Perceptions on Collaborative Learning: A Case Study of Female Community College Instructors

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Perceptions on Collaborative Learning:
A Case Study of Female Community College Instructors

by

Marilyn C. Armstrong

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
Department of Adult, Career, and Higher Education
College of Education
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Date of Approval:
April 27, 2011

Keywords: Cooperative Learning, Small Group Learning, Learning-Centered College,
Higher Education, Qualitative Research

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Dedication

Captain of the girls’ ice hockey team and valedictorian of her high school graduating class, Helen Lelia Hall Morse, my mother, excelled in every endeavor she undertook. During the end of a great depression and through a world war, she forsook a four-year scholarship to a state university and the pursuit of higher education to oversee an insurance business and support a family. The first and most consistent encourager in my life, she pounded into my soul the belief that anything is possible to those who are willing to pay the price of following a dream and only a great dream. Years after her untimely death, I still hear her voice championing my spirit.
Acknowledgements

A dissertation on collaborative learning would be incomplete without expressed appreciation for the diversity of persons who contributed.

To my committee: Dr. William Young, a consummate eclectic intellectual with a deep commitment to his students, your authentic, thoughtful, and often candid advisement and encouragement was instrumental to this moment. Dr. James Eison, thank you for introducing me to a host of scholars in higher education, unlocking passages to understanding and articles shaping my literature review, research design, and findings. Dr. Rosemary Closson your facilitation of meaningful learning activities in a variety of formats impacted the interviews, adult education, and theory of this dissertation. Dr. Valerie Janesick your unending willingness and consistency forwarded my thinking, motivated my spirit, and held me accountable to the task of completing this dissertation. Your simultaneous challenging and championing was without peer.

To other faculty: Dr. Suzanne Kirkmann, who spurred me to “go on.” Dr. Waynne James, you demystified doctoral studies and your encouragement to continue captured my attention. Dr. John Hanna, thank you for introducing me to my research field site.

To colleagues: Especially, Ana Torres, together we plowed through Statistics and the weeds of qualitative analysis. Carol Burg, thank you for providing counsel, direction, and the right questions with compassion and without interference.
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Abstract

In the 1980s, academic assessments called for “the ability of individuals and groups to talk, listen judge, and act on issues of common interest” (Morse, 1989, p. 30). More recently, corporate research findings, Are They Ready to Work? Employers’ Perspectives on the Basic Knowledge and Applied Skills of New Entrants to the 21st Century U.S. Workforce (The Conference Board, Inc., Partnership for 21st Century Skills, The Corporate Voices for Working Families, & Society for Human Resource Management, 2006), report the workplace is seeking college graduates with skill in collaboration (e.g. build diverse relationships, negotiate, manage conflict). While the interest in collaborative learning has expanded in higher education and business, “sparse application” is reported in the college classroom. In academia, collaborative learning has been dependent on cooperative learning research focused on quantitative student achievement outcomes while faculty perceptions of a nonfoundational social constructivist view of collaborative learning is reported as “hardly begun.” Along with an increased ambiguity in the terms collaborative and cooperative learning, a comprehensive understanding of collaborative learning and its potential uniqueness, if any, has been skewed.

The purpose of this study was to describe and explain collaborative learning from the perspective of selected classroom practitioners representing multiple academic disciplines at a learning-centered institution. The exploratory questions guiding this qualitative case study were: (a) what elements constituted community college
collaborative learning practitioners classroom experience and (b) what variables influenced the elements. The theoretical framework undergirding this dissertation is social constructivism nested in constructivism.

A purposeful sampling of four instructional criteria indicative of a nonfoundational socio-constructivist concept of collaborative learning guided the participant selection process. The limited candidate list consisted of 31 faculty (20 females, 11 males) at the field site, a learning-centered community college with an FTE near 30,000 for the 2009 – 2010 school year. From 22 initial responses, seven faculty participants (6 female, 1 male) were selected and participated in two semi-structured in-depth interviews. The data collection included interviews, institutional and practitioner documents, the researcher’s reflective journal, and field notes. The male participant was removed from the study because he did not submit all requested documents. Therefore, though unintended, six case studies of female instructors were analyzed over an eight month period and reduced to four when saturation was reached, no new information was elicited. All four participants fulfilled all four specified instructional criteria.

The central finding is the strong identified practice of the defined concept reported as sparse in the literature. The single most defining attribute of this sophisticated concept of collaborative learning is the instructional criteria of distributed authority. In part, this manifested itself in students teaching students (e.g. intellectual negotiation, consensus building, and student(s) ownership of learning). The high level reported by the participants in classroom applications also constitutes skills sought by the work force. In addition, term interchange and confusion was found to be profound as also reported in the literature. The value is qualitative faculty data ascertaining the lack
of definitional clarity between the terms collaborative and cooperative learning and providing a possible explanation for the reported lack of the defined concept in the college classroom. This study contributed to all three research attributes reported as minimal in the literature, qualitative research, a faculty perspective, and the specified concept of collaborative learning.

Given that a comprehensive participant selection process was not conducted and in view of the central finding in the context of existing gaps in the literature, a primary recommendation for future research would be a more intentional expansion of the candidate recruitment process. Potentially, this could increase identification of classroom instructors practicing the particularized concept of the phenomenon and service the import of definitional clarity. Rich in research potential, priority recommendations from this study include more intentional exploration of the defined concept of collaborative learning in relationship to: (a) the learning-centered institution, (b) faculty resistance (e.g. impact of personality, gender, age, teaching or learning styles), (c) the work force demand, (d) high density foundational knowledge disciplines, and (e) potential in web-based instruction.
Chapter One

Introduction

Introduction

I had a hunch, an “informed hunch” (Janesick, 2004; Piantanida & Garman, 1999), resulting from professional, personal, and academic contexts. My intuitive sense was that collaborative learning as an instructional strategy in the college classroom, regardless of the discipline, could substantially develop needed knowledge, skills, and social sensitivity or maturity for transfer to the workforce. As a child at play or an adult in professional or community endeavors, my life experiences reflect the desire to bring diversity together as circumstances have allowed to achieve (e.g. exchange ideas, strategize shared objectives, devise a plan). Requests for more cohesive interaction in the workplace and academic exposure to collaborative learning and socio-constructivist thinking piqued my interest in group practices for professional and personal transfer.

Not to be overlooked was my “serendipitous” (Janesick, 2004) encounter with an innovative institution to complete a doctoral course assignment, the “Learning-Centered College Movement.” In my backyard, I discovered a community college in central Florida which described itself, in part, as an “institutional transformation initiative focused on collaborating to become more learning-centered.” It is important to note, I deeply value solitary reflection and independent or individual work. As collaboration is an option, increasing in demand, it is not always the best choice.
Rationale for the Study

In my search of the literature three gaps became apparent. Lacking in the research is an investigation of collaborative learning from a nonfoundational perspective and separate from cooperative learning research. Concomitant with this lack of research, the literature also attested to college faculty being an underrepresented population in studies on the classroom application of collaborative learning as defined above. In contrast, highly positive student achievement studies were extensive, particularly in qualitative research on cooperative learning. In addition, community colleges were not specified in the literature. The doctoral course assignment on community colleges, identified earlier, afforded me the discovery of a postsecondary school that had transitioned to a collaborative culture to establish a learning-centered paradigm. This institutional “uniqueness” fits the “bounded system” nature of a case study (Stake, 1995).

In the overarching pedagogy of small group learning, four valued attributes emerged from the literature: (a) engaging social interaction for active learning, (b) creating a sense of community, (c) achieving a pedagogical objective, and (d) responding to an epistemological position (Cross, 2000; Gamson, 1994). An epistemological position is defined as a belief or an understanding of what knowledge is and how it is attained. Two forms of small group learning with major commonalities and distinctive differences became strongly apparent, collaborative and cooperative learning. Substantively encompassed in ambiguity and confusion, the core differential between these two pedagogies is epistemology. Cooperative learning fundamentally embraces a foundational epistemology of knowledge, therefore, cognitive, grounded in fact, and committed to learning the basics of established knowledge for which debatable positions
are minimal to none. In contrast, collaborative learning employs a nonfoundational view where knowledge is coconstructed and solutions are seldom absolute (Bruffee, 1995; Gamson, 1994; Matthews, Cooper, Davidson, & Hawkes, 1995). These distinct epistemological groundings determine where classroom authority rests, how pedagogical applications should be applied, and distinctly represent the differences.

As outlined by others, all four primary attributes of small group learning, significantly described Kenneth Bruffee’s philosophy of collaborative learning particularly the epistemological stance. Bruffee is considered one of the foremost scholars and proponents of collaborative learning and is credited with popularizing this instructional strategy in higher education (Hawkes, 2008; Holt, 2008; Holt, 1988). Bruffee’s (1984, 1995, 1999) view is epistemologically grounded in the conviction that what knowledge is, determines where authority rests, and therefore, cognizant or not, how collaborative learning is applied in the classroom. According to Bruffee (1999) and others, knowledge at the university or college level is “mostly” nonfoundational eliciting questions with a range of “arguable or ambiguous” responses. Therefore, knowledge is being socially constructed and reveals classroom authority as shared by students and instructor. This theoretical stance engages the instructor and student as mutual inquirers in substantial and subjective issues and shifts classroom authority to include both. Bruffee’s (1999) seminal work (cited 679 times) juxtaposed his nonfoundational perspective with academic and corporate reports on college graduate new-hires as adept at computers and individual work but limited in peer interaction on “substantive issues.” Bruffee (1999, 2009) continues to seek “recognized identity” for greater “social maturity integrated with intellectual maturity” (p. xiii).
Problem Statement

According to Piantanida and Garman (1999), the intent of qualitative studies in education is “deeper understanding – within a particular context – of some perplexing aspect of this complex human enterprise” (p. 90). Since the 1980s, the literature reveals a growing interest in collaborative learning as an instructional strategy (Cabrera et al., 2002; Cross, 2000), yet a minimal application of this pedagogy exists within the college classroom. Documented by several, Gamson (1994) succinctly depicted this disparity, “while the evidence for the impact of collaborative learning is growing, it is still quite sparse” (p. 46). Also, emerging was collaborative learning’s dependence on extensive cooperative learning research exacerbated by or resulting in a profound interchange of terms. This confusion between the two instructional strategies skews a comprehensive understanding of collaborative learning, its unique contributions and limitations (Tinto, 1997). Cooperative learning research is, also, predominantly quantitative, not qualitative. Although changing, what was titled collaborative learning research was also reported more at the elementary and secondary level (Cabrera et al., 2002; Roberts, 2004). In contrast, college level cooperative learning research began in earnest in the 1940s and in K-12 in the 1970s (Johnson, Johnson & Smith, 1998, 2007).

Wrapped in historical tradition, norms, and culture the college classroom has been a major source of faculty identity (Berge, 1998; Jaffee, 1998) for over 150 years. With a lack of clarity on whom this population included, the literature also described college faculty as an understudied group. Given the disparity between the “growing impact” and the “sparse practice,” the intent of this study was to probe the classroom perspective and experience of selected community college faculty for deeper understanding.
**Purpose Statement**

The purpose of this study was to describe and explain collaborative learning from the perspective of selected community college faculty preferably representing multiple academic disciplines.

**Research Questions**

The following exploratory questions guided this qualitative case study:

1. What elements constitute selected community college faculty perspectives on collaborative learning in the college classroom?

2. What variables influence these elements?

**Theoretical Framework**

Nested in constructivism, social constructivism supports an active cycle of making and re-making sense out of experience with others (Merriam & Caffarella, 1999; Svinicki, 2004). Constructivism differs from a cognitive model by “who is doing the work,” instructor or student (Svinicki, 2004, p. 35). Merriam and Caffarella (1999) note alignment with self-directed learning (Houle, 1961; Knowles, 1975; Tough, 1971), transformative learning (Freire, 1998; Mezirow 1991), and andragogy (Cross, 1981; Knowles, 1980), adult learning principles. Individual and transformative learning emerged in this study. Adult learners are a growing population in higher education (Benedetti, 2007; Haddad, 2006). Referencing social constructivism, Creswell (2007) explained the “constructivist researcher’s interest often includes not only “the ‘processes’ of interaction among individuals” but the “contexts in which people live and work” (p. 21). Data collected from interviews, institutional documents, and the researcher’s reflective journal supports social constructivism.
Importance of the Case Study

The value was to enrich the literature in the unique attributes of collaborative learning for enhanced classroom practices, workplace transfer, and future research in an emerging field. This descriptive case study’s contribution to this instructional pedagogy can potentially add: (a) a deepened understanding of the lived experience of selected faculty in a unique two-year college, (b) classroom practitioners’ perspectives as to why this instructional strategy with rapidly growing impact is sparse in practice (Cross, 2000), (c) the qualitative dimension from faculty in contrast to the weight of quantitative research primarily on student achievement (Johnson & Johnson, 1996; Johnson, Johnson & Smith, 1991; Johnson et al., 1998, 2007; Prince, 2004), and (d) insights on the potential impact of the contextual uniqueness of the field site, or lack thereof.

Boundaries of the Case Study

The boundaries for selection of the community college faculty participants were:

- facilitate collaborative learning (see Appendix A) in their classroom;
- one year of experience (minimum) with the described phenomenon;
- one year (minimum) full-time faculty member at the selected field site;
- willing and able to be interviewed on two separate and scheduled dates.

Trade Offs in Case Studies

The researcher is the main instrument (Janesick, 2004; Patton, 2002). To offset researcher bias, the literature informs the development of the “researcher’s capacity for encountering, listening, understanding, and thus ‘experiencing’ the phenomenon under investigation” (Piantanida et al., 1999, p. 139-140). The researcher’s role is described in Chapter Three. Transfer of findings is done at the reader’s discretion.
**Definition of Terms**

To assist the reader’s understanding, the following definitions are based primarily on Bruffee’s (1999) seminal work with supporting citations added as needed:

*Collaborative learning* - A specific type of active learning in which students are intentionally grouped for synchronous intellectual effort to primarily co-construct nonfoundational knowledge. Authority is distributed and responsibility is shared by faculty and students. Collective decision-making is reached in open-ended tasks assigned by the instructor or mutually determined. The process will evidence a sophisticated level of: (a) agreement and disagreement, (b) intellectual negotiation, and (c) collective decision-making. In designing learning tasks and student evaluation, collective or self-governance (i.e. independent of the instructor) is more valued than teacher-directed accountability (Bruffee, 1995; Cuseo, 2002; Goodsell, Maher, Tinto, Smith, & MacGregor, 1992; Trimbur, 1989).

*Cooperative learning* – A form of active learning in which students are intentionally grouped to work together to learn primarily what is known (e.g. basic, indisputable facts) and gain social skill development. A traditional approach to classroom authority is directional or centralized in the instructor who operationally defines and procedurally directs the small group interactions. Task distribution is characterized by division into independent subtasks where each learner is responsible for a portion (Bruffee, 1999; Cuseo, 1992, 2002; Gamson, 1994).

*Established community* – The peer group (e.g. academic discipline, family, club, neighborhood) deeply acculturated or shaped by its own language, field of interests, set of values, beliefs, opinions, passions, and commitments (Bruffee, 1999).
*Transition community* – A temporary group to facilitate renegotiation from one’s present community to a desired knowledge community. The cycle of thinking, speaking and writing that takes place at the boundaries of communities is the “re-acculturative activity we call education” and the facilitators “we call teachers” (Bruffee, 1999, p. 120).

*Desired knowledge community* – A sought interpretive community or place of peer acceptance based on achieving the established set of conventions valued and expected for entry and acceptance (Bruffee, 1999).

*Reacculturative conversation* – The complex, painful, often incomplete, and iterative process of leaving, modifying, or renegotiating membership in a present community of conventions (e.g. language, field of interest, set of values, beliefs, opinions, passions, commitment) to gain fluency and acceptance based on the conventions of one or more desired communities. Best accomplished in a group setting, the willingness and courage to give and accept peer authority and develop skill in the craft of interdependence is required (Bruffee, 1995, 1999, 2003).

**Summary**

This chapter began with my “informed hunch” supported by the literature to develop collaborative learning for transfer to the larger social context. Prevalent in the literature, the problem was the disparity between a growing interest in collaborative learning yet sparse evidence of classroom application. In addition, a lack of research on collaborative learning, from a nonfoundational epistemological perspective and separate from cooperative learning, limits knowing the possible unique attributes of collaborative learning, if any. Furthermore, qualitative research from a college faculty perspective was almost nonexistent. Lastly, this case study allowed for, but did not control for, the
potential emerging impact of the field site’s institutional collaborative culture to become more learning-centered. This descriptive case study explored, therefore, collaborative learning from the perspective of selected community college faculty from multiple disciplines in a learning-centered institutional setting.

In Chapter Two, the literature review situated the problem in a social, historical, and educational context which notably reflected its historicity and the growing population of adult learners effected (Merriam & Caffarella, 1999). The topics positioning this study of collaborative learning were: (a) a historical overview in the United States, (b) the background and relationship to Kenneth Bruffee, (c) the specific concept being investigated, (d) the impactful relationship between collaborative and cooperative learning, (e) the relevant published research studies, and (f) best practices.
Chapter Two
Review of the Literature

Introduction

The purpose of this study was to describe and explain collaborative learning from the perspective of selected community college faculty representing multiple disciplines at a learning-centered institution. The following exploratory questions guided this study:

1. What elements constitute selected community college faculty perspectives on collaborative learning in the college classroom?

2. What variables influence these elements?

In keeping with this purpose, the literature review provides a context for the researcher and the reader on a qualitative case study inquiry into the classroom practice of Kenneth Bruffee’s epistemological socio-constructivist view of collaborative learning. Topics addressed are: a) a historical overview of collaborative learning, b) background and relationship of Kenneth Bruffee to collaborative learning, c) the perspective under investigation, d) relevant published studies, e) scholars’ critiques, and (f) best practices.

Historical Overview of Collaborative Learning in the United States

Ancient man, the Socratic Method, and apprenticeships in the Middle Ages denote an extensive history in joint efforts to collaborate for intellectual advancement, mutual goals, and the preparation of the next generation (Holt, 1988; Johnson, Johnson, & Smith, 1998). The “little red schoolhouse,” “Orientation Week,” and “two heads are
better than one” mark a rich American tradition (Bruffee, 1999; Millis & Cottell, 1998). Frequent references to classroom practices as recently “discovered” reflects collaborative learning’s lack of educational dominance (Gere, 1987; Holt, 1993). Intermittent bursts of engagement correlate with the socio-historical influences and the universal practice of old forms revised and re-cycled for new contexts. Since the Colonial Period, multiple dynamics have been fundamental to understanding and effectively responding to philosophies, policies, and classroom pedagogies within higher education. Demographic expansion, politics, educational responses, government funding initiatives, and the unpredictable intensity of perceived change have shaped stakeholders’ decisions.

Not new and occasionally mainstreamed, collaborative learning in the 18th and 19th century, the 20th century, and the 21st century in America is presented in this section. In each time period this pedagogy has been determined by what knowledge is, where authority rests, and how social interaction occurs. This is the core of Bruffee’s (1999) perspective on collaborative learning (Cross, 2000; Gamson, 1994). As reviewed for this study, Bruffee’s (1999) fundamental belief in the inescapable interplay of theory and practice emerges throughout the history of collaborative learning in the United States. Like Bruffee (1984, 1999), Gamson (1994), and others believe teachers’ apprehension and uncertainty about how, when, and where to appropriately apply collaborative learning can be enhanced by an understanding of the socio-historical conditions, as well as subsequent learning theory underlying and influencing the practices. Therefore, the lens of history provides a practical tool through this study to: (a) distance ourselves and more objectively assess the impact of philosophical beliefs on collaborative pedagogical practices and (b) compare and contrast the research findings to the historical record.
**Eighteenth and nineteenth centuries.** Tocqueville (2000) characterized independence as “distinctively American.” Bruffee (2003) concurs, “Interdependence doesn’t come easily for all of us, bred as we tend to be on the ethic of rugged individualism” (p. 18). Yet “interdependent informal working relationships” (Bruffee, 2009, p. 7) can be traced to the early 18th Century in the United States. Writing groups and peer tutoring are a central focus of Bruffee’s professional contribution to collaborative learning (Hawkes, 2008; Kail & Trimbur, 2007). A look at Gere’s (1987) history of academic and non-academic writing groups in the 18th and 19th centuries: (a) documented collaborative learning in the United States since its inception, (b) established the ever present relationship of beliefs to practice, and (c) offered a possible explanation for collaborative learning’s intermittent bursts of engagement in the acceptance or non-acceptance of group work.

**Academic and self-directed writing groups.** Writing groups in academia, characterized by “novelty and longevity” (Gere, 1987, p. 9), were founded throughout the 18th and 19th centuries with faculty involvement enhancing their “intellectual vitality.” Given their innovation, longevity, and changing circumstances, these literary societies often appeared as “new” because they were usually “relatively obscure.” In the early 1700s, the Harvard College literary society was formed. These college literary societies served to improve writing skills, foster critical thinking, address political and social issues, engage peer critique, and create libraries when students’ had limited access to “sad collections,” often providing the singular social outlet. In the late 1800s, institutional innovations (e.g. fraternities, better-funded libraries, curriculum changes) absorbed the work done by literary societies, causing them to dissolve or re-direct their
mission. This early history of writing groups was incipient to the thinking, speaking, and writing cycle within “community” and integral to Bruffee’s (1984, 1999) conceptualized view of collaborative learning. A recurring value is - the better we speak, the better we think, the better we write, and the better community we can build.

Closely aligned with academic writing groups were self-directed learning groups. Gere (1987) expanded on the rich history of voluntary non-academic groups designed for adult learners and distinguished by Franklin’s Junto, the Lyceum Movement, and the Chautauqua circuit. Grattan (1971) wrote about the Chautauqua, an adult education movement that pursued at one time university status and the power to grant degrees. American patriot, Ben Franklin, also had initiated autonomous informal groups for impoverished youth like himself who read their work aloud to each other to improve writing skills (Gere, 1987; Holt, 1988). This technique is espoused by Bruffee (1999, 2009) and others today. In 1806, inspired by European and Eastern efforts to provide for the “masses,” cooperative learning groups were established (D. W. Johnson, et al., 1998). Such groups remained into the early 20th century the only available educational resource for women and most working class men. The literature, however, also recorded a cyclical resurgence. Freire’s (1998) work was based in the social interaction of the lived experience and critical reflection with dialogue for transformative adult learning and development. Not to be dismissed were the numerable women’s clubs, literary societies, young men’s associations, and co-ed groups with members who participated in both the academic and self-directed writing groups. According to Bruffee (1999) and Gere (1987), such groups were later influenced by works such as Peter Elbow’s (1973) *Writing Without Teachers*. 
Influence of theory on practice. In the British Romanticism of the 18th and 19th century, poets and writers sought social interaction to nurture the humanist’s concern for the individual’s reasoning power and creativity because the aesthetic, natural, and cultural heritage was being thwarted by industrialization and materialism (Gere, 1987). Among the British romanticists, collaboration was limited to creating an innovative environment to foster individual creativity (Trimbur, 1989). In contrast, Eagleton (1983) wrote about the hope in the cultural and political activity of writers within the British working-class to break out of their common and dominant thinking of writing as a solo performance. In the same time frame, the focus in western thought was on developing the individual mind aligned with freedom, justice, and democracy (Gergen, 2001).

This contrasts with those in collaborative learning for whom the environment is integral to, not independent of cognition, not simply the circumstances in which cognitive processes can develop collectively or separately (Dillenbourg, Baker, Blaye, & O’Malley, 1996). Bruffee also finds his philosophical roots in this humanist concern. However, he expands critical thinking, prominent in writing groups, to a socially derived view that includes not only one’s own work but that of others. According to Bruffee (1978), writing groups engage, “students in each other’s intellectual, academic, and social development” (p. 447). In this position, discussed under Scholars’ Influence and Critiques, some scholars believe Bruffee takes social interaction too far and others say he takes social interaction so far he comes full cycle and loses his own intent or value.

Collaborative learning marginalized. Significant to this study and “generally catalogued under the heading of collaborative learning” (Gere, 1987, p. 55) was what distinguished the academic from the nonacademic writing groups. Gere (1987)
wrote of two scholars and practitioners, Hedges (1919) and Putz (1970) who, though separated in time, illustrated the impact of theory to practice and its influence on the issue of “marginalization” in the lack of mainstream acceptance of writing groups. Unknown to each other, both agreed writing groups “increase motivation, foster critical thinking, enhance positive attitudes, and develop audience awareness” (Gere, 1987, p. 18). Putz (1970) conceded, however, of having no knowledge of earlier writing groups. Gere (1987) documented additional testimonials of authors and surveys from high school students in the latter time frame who echoed the same lack of knowledge about or experience with writing groups. Some claimed graduate school small group experiences but otherwise the high school student surveys spoke of teachers’ “artificial writing” tasks. According to Gere (1987), authority in autonomous groups originated in the individual student and is grounded in personal choice. In contrast, “school-sponsored groups” derive authority from “the instructor who directs students to share their writing with peers” (p. 51).

To the matter of “marginalization,” hierarchy, competition, and isolation fluctuated on a continuum from non-autonomous to semi-autonomous to autonomous dependent on underlying philosophical beliefs. Frequently related in the literature with collaborative learning, Gere (1987) dismissed the term “progressive education” as ambiguous and accentuated four associated terms: (a) humanism - improve individual minds as in critical thinking, (b) social meliorism - improve one’s surroundings as in civic responsibility, (c) developmentalism - decrease egocentrism as in speak and write for others, and (d) social efficiency - integrate mechanical business models as in the “Taylor” method. These philosophies surface intermittently throughout the history of
collaborative learning influencing curriculum design and classroom practice (e.g. writing groups). The “Taylor” method and other analogous thinking emerged in the 20th century and will be explained later.

According to Gere (1987), these philosophical beliefs still existed more than a half century later. The “intellectual climate” proved more “hospitable” by the late 1960s because “views of the nature of knowledge had begun to shift” (p. 29). Trimbur (1989) directly attributed this to the grass roots “political pressures to extend literacy and access to higher education to black, Hispanic, and working-class people who had formerly been excluded” (p. 605). American higher education and adult learning history in the 18th and 19th century aligned with the impact of social and political life on determining what knowledge is, where authority rests, and how collaborative learning is applied.

Often referenced as Cartesian epistemology, Gere (1987) outlined the layered historical dimensions of knowledge and writing dominated by a “fixed and hierarchical” understanding of knowledge to be conveyed, not constructed, by limited sources primarily for individual consumption. Gere (1987) contended this traditional philosophical perspective on knowledge and authority helped to explain the disparity between and resistance to writing groups in formal settings, a form of collaborative learning, and their acceptance in non-academic environments. “The dissonance between Cartesian epistemology and writing groups accounts for much of the marginality of writing groups across time because these groups were repeatedly thrust into an intellectual environment unable to support them” (Gere, 1987, p. 76). The lens of history solicits critical reflection on the interplay of theoretical belief and the application of collaborative learning today.
Twentieth century. In the midst of collaborative learning’s fluctuating influence, Holt (1988) presented “pragmatism – or its more recent variant, social constructionism” (p. 3), as the most reliable theoretical rationale for collaborative learning. American pragmatists, George Herbert Mead (1863-1931), John Dewey (1859-1952), Richard Rorty (1931-2007), and others influenced the Progressive Education Movement which profoundly impacted educators in the 20th Century. Since the 1980s, among those influenced was Kenneth Bruffee, leader, developer, and practitioner of collaborative learning theory and practice.

According to Holt (1988), four of the fundamental tenets of American pragmatism shaping collaborative learning are: (a) the interplay of theory and practice, (b) the interdependence of epistemology and authority, (c) the effect on critical thinking, and (d) the connection of democracy to education through active participation. Holt (1988) believed this pragmatic rationale forced a stance on three critical components: (a) one’s conceptualization of knowledge, (b) the placement of power or authority in the student and teacher relationship, and (c) the democratic ethos of social equality and consensus in the social interaction of the individual and the group. Today, combinations and modifications of these assumptions differentiate and determine collaborative practices.

Early twentieth century - Individual and interdependence. America entered the 20th Century transitioning from a rugged, “romantic” frontier of exploration and commerce to a “scientifically efficient free enterprise” (Holt, 1994, p. 76). World War I significantly defined priorities. The influence of prevailing ideologies on classroom practice is evidenced by the extensive descriptive details from Holt’s (1993) analysis of articles in the English Journal, College English, and College Composition and
Communication. In practitioners’ words, these articles provided a qualitative perspective into the rationale for their professional experience. Early on, three “countervailing” ideologies: (a) the traditional education, (b) the progressive education movement, and (c) the social efficiency movement converged. Three metaphors emerged describing these philosophical initiatives: (a) traditional - school as a “bank” or depository (Freire, 1998), (b) progressive education – school as a “community” (Bruffee, 1999), and (c) social efficiency – “school as a factory” (Lambert et al., 2002). Connecting, contrasting, or colliding, these metaphors symbolize the influence of science, the humanities, and commerce on education and serve as graphic illustrations of philosophical perspectives shaping instructional strategies, more specifically collaborative learning applications.

Traditional education. According to Brown and Atkins (1988), the traditional modus operandi in American universities, the lecture, is rooted in the Medieval Latin term “lectare” meaning to read aloud. This instructional method was and is deeply engraved in curriculum design and delivery (Cabrera, et al., 2002; Gamson, 1994; Prince, 2004). Coined by Freire (1998) as the “banking concept,” the lecture approach upholds a foundational, immutable, positivist view of knowledge and most naturally supports learning as individuals rather than as groups. Collaborative learning, a nonfoundational pedagogy nested in constructivism and social constructivism directly challenges the lecture model. With longstanding proven worth, the lecture remains fundamental to most comprehensive instructional planning, as is solitary reflection and independent work (Lambert et al., 2002; Newmann, Secada, & Wehlage, 1995).

Progressive education movement. Highly influenced by American pragmatism, the progressive education movement is often identified with John Dewey who is
attributed with identifying education as a “social institution” and human relationships as essential to “welfare, achievement, and mastery” (Bruffee, 1995, p. 12). Pragmatism, marked by democratic principles and the nature of knowledge, affected a paradigm shift in education from an emphasis on the individual to the broader context of society and political reform. This shift fluctuated from a psychological emphasis on the individual in the 1920s to a political emphasis of social reform in the 1930s which continued in future decades (e.g. 1960s) to cycle in and out (Holt, 1988, 1993). In the 1920s and the 1930s, the longstanding engagement of autonomous peer group learning continued to thrive (Bruffee, 1999). Generally consistent with pragmatic principles, collaborative pedagogy was prevalent during the Depression years of the 1930s. Emerging practices through this movement also included student-centered initiatives and expressive writing in literature.

Of interest to this study, Dewey’s influence within the progressive education movement fostered a growing dialogue on collaborative practices. Trimbur (1989) illustrated the contribution of Dewey’s educational pragmatism on collaborative learning (e.g. consensus building), with Bruffee’s “appreciation of the generativity of group life and its promise for classroom teaching” (p. 604). Rather than inhibit individuality, a concern of those who fear conformity or “group think” in collaborative learning or consensus building, Trimbur (1989) explains the shared engagement allows the individuals to take ownership of their learning. Trimbur (1989) questions if the desire to liberate the individual through pedagogies embodied in teacher-centered authority are not more fearful of “an aggregate of individuals” becoming “a participatory learning community” (p. 604). Trimbur (1989) concludes collaborative learning through social interaction can empower rather than inhibit the individual.
Social efficiency movement. Prominent in the 1920s, Dewey’s belief in discussion or dialogic reasoning as a method of intellectual investigation contrasted and competed with the simultaneous sway of business. According to Holt (1994), the influence of enlistment efforts during World War I popularized a proliferation of “standardized” assessment tools “to sort and eliminate recruits” (p. 4). The modus operandi was to adapt “scientific” assessment and “management” techniques concerned with “social efficiency” (p. 73).

Dewey valued the scientific method as democracy at its best. To him the autonomous work of individual scientists depended on prior investigations by the larger scientific community. He saw a dynamic interplay of individuals, groups, and teachers within society modifying and enhancing each other’s creative contributions. For Dewey, the heart of education was the reciprocal influence of the individual and the group, iteratively shaping and being shaped, an unending social formation and reformation influencing change. Dewey dismissed the extremes of predetermined fact-focused lecture and recitation along with any stance for total student freedom. Differences were tools to hone critical thinking and achieve the optimum benefit of consensus.

Gere (1987) defines learning as occurring in a collaborative group, not through the “democratic give-and-take of collaboration,” but more “when they challenge one another with questions, when they use the evidence and information available to them, when they develop relationships among issues, when they evaluate their own thinking” (p. 68). In the business model, however, standardization to select and train participants for predetermined ends was the valued objective, “emphasizing assembly-line production, compliance, and uniformity” (Lambert et al., 2002, p. 21). Also known as
“Taylorism” and antithetical to Deweyan progressivism, Holt (1994) describes this “cult of efficiency” as comprised of “smart managers” and “ignorant workers” (p. 83).

Inspired by pragmatists and educators like John Dewey, the work of the Progressive Education Movement in the 1920s to integrate democratic assumptions (e.g. egalitarian status) on epistemology and authority and counter “scientific management” agendas is illustrated by two collaborative pedagogies, the Project Method and the Dalton Plan (Holt, 1994). To offset the prevailing business model, both encouraged academic student interaction structured in group interdependence and individual work, respectively. A prolific recurrence of articles throughout the decade in the English Journal provides rich insight. An alternative to traditional education, the Project Method employed active learning strategies through extended group projects and fostered student engagement, critical thinking, and student responsibility for learning. The Dalton Plan consisted of learning contracts with monthly assignments determined by the teacher, then, completed and recorded by the student. Students were “expected to rely on each other for support, encouragement, and problem-solving” (Holt, 1994, p. 83). Extensive student classroom experience in independent, competitive academic work left “expectations” unfulfilled.

Holt’s (1994) review of the English Journal articles from the 1920s is almost comical, mitigated only by the truth of the narratives. According to Holt (1994), these articles illustrate the complexities and challenges of student interaction and the teacher’s role when theories compete for dominance. When the work of well known psychologist and social efficiency advocate, E. L. Thorndike, was called on to assist with the group project model and humanize the “regimented workplace,” operational difficulties were in place. Teacher as “clerk,” “social engineer,” or “drill sergeant” never seemed to be
reconciled. At one extreme, students were given freedom and responsibility without instruction. In the other untenable position, correctives included a “hidden agenda” to “manipulate” and “reproduce” the teacher’s plan. Both plans erred in excess of their intended purpose and failed to resolve the issues of freedom and authority (Holt, 1994).

Some pragmatist ideals were achieved. Both plans, however, countered Deweyan thought because of their lack of individual and group interaction. A disproportionate freedom at the expense of authority or accountability also existed. Holt (1994) concludes with three pertinent lessons: (a) social pedagogies with sound relationship models in the classroom or society, require a balanced tension between freedom and responsibility, (b) institutional cultures directly influence the richness and access to social participation, and (c) a non-foundational epistemology does not require “European postmodern theories,” but “democratic ends require democratic methods” (p. 88).

**Mid-twentieth century – Contrasts in theory and authority.** According to Holt (1993), collaborative pedagogy nearly ended in the middle of the 20th century, especially in the 1940s. As World War II approached, interest in collaborative pedagogy waned, with the exception of a brief interlude of “group dynamics” (e.g. the Oregon Plan of the 1950s). An insightful contrast is documented between collaborative practices of the 1930s and the 1950s in the competing rhetorics of dissonant ideologies. This historical perspective warrants a reflective assessment of our own view on the relationship of knowledge, social relations, and classroom authority.

In the educational quest for knowledge, practices of the 1930s adopted an inclusive democratic character in harmony with progressive educational objectives (Holt, 1993). This was played out in collaborative practices with knowledge described as
“relational in nature” or based on “intuition and interaction.” In the social organizing of students the intent, then, was to support student control of their learning by building interdependence. Peer editing groups emphasized social skill development. The outcomes were limited by the tension between individual and group interests.

Active and adding to the complexity was “romantic epistemology” and “Cartesian objectivism.” Both are centered on the individual. In the former, the individual creates knowledge and in the latter the individual reflects knowledge, as in a mirror (Rorty, 1979; Holt, 1993). Sometimes the good of individual development was attained, regardless of the premise. As Holt (1993) writes, also prevalent was the assessment of “an anxiety that one is always in danger of overwhelming the other” (p. 542). By the end of the 1930s doubts were voiced about the success of balancing group and individual roles. This challenge or tension between role expectations and outcomes for the individual and the group emerges in the literature on collaborative learning and peer group influence (Bruffee, 1999; Kail & Trimbur, 2007; Newcomb, 1966).

The 1950s evidenced a greater reliance on “objective” knowledge (Holt, 1993). According to Holt (1993), the 1950s was the “heyday of positivism” for acquiring knowledge and a “spectator view” eliciting “observation.” Group work was more about form and the “scrutiny” of others work not “to challenge and defend ideas, but rather to speed up the process of correcting papers” (p. 541). With the formation of the Hitler-Stalin Pact in 1939, the interpretation of socialization changed. Collective action was identified with totalitarianism and again the influence of the larger social context became apparent. With the intervening national and international events, group effort by the 1950s was a “veiled threat.” Distrust and competition gained value. The supportive
group unity of the 1930s was replaced with an “antagonistic relationship.” The supportive alliances developed between individual students and the teacher to expose the inadequacies of fellow students.

Power is prolific in our language, our culture, and pervades our educational settings. Classroom authority or lines of power are a key component of Bruffee’s (1999) concept. Profound in its impact, power’s effect is often missed or mistaken in its implementation. In the 1930s, teachers often overlooked the appropriate redistribution of authority, simply relinquishing authority to students. In the 1950s, teachers primarily fostered student dependence on the strong authority figure. This supported social interaction between student and teacher and resisted a distribution of authority. Holt (1993) tells of a professor in the 1930s at Florida State College for Women who provided a forum for students to negotiate knowledge, to present their individual ideas, and determine their value. Holt (1993) quoted from the professor’s journal article, “One of the most stimulating phases lies in the discussion evolving from the students’ challenges and defenses of the ideas presented” (p. 541). More often, journal articles of that decade record distribution of authority as limited to student populations and being “free labor” to grade papers and correct mechanical errors or tutor in a traditional manner.

In a more recent time frame, Worthman (2008) analyzed the discourses and power structures of two adult education instructors in ESOL classes, through the lenses of identity and dialogism that could only result from socially constructed interactions. Instructors, “Amy” and “Miriam” both drew on the learners’ experiences to define their curriculum and pedagogical methods. How each of them “defined and valued” their learners’ experiences to support learning English and improve their futures dramatically
differentiated student outcomes between empowerment and emancipation, respectively. Time sensitive, task-centered, role-focused, and experience-rich, adult learners have “figured worlds” of what learning acquisitions (e.g. language and literacy development) will look like, feel like, and be, as do adult educators. “Amy” conceptualized her learners’ experience for empowerment, positioning adult learners to acculturate successfully into an existing system. “Miriam” visualized her adult students’ learning outcomes for emancipation, enabling them to bring new meaning, form, and function to community. Right or wrong, Worthman (2008) acknowledges both ends of the scale exist in adult education. His findings correlate with the work of pioneers and practitioners in adult education (Freire, 1998; Knowles, 1980).

Though Worthman (2008) documents others, Freire’s (1998) concepts of banking, dialogue, praxis, and conscientization; Belenky, Clinchy, Goldberger, and Tarule’s (1986) qualitative research involving voice and authority; and Knowles’ (1980) assumptions and process elements are clearly demonstrated. Knowles’ (1980) reference to “ideological pedagogs” who, knowingly or unknowingly, keep learners dependent for their own “psychic reward” comes quickly to mind. Related to empowerment and emancipation, Knowles (1989) offered a vivid personal example of growth and development through dialogue with others in regard to pedagogy and andragogy. In the field of adult learning, Knowles (1980), considered the predominant pioneer of adult education in the United States, defined pedagogy as “teaching children” and andragogy as “helping adults learn.” His interactions with colleagues resulted in his changed perspective of pedagogy and andragogy as not dichotomous or antithetical but on a continuum influenced by a larger context with multiple power players and learners of
diverse ages. Worthman (2008) is right “as interactions play out on the continuum, participants negotiate meaning in a process that only ends when (we) die” (p. 449).

**Late twentieth century – A new prominence.** In the late 1950s, British influence again spawned American interest in collaborative learning. Bruffee (1999) credits British educator, Edwin Mason (1970), whose term collaborative learning he “adopted,” “for calling attention to the value of collaborative learning in the late twentieth century” (p. 80). The democratic view of authority and knowledge, prevalent in the 1930s, came to prominence again in the 1960s (Cabrera et al., 2002). According to Gamson (1994), educational innovations (e.g. cluster colleges, free schools, interdisciplinary programs) incorporated social approaches influenced by Dewey (1963) and Freire (1998). In the late 1960s emerging self-help groups and social group work research along with the political agendas reverberating from the women’s movement and an unpopular war contributed to increased interest in peer group influence for intellectual concerns (Bruffee, 1999; Hawkes, 2008).

**Collaborative and cooperative learning.** In this general time period, cooperative learning had begun in earnest. In the 1960s, three scholars, Roger Johnson, his brother, David Johnson and Karl Smith, all from different disciplines, began a “comprehensive library” of research analyses on cooperative learning with the first study in 1924 (Johnson et al., 1998). Enriching profoundly the whole spectrum and interest in small group learning, these foremost authorities on cooperative learning document that “68% of the studies have been conducted since 1970” ((Johnson et al., 1998). p. 31). In contrast, Bruffee (1999) describes collaborative learning with its dialogic reasoning and challenge as having “languished” in the 1970s and 1980s. This was due to sociologists "unfair and
inaccurate” associations with the “managerial manipulation” and “social efficiency” to standardize, select, and train for pre-determined objectives of “Taylorism” (p. 81).

Bruffee (1984, 1999) sets forth that collaborative learning answered an accelerating crisis created by a burgeoning enrollment of first time students unprepared for the academic rigor of the college classroom in the 1970s. Weiner (1986) also attributes this change in student population to the isolation of large overcrowded classroom settings and the growth in nontraditional students. In the literature, the term nontraditional references students with family responsibilities, employment obligations, and delayed postsecondary enrollment, therefore, primarily viewed as an adult learner (Benedetti, 2007; Zitomer, 2005).

At the University of London in the late 1970s, a group of colleagues with largely political agendas and influenced by the Vietnam era, were vested in mitigating (if not removing) from education what they considered destructive authoritarianism (Bruffee, 1984; Hawkes, 2008). At this time in American higher education, the “roots” of implementing collaborative learning did not surge from “radical politics nor research” (Bruffee, 1984, p. 637). Rather an accelerating crisis of first time students unprepared for the college classroom compelled the innovation. A plethora of traditionally based “help” programs failed. Harshly confronted with the inadequacies of new students, irrespective of their K-12 experience, the dilemma was not alleviated by favorable secondary academic backgrounds and exacerbated by refusals to accept help. Acting intuitively, some college faculty determined students did not need a variance of what had not worked in the past but an alternative learning experience. Peer tutoring, peer criticism, peer evaluation, and classroom group work were initiated, all forms “of indirect teaching in
which the teacher sets the problem and organizes students to work it out collaboratively” (p. 637). By the 1980s, this educational jolt in higher education launched a broader interest in collaborative learning and community for learning (Gamson, 1994).

Active learning. In the 1980s, propelled by college and university leaders and national reports calling for increased student participation to improve learning outcomes, active learning emerged (Bonwell & Eison, 1991; Prince, 2004). With widespread concern, multiple educational initiatives converged under the overarching concept of active learning. Sutherland (1996) identified Maria Montessori and John Dewey as early advocates. According to Senge (1990), learning had “lost its central meaning. . .learning has come to be synonymous with taking in information” (p. 13). Cross (2000) specified “attending, thinking, analyzing, considering, arguing, imagining, reflecting” (p. 18), as collaborative learning tasks to foster an active environment for brain connections in cognitive and non-cognitive achievement outcomes. In the literature on collaborative learning, the recurring attribute was active engagement through social interaction (Bruffee, 1999; Cabrera et al., 2002; Cross, 1998, 1999, 2000; Gamson, 1994; Goodsell et al., 1992; D. W. Johnson et al., 1998; Prince, 2004; Silverman & Casazza, 2000).

Learning college movement. Collaborative learning, a form of active learning, shares the philosophy of the learning college movement. A myriad of factors, including the quest for active learning, spawned the Learning College Movement. In 1983, the National Commission on Excellence in Education published, “A Nation at Risk,” a summary of the demoralizing data attributed to “the rising tide of mediocrity.” Not the target of these profound statistics, higher education soon felt the impact (Cross, 1998). “The American Imperative” framed the issues for reform. The call was for a “redesign of

Barr and Tagg (1995) of Palomar College write, “For many of us the Learning Paradigm has always lived in our hearts. . . .But the heart’s feeling has not lived clearly and powerfully in our heads” (p. 14). Community college professors in California, their ground-breaking article defined the paradigm shift in American higher education by redirecting the focus from the quantity of instruction to the quality of learning outcomes. Integral to this highly defined paradigm shift from “providing instruction” to “producing learning” is active learning. Cross (1998) illumined the implications of this dramatic change as an “important difference in the climate of a campus when the focal point for attention is students and their learning rather than teachers and their teaching” (p. 14).

At the forefront of this movement is the League of Innovation in the Community College. In response to national community college trends, McClenney (2004) outlines five promises made by community colleges. Under “Focus on Learning,” she attributes the “near tidal wave of interest” (p. 12) to the above mentioned pioneers and lists six basic attributes of a learning-centered institution: (a) unmistakably defined learning outcomes, (b) systematic student assessment and documentation, (c) student data prompting reflection, decisions, and action, (d) learning-centered approach to all institutional tasks (e.g. recruitment, hiring), and (e) documents, policies, collegial effort,
and leadership behavior consistent with a learning-centered culture. The community college field site for this study is identified with this movement. In 2000, this field site was one of the first twelve colleges selected as an International Vanguard Learning College. Additional background is in Chapter Three under Context for the Inquiry.

**Twenty first century.** Smith and MacGregor (1992) state collaborative learning occurs “in all disciplines at every level of education” (p. 10). Referenced as “innovative” or “new,” new forms are being introduced, and new demands are being made for new contexts, more specifically, web-based delivery and workforce demands, respectively.

**Web-based delivery.** The foremost new venue is educational technology. Bruffee (1999) focused on instructional technology, as well as collaborative writing and peer tutoring. According to Bruffee (1999), if the same engagement of theory to practice is incorporated, online delivery systems offer “the potentially most important and powerful educational tools we have at our command” (p. 113). Bruffee (1999) counseled software designers like classroom professors to foster interaction between individuals and groups of individuals while responsibly decentralizing and monitoring authority to advance the kind of “social maturity” in keeping with intellectual development.

Current developments in educational research and technological applications provide evidence for technology’s potential as an educational tool. A study of graduate students by So and Brush (2007) engaged in a blended format course with a substantive collaborative learning project found high levels of “perceived” collaborative learning correlated with “perceived” high levels of mutual trust and interdependence. Aware of the value of “community” to ignite passion and prepare students to learn more quickly for rapidly changing real world environments, Brown and Adler (2008) explained one of the
foremost innovations, “Learning 2.0.” This new generation of technology provides the platform and structural enhancements to support a high level of participation amongst learning communities. Technology that can undergird the thinking, speaking, and writing cycle advocated by Bruffee (1999) and others is described later in this chapter.

**Workforce demands.** In 2006, five corporate authors published research findings titled, “Are They Really Ready to Work?” Survey questions were posed to human resource professionals on the workforce readiness of “new entrants.” For two-year and four-year college graduate new hires, they ranked second of twenty skills “Teamwork/Collaboration” at “82.7 percent” and “94.4 percent,” respectively. “Teamwork/Collaboration” was defined as to “build collaborative relationships with colleagues and customers; be able to work with diverse teams, negotiate, and manage conflicts” ((The Conference Board, Inc., Partnership for 21st Century Skills, Corporate Voices for Working Families, and Society for Human Resource Management, 2006, p. 21). In addition, the Lumina Foundation for Education published research titled, “Returning to Learning: Adults’ Success is Key to America’s Future.” In this study, seven researchers reported an undergraduate degree is now the equivalent of a high school diploma. Moreover, the report concluded that the United States to remain economically viable in the world community will need 53 million adult workers to complete a four-year degree (Turner et al., 2007).

Popularizing the term collaborative learning in the 1980s (Holt, 1988), Bruffee’s (1999) seminal work juxtaposed his view of this instructional strategy with academic and employer reports on college graduate new hires as adept at computers and individual work but limited in peer interaction on “substantive issues.” Bruffee (2009) continues to
seek “recognized identity” for greater “social maturity integrated with intellectual maturity” (Bruffee, 1999, p. xiii). Cabrera et al. (2002) cite Morse’s (1989) work, *Renewing Civic Capacity: Preparing Students for Service and Citizenship*, to pinpoint a “major key civic competency” or social maturity, “the ability of individuals and groups to talk, listen, judge, and act on issues of common interest” (p. 30). This larger social context dispersed through the literature frames the potential for developing collaborative learning and the premise of the collaborative learning concept researched in this study.

Since flourishing the 1930s, Bruffee’s (1984, 1999) notion of collaborative pedagogy has been considered the first activity in “student collective thought” and the most representative of pragmatist tenets. His interest in social constructivism, a “more recent variant” (Holt, 1988) of pragmatist thought, propelled Bruffee’s ideas to the forefront for many American scholars and social scientists. His view of collaborative learning continues to provoke acclaim and controversy.

Looking through the lens of history served to situate this study in its historical context for stakeholders in education (e.g. taxpayers, classroom instructors, academic institutions, government agencies) and assess the impact of philosophical beliefs on pedagogical practices. The literature strongly reported that what knowledge is and where authority rests will impact how social learning interaction or the lack thereof is structured for cognitive or academic applications of collaborative learning. This study, however, challenged this historical element by documenting a nonfoundational socio-constructivist concept of collaborative learning in classroom settings with foundational curriculum.
Background on Kenneth Bruffee

Further positioning the intended research in the literature, Kenneth Bruffee is the scholar, author, and classroom practitioner who popularized the term, collaborative learning, in the 1980s (Holt, 1988). His concept is the phenomenon under investigation. Evident throughout the literature review are Bruffee’s primary contributions to academia: (a) initiating substantive dialogue on basic principles of collaborative learning, (b) popularizing the theoretical considerations to improve collaborative learning, and (c) promoting collaborative learning from the nonfoundational social constructionist stance for multiple disciplines, particularly writing centers, English composition, and literature (Kail & Trimbur, 2007; Kennedy, 2006; Ward, 1994). In this section, the professional credentials, educational contributions, personal experience in re-acculturation, and notable scholars’ influence on this formidable leader in higher education helps to explain his convictions and commitment to collaborative learning.

Credentials and contributions. Bruffee (1999) began his academic career in the 1960s. Influenced by noted researchers and scholars (e.g. Bruno, Dewey, Kuhn, Latour, Oakeshott, Rorty, Vygotsky) in the development of his collaborative learning concept -- writing centers and peer tutoring are the hallmark of his practitioner investment. Nationally recognized in peer tutoring and collaborative learning, the range and focus of his professional activities and testimonies of colleagues and practitioners is compiled in a special edition of The Writing Center Journal (2008). This special edition affirmed not only his theory but his practice of his theory (Lerner & Boquet eds., 2008). Table 1 below highlights Kenneth Bruffee’s academic career.
Chronology of Kenneth Bruffee’s Professional Career

1956  B. A. in English from Wesleyan University  
1966  Ph.D. in English from Northwestern University  
1971  Freshman English Director, Brooklyn College, City University  
1972  Published A Short Course in Writing  
1977  Co-Founder of the national Council of Writing Program Administrators (WPA)  
1979  Founding editor, WPA Journal  
1979  Co-Founder of Brooklyn College Summer Institute in Training Peer Writing Tutors  
1979-1982  Directed a Fund for the Improvement of Postsecondary Education (FIPSE) Institute in Peer Tutoring and Collaborative Learning (spawned significant contributors and practitioners)  
1984, 1993  Keynote speaker, Peer Tutoring Conference, Brown University  
1989  Began writing seminal work, Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge  
1991-1992  Faculty Fellow, Wolfe Institute  
1991-1994  Broeklundian Professorship, Brooklyn College, City University  
1998-2000  New York University Faculty Resource Network Scholar in Residence  
1999  Seminal work published  
2007  Keynote Address, 25th Annual National Conference on Peer Tutoring and Writing  
2008  The Writing Center Journal, Issue dedicated to Kenneth Bruffee and the Brooklyn Plan

Adapted from Bruffee (1999) and http://academic.brooklyn.cuny.edu/english/bruffee/bruffee_cv.html.

Encounter in reacculturation. Bruffee’s (1999) collaborative learning perspective was profoundly impacted by a personal experience compelled by a professional crisis. In 1971, overwhelmed with a new directorship and Brooklyn College embracing “open admissions,” Bruffee enlisted colleagues from other schools finding them a limited resource with similar “appalling” circumstances (Kail & Trimbur, 2007).
In their comparable realities they found a camaraderie that spawned recurring meetings with assigned readings. In these gatherings, “the most powerful force changing us was our influence on one another” (Bruffee, 1999, p. 9). Feeling both risky and comfortable while unintentionally developing a new language along with other attributes, a cultural change was signaled by this new fraternity. Also developed was a sense of displacement and distance from other longstanding colleagues. Bruffee’s personal and professional reacculturation, a key component of his collaborative learning perspective, instilled a belief in facilitating collaborative learning. Bruffee and his colleagues came to realize students: (a) come deeply acculturated with community identities (e.g. family, clubs, ethnic groups), (b) talk, think, write, and behave like their established communities, and (c) need reacculturation not correction by instructors to reach new and desired “knowledge communities.” What Bruffee and his colleagues learned about themselves resulted in what they came to understand about their students’ needs. Consequently, Bruffee (1999) believed such facilitation was difficult to attain without a collaborative re-acculturation of “this magnitude,” including “the painstaking talking through” (p. 78) as Bruffee and his colleagues encountered. In A Short Course in Writing, journal articles, and national or regional conference presentations, he espoused his conviction. Consequently, the academic community with whom Bruffee associated became highly engaged in and committed to collaborative learning, this pedagogy of reacculturation.

**Scholars’ influence and critique.** Influenced primarily by Oakeshott (1962), Vygotsky (1965, 1978), Kuhn (1970), Rorty (1979) and Fish (1980), Bruffee (1984) viewed knowledge as a “social artifact.” At the risk of oversimplification, scholars and researchers shaping Bruffee’s concept helped to define his view of knowledge and
explain the role of conversation and community. Kuhn (1970), Rorty (1979), and Fish (1980) posit that knowledge is not dependent on absolute truth and refute its existence. Kuhn (1970) explained scientific knowledge as changing because scientists arrange and rearrange what they know, not because “understanding of the world” changes (p. 209-210). Rorty (1979) followed in defining knowledge as a “social artifact” resulting from challenging one another to explain why we believe what we believe. Both contended knowledge is not, however, whatever an individual claims it is but is established by a “knowledge community” of peers. Fish (1980) completed the argument by explaining knowledge as an acculturating process into an “interpretive community” where ideas take on meaning. Oakeshott (1962) argued conversation distinguishes humans externally in social interaction and internally, conversation reconstituted as thinking. Geertz (1971), Vygotsky (1978), and others influencing Bruffee espoused that we first learn the external experience of conversation in social exchange and later develop displaced conversation in human reflection or thinking. Vygotsky (1978) further explained as heterogeneity expands in social interaction potential learning power increases. Bruffee (1984) wrote:

To the extent thought is internalized conversation, any effort to understand how we think requires us to understand the nature of conversation; and any effort to understand conversation requires us to understand the nature of community life that generates and maintains conversation. . . .To think well as individuals we must learn to think well collectively – we must learn to converse well. The first steps to learning to think better. . .are learning to converse better and learning to establish and maintain the sorts of social context, the sorts of community life, that foster the conversation members of the community value. (p. 640)
The influence of scholars on Bruffee’s concept of collaborative learning is the essence of knowledge in relationship to conversation and community dependent on the weight of dialogue and critical mass. This makes for a classic inquiry. Is sound – sound, if no one hears it? If not, how many need to hear and under what conditions? Bruffee (1999) referenced Abercrombie’s (1960) research on medical students’ group diagnoses resulting in more valid medical judgments than individual efforts initiated. Bruffee (1999) emphasized Abercrombie’s contribution to the value of conversation in “socially justifying their beliefs” (p. 13) and abandoning what cannot be justified. Bruffee (1999) credited again British educator, Edwin Mason, leading him to see not only learning but knowledge as socially achieved. Such influences contributed to Bruffee’s (1982) work on the role of social justification in relationship to a liberal or classical education.

Bruffee’s (1999) view evolved over two decades beginning with faculty at different institutions who challenged him to explore his “discomfort” with traditional education and opened new vistas for discovery and self-examination. While Treisman (1985) was discovering the positive effect of continual engagement in conversation for African-American students at Berkeley, Robert Unger unveiled for Bruffee the dichotomous tension between the desire for group and the accompanying distrust (Bruffee, 1999). Bruffee (1999) claims it was not until 1989 when writing his seminal work “for a larger audience” that he began to grasp “non-foundational thought, the relationship among the three elements that concerned me – classroom teaching, social group work, and what we think knowledge is” (p. xvi). Throughout this journey, Bruffee (1984) upholds the “vitality of knowledge communities” that depends on educators performing as “conservators and agents of change” (p. 650).
As Bruffee’s view was grounded in a nonfoundational social constructivist epistemology, so was the antagonism situated in counter theories and the dissonance of divergent ideologies, evidencing the socio-political context addressed earlier. Bruffee’s critics, educators and scholars, largely respect his leadership role in collaborative learning over the last three decades. The benefits frequently cited were students gaining: (a) new points of view to develop their own, (b) mutual peer improvement amidst diversity, (c) skill in substantive conflict dialogue to hone social and critical thinking in an academic setting, and (d) transfer to other settings. Critics take issue, however, primarily with his social constructivism and narrow view of how knowledge and learning occur depicted here in coconstruction of language, consensus building, and creative thinking.

Sullivan (1995) and others viewed social constructivism as a “default,” “no fault,” catch all theory with the “patrons,” educators, deciding what is wanted and how, then, calling it social constructivism (i.e. name it and claim it). In further review of Bruffee’s seminal work, first published in 1993, Sullivan (1995) observed that some view social constructivism as overused and lacking criteria to establish credibility. Beade, Beck, and Foster (1987) described consensus as an “overeager application” of social constructivism.

Bruffee’s concept of consensus focused criticism of Bruffee’s work on his premise that all knowledge is co-constructed to the exclusion of individual thought (Trimbur, 1989). Some of the critics contended consensus is a potentially totalitarian practice stifling individual creativity and imposing conformity, as in the British Romanticists’ position addressed earlier under Eighteenth and Nineteenth Centuries. Moreover, Johnson (1986) characterized Bruffee’s (1984) use of a common language, “normal discourse” or agreement, and instructors as “peers” with students. He saw this as a “benign” alignment with “Naziism, Fascism, and Communism” (p. 76). In Bruffee’s (1986a) response to Johnson (1986), he countered by explaining his concept of collaborative learning and the aspects formerly mentioned as “agreed to” not “imposed” and based on “negotiation rather than a principle of assertion and acceptance” (p. 78). Johnson (1986) added to this contention describing Bruffee’s collaborative learning as “Orwellean ‘group-think’” and asked how “the integrity of the individual creative thinker” would be protected “when he is out-voted” (p. 76). In Bruffee’s (1984) article, he described “abnormal discourse,” that “sniffs out stale, unproductive knowledge and challenges its authority” as, also, “necessary to learning” (p. 648).

Johnson (1986) acknowledged Bruffee’s “liberal bows” to creative thinking but found unacceptable in Bruffee’s (1984) article that creative thinking “can’t be taught directly” (p. 76). Bruffee (1986a) responded, “I claim that no one can teach ‘creativity,’ because although many people talk a lot about it, no one has convinced me he can define it, much less teach it” (p. 78). Bruffee continued, “Collaborative learning certainly cannot induce creativity. But it does make a place for it. Collaborative negotiation of knowledge allows the option of dissent and it responds to the pressure of ‘abnormal
discourse.’ Dissent is not, I believe, an option conspicuously offered under ‘Naziism, Fascism, and Communism’ (p. 78). Langbert (2007) held Bruffee’s position has been followed and a “competence crisis” across the professional landscape exists.

In contrast, Truesdale (2008) viewed this divergence as a misunderstanding between “our methodology” (i.e. his agreement with Bruffee) and a “traditional” classroom. Believing objectives are the same, one uses a “directive” and the other an “indirective” approach with both learning the conventions of the academy and acknowledging the goal of “consensus,” Bruffee’s (1999) centerpiece. Furthermore, those who agree with Bruffee (1999) believe knowledge, authors, and conversation, displaced or direct, is socially constructed. Further exposing the layered complexities of thought on these theoretical issues, those more liberal than Bruffee believe he is micro-focused on how knowledge communities work. They contend he failed to consider how the outcomes can interface with an exclusionary social order entrenched in hierarchy.

Lastly, Trimbur (1989) sought not to eradicate Bruffee and Rorty’s value of consensus but to introduce “dissensus.” Trimbur (1989) challenges Bruffee’s practice of consensus as a process of normal and abnormal discourse that eventually brings us back to “business as usual.” He proposed a tool that does more than “determine who may speak and what may be said” (p. 614). Trimbur (1989) envisioned a structure that frees participants to investigate differences “not on consensus but on reciprocity and the mutual recognition of differences” (p. 614). Young (1986) called it “openness to unassimilated otherness” (p. 615). Whereas Bruffee (1999) advocated for agreeing to disagree, Trimbur’s (1989) concept would carry Bruffee’s thinking a step farther, “organizing the conditions in which we live and work accordingly” (p. 615).
The Conceptual Framework under Investigation

Influenced by respected scholars in various disciplines and coupled with his serendipitous personal experience, Bruffee’s conceptual framework of collaborative learning can well be explained by: (a) the role of theory, and (b) the two components of reacculturation. This section also includes an expanded version of the collaborative learning description for the purposeful criterion sampling which embodies the consensus building model. The simplified version implemented in the purposeful criterion sampling process for the selection of community college faculty is Appendix B in Chapter Three. Bruffee’s (1999) consensus building model demonstrates a primary model of his view of collaborative learning and can be found under Best Practices.

Role of theory. In Bruffee’s (1999) seminal work, his conceptual framework came to the attention of scholars and practitioners in the 1980s primarily because of his premise of the interdependence of theory to practice, a key tenet of American pragmatism (Holt, 1988). Theory, the result of common and natural processes, evokes negative connotations that have mitigated its ability to ground educational practices. Cognizant or not, a why exists for instructional applications with critical insight to the sometimes “short-lived” tendencies of educational innovation lacking theoretical foundation. Gamson (1994), Beebe and Masterson (2006), and others outline key values of theory: (a) provide structure to bind multiple facts together as a whole, (b) expedite improving student learning outcomes, (c) offer clarity in cause and effect, and (d) enhance appropriate transfer to other settings (e.g. new populations). In Bruffee’s (1999) view, the first consideration is one’s epistemological understanding of what knowledge is, distinguishing philosophically between foundational and nonfoundational knowledge.
Then, the relationship between “the learned and the learning” (p. xi) must be considered, discarding conveyance for conversation to coconstruct knowledge which realigns roles of authority. This requires a paradigm shift in thinking and function for all learning environments (e.g. traditional classroom, web-based environments).

According to Bruffee (1999), foundational knowledge is “cognitive,” grounded in fact, debatable positions are minimal to none and authority is centralized. Professors are the source who “discover, store, and purvey knowledge while their students consume, process, and use it” (p. xi). Freire (1998) popularized the “banking concept” to define foundational knowledge and its authority structure. In contrast, nonfoundational knowledge, Bruffee’s view (1999), is a social construct reached by consensus amongst a community of knowledge peers for whom solutions are seldom to never absolute (Bruffee, 1995). Learning moves from a monologue to a dialogue with professors and students in continual conversation (Gergen, 2001). Mutual enquirers, distributed authority naturally follows and Bruffee (1999, 2003) coined the term the “craft of interdependence.” He documented its commonness in noncurricular college activities (e.g. Orientation Week, protest marches, charitable events, orchestras, plays, team sports) yet is baffled by its lack in “substantive issues in their academic courses” (p. xiii).

**Two components of reacculturation.** The supporting theoretical framework, social constructivism guides the “trend” toward students coconstructing knowledge in a “socially interactive” setting (Cross, 1999; Gamson, 1994) where “knowledge evolves through a process of negotiation within discourse communities” (Prawat & Floden, 1994, p. 48). Within this world view of social constructivism, reacculturative conversation and knowledge communities are the two key functions to achieving Bruffee’s view of
collaborative learning. Reacculturative conversation occurs when control of social processes and tasks remain in the hands of the members of the knowledge community. Bruffee (1999) warns repeatedly for course instructors and curriculum designers to responsibly decentralize the placement and monitor the maintenance of distributed authority. Critical to achieving such procedures in collaborative learning is to foster peers granting to and accepting from each other authority while gaining skill in the craft of interdependence. Willingness for both to learn a new language and enter a new community is the essential skill in this “craft.”

Reacculturative conversation engages people in an iterative speaking, thinking, and writing cycle enabling change and movement from “established communities” to membership in desired ones. From Oakeshott’s (1962) influence, Bruffee (1984) references this iterative cycle as “conversations of mankind” and makes three statements worthy of reflection. “If my talk is narrow, superficial, biased, and confined to clichés, my thinking is likely to be so too” (p. 639). “The first steps to learning to think better, therefore, are learning to converse better and learning to establish and maintain the sorts of social context, the sorts of community life, fostering the sorts of conversation members of the community value” (p. 640). “We converse; we internalize conversation as thought; and then by writing, we reimmerse conversation in its external, social medium” (p. 641). Simply stated, the better we speak, the better we think, the better we write, the better community we build.

In tandem with conversation in reacculturation is the second component, community. Bruffee (1999) explains that if Shopkeeper A asks Shopkeeper B to help him improve his floor displays and Shopkeeper B agrees, they have embarked on
mutually beneficial collaborative learning. They begin to share the criteria of a
together they will understand, agree, challenge, empathize, accept, come to consensus, and learn. The risk level depends on the degree to which common experiences, responsibility, and knowledge about shopkeeping exists. Likewise, when two or more people allow themselves to enter a new “community,” the potential, if not assurance, for one to see the other as making “errors” and needing to change exists. When new students write a first assignment, it is often seen as full of “errors” needing correction. Bruffee (1999) and colleagues learned in their collaborative journey the way new students talk, think, and write is not “unacceptable” in the community from which they originally came.

Bruffee (1984) having established the criteria to build a “community of knowledge peers” (p. 642), asked how student peers desirous of entrance to new communities yet lacking the criteria of the new community can hope to get in. Bruffee’s (1999) answer entailed “collaborative reacculturation” through “transition communities.” Bruffee (1999) writes of Trimbur’s experience, as a professor of undergraduate students at Worcester Polytechnic Institute. Trimbur’s students collaboratively constructed a response to an assignment that included a highly controversial reading task, journaling, small group discussion, and concluded with a written essay on the change in their thinking. One student, “Mary” did not want to “judge” another person, based on her “acculturation” in the knowledge community of her family. In conversation with a peer, she connected with the word “conversion” and could relate it positively to her faith beliefs. This “dramatic” change in Mary’s thinking began “when she engaged in
conversation with a peer at the ‘boundary’ between the community she was brought up in” (p. 11) and her peer’s. In other words, the negotiations that take place at the boundaries of knowledge communities is the “reacculturative activity we call education” and those who facilitate those negotiations “we call teachers” (Bruffee, 1999, p. 120).

Bruffee’s (1999) colleagues believed this formidable commitment to students could best occur in a collaborative environment with student peers forming “transition communities” to facilitate transfer to new knowledge communities. Transition communities are understandably often characterized by stress and uncertainty. In these transition groups students have a place to meet under agreed-upon “rules of engagement” and are afforded “ports of entry” (p. 78) to negotiate membership. The single most critical component is a “vocabulary” or “language” to begin reacculturative conversation. Known also as “translation communities,” participants use the vocabulary of established communities, invent their own, borrow from others, and seek to integrate terms indigenous to the community they plan to join and from which the instructor positions the learning task. At multiple levels of collaborative engagement for transfer beyond the classroom, the relevance of “language” is evident. For example, to address state-wide preparation for possible terrorist attacks on Florida attractions while conserving time, finances, and limited human resources, an educational technology company teamed up with the Florida Department of Health and the University of Florida, College of Medicine. The Orlando Sentinel reported art, technology, and medical professionals representing different generations “spent a lot of time together. It took about six months for the two groups to learn each other’s languages” (Horowitz, 2008, p. A7). Thus, the better we speak, the better we think, the better we write – the better community we build.
Expanded description of concept for criterion sampling. For purposeful criterion sampling, this research study required community college faculty participants who employ these instructional practices in the learning tasks of their course(s) for students to achieve substantive academic objectives. The learning environment (e.g. within and outside the formal setting), objectives, assignments, and assessments evidenced the following attributes or elements:

1. The Learning Environment
   a. The instructor shares learning responsibility, governance, and assessment with students.
   b. Conversation is the core learning tool to construct knowledge for a problem solution or learning process analysis with disagreement encouraged (Bruffee, 1984, 1999, 2009).

2. The Learning Objectives
   a. Learn to think, speak, write and read (i.e. “displaced” or “indirect” conversation) better while building better community through interdependent human interaction.
   b. Construct new or improve existing knowledge through full student group participation in synchronous intellectual effort recognizing learning potential for every student is greater than what can be attained or “endured” alone (Bruffee, 1999, 2009).
   c. Articulate and reference facts in a context for a specific application within a discipline or a larger knowledge community (i.e. mastery knowledge, deep learning) structured in social interaction (Bruffee, 1984, 1999, 2009).
d. Gain more substantive and sophisticated interpersonal skills, especially the active learning conversation skills (e.g. encourage, listen, explain, justify, critique, challenge), leading to “social maturity” (Bruffee, 1999, 2009; Morse, 1989; Soller, 2001).

e. Develop consensus building skills through expanding conversation with skills to disagree, as well as agree.

3. The Learning Activities

a. Open-ended academic learning tasks designed by the instructor.

b. Students work together in multiple levels of nested discussion groups to gain increased authority characterized by (a) agreement and disagreement, (b) intellectual negotiation, and (c) collective decision-making to reach learning outcomes or consensus (Bruffee, 1999, 2009; Trimbur, 1989).

4. The Learning Assessment

a. What is not evaluated in student assessment:

   i. Effectiveness at working together

   ii. Assimilation and accurate reproduction (i.e. traditional criteria)

b. What is evaluated in student assessment:

   i. How well students can incorporate the knowledge each brings to the small groups or whole class discussions and apply integration to an open-ended task. Open-ended tasks include:

      1. A problem(s) within the discipline or field of study

      2. The collective learning process within the discipline

   ii. How well students’ conversations integrate individual knowledge:
1. The similarities, differences, and motivations

2. The evidence of new knowledge generated

3. Behavioral changes or methods of working together

   iii. How conversant students are (i.e. verbal or written):

   1. Integration of facts and context of the discipline

   2. Participation in small group and whole class discussions.

   iv. How well students challenge, clarify, and justify positions through evidence or reasoning (i.e. agree, disagree, group decision-making)

   c. The primary instruments of assessment are students’ contributions to class discussions through the displaced conversation of writing assignments:

      i. Group assignment with a “recorder” to write and others practice and improve speaking, thinking, and writing in conversation to edit

5. Students write individual essays or reports on:

   a. Attributes and changes in the problem solution or the collective learning process resulting from the group discussions.

   b. Before and after group discussions to compare and contrast the attributes or changes resulting from either type of open-ended task.

   c. Additional assessment: Instructor observations of verbal interaction in

      d. small group and whole class discussions (Bruffee, 1999, 2009; Cuseo, 2002; Goodsell, et al., 1992; Soller, 2001; Trimbur, 1989)

**Collaborative and Cooperative Learning**

As stated in Chapter One, the confusion, typified in various layers of complexity, characterizes the scholarly literature on cooperative and collaborative learning. Though
the differences are distinctive; the major commonalities tend to leave both vulnerable to uncertainty and challenges. Based on the literature, a more accurate interpretation of the research and effective application of either can be aided by an understanding of their: (a) historical origins, (b) similarities and differences, (c) taxonomies (e.g. continuums, models), and (d) the interchange of terms to help clarify uniqueness amidst ambiguity.

Historically speaking, before collaborative learning “trickled up” to higher education, small group learning, practiced primarily as cooperative learning, was developing in American K-12 education in the mid-20th century. The term cooperative naturally and intentionally implies non-competitive, centers on socialization, and rewards working together. The latter was designed by sociologists to enable the young child and the developing adolescent to learn the basics, where correct answers exist, simultaneously with social skill development. Postsecondary learning moves beyond the basics of established (foundational) knowledge, for which debatable positions are minimal to none, to constructing knowledge (non-foundational) where solutions are seldom to never absolute (Bruffee, 1995; Gamson, 1994; Matthews, Cooper, Davidson, & Hawkes, 1995).

This implies cooperative learning embraces a foundational epistemology and Bruffee’s concept of collaborative is a nonfoundational, social constructivist position. Millis and Cottell (1998) and others question an epistemological distinction, yet this divergence is the core differential expressed by many scholars (Bruffee, 1995, 1999; Cross, 2000; Dillenbourg, 1999; Gamson, 1994; Goodsell et al., 1992; Roberts, 2004; Silverman & Casazza, 2000; Vygotsky, 1978). Macaulay and Gonzales (1996) further depict collaborative and cooperative learning as representing a range of shared assumptions on a continuum (e.g. student-directed to teacher-directed) which does not
contradict an epistemological difference and supports the commonalities. In addition, Cuseo (1992) describes cooperative learning as more operationally defined, procedurally directed, and empirically assessed. Dillenbourg and Schneider (1995) define cooperative learning as a “protocol in which the task is split into subtasks in advance that the partners solve independently” and collaborative learning as “two or more subjects building synchronously and interactively a joint solution to a problem” (p. 22).

Although each has a distinctive origin, purpose, their own conferences, and proponents, both are about more than (a) physical proximity, (b) material sharing, and (c) verbal discussions. Neither is about throwing students together and expecting a powerful learning environment (Millis & Cottell, 1998). Smith (1996) also points out both are not about an inequitable distribution of tasks nor the more capable responsible for the less capable. Such actions can only result in all that detracts from collaborative or cooperative learning strategies. Bruffee (1984) lists the detractors as “conformity, anti-intellectualism, intimidation, and leveling down of quality” (p. 652).

Millis and Cottell (1998) categorize cooperative learning as a “sub-type” of collaborative learning and describe both as sharing common, philosophical, social, and pedagogical inferences. Philosophically, both value diversity of backgrounds, respect for the individual, and his or her potential to succeed in learning pursuits. Socially, each is a proponent of interdependence. Dewey’s view of education as “a social enterprise” and “associated life” credited to Benjamin Franklin are terms frequently cited, accentuating an unquestionable mantle of shared strength (Bruffee, 1995, 1999; Millis et al., 1998). Pedagogically, both call for active engagement to reach consensus for application toward a common learning objective. The five elements of cooperative learning developed by
Johnson, et al., (1998) reveal this: (a) mutual interdependence, (b) face-to-face interaction, (c) individual and collective responsibility, (d) interpersonal skills with academic and social development objectives, and (e) self-reflection and assessment or student metacognition of the group process (Smith, 1996, Cross, 2000; Prince, 2004).

The literature is somewhat wide ranging with regard to quality and extent of interpersonal skills for direct interaction. The consensus seems to be that these active learning skills are more critical to collaborative than cooperative learning. In Bruffee’s conceptual framework of collaborative learning, the key distinctive is the complexities of substantive dialogue for the coconstruction of knowledge in contrast to socialization by working together for learning what is known. Bruffee (1995, 1999) writes extensively on “constructive conversation” and the functional interplay of thought, conversation, and writing. Myers and Jones (1993) describe cooperative learning as an interdependent setting to “talk and listen, read, write, and reflect as they approach course content” (e.g. problem-solving, simulations, and role playing). Soller (2001) and others adhere to a greater sophistication and complexity of communication in collaborative learning which “encourages each other to justify their opinions, and articulate and explain their thinking” (p. 6). Such active learning skills as “encourage, justify, and elaborate” describe the distinguishing discourse and the potential of collaborative learning, the influence of Rorty’s (1979) “socially justified belief” as well as others.

Gamson (1994) notes a letter from a colleague, William Whipple, confronting power and authority issues, as “implicit” yet often “ignored” in all instructional strategies. In collaborative learning, however, Whipple penned, such issues “always takes both the student and the professor ‘into enemy territory’; cooperative learning
generally maintains traditional authority structures” (p. 46). Romer and Whipple (1991) wrote, “When students and faculty work together on course design, we have found that the extent of genuine collaboration depends on the negotiation of authority.” Hawkes (2008) credited Bruffee with “first identifying” the teacher’s classroom authority “as a key issue in student learning” (p. 31). In a review of Bruffee’s (1985) *A Short Course on Writing*, Kail and Trimbur (2007) pointed out that this first handbook for peer tutors addressed in its first edition the “redefining” of instructor and student roles moving students from being controlled to taking control and instructors from conveying new material to “developing evaluative judgment and intellectual maturity” (p. 85).

Amidst the similarities and distinctions in the literature, the scholarly literature provides organizational structures to illustrate differences and assist classroom implementation. For example, the literature places cooperative and collaborative learning on a continuum from more teacher-directed to more student-directed, respectively (Macaulay & Gonzales, 1996; Smith & MacGregor, 1992). For effective application, this provides a developmental perspective, flexibility and versatility, as well as securing the limitations. Table 1 contrasts differences in the primary instructional strategies found in the literature.
Table 1

Comparison Chart of Collaborative and Cooperative Learning

<table>
<thead>
<tr>
<th>Differences</th>
<th>Collaborative Learning (Nonfoundational)</th>
<th>Cooperative Learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Origin</td>
<td>Higher Education</td>
<td>K-12</td>
</tr>
<tr>
<td>Content</td>
<td>Nonfoundational; Debatable</td>
<td>Foundational; Wide agreement;</td>
</tr>
<tr>
<td>Authority</td>
<td>Student-based; Self-governing; Distributed;</td>
<td>Instructor-based; Centralized</td>
</tr>
<tr>
<td>Role of Faculty</td>
<td>Facilitator; One of multiple knowledge sources</td>
<td>Lecturer; Primary knowledge source</td>
</tr>
<tr>
<td>Structure</td>
<td>Minimal Oversight or direction</td>
<td>More pre-determined, directed &amp; assessed;</td>
</tr>
<tr>
<td>Accountability</td>
<td>More student responsibility;</td>
<td>More teacher responsibility;</td>
</tr>
<tr>
<td>Interaction</td>
<td>More complex and direct; Substantive conversation and negotiation skills;</td>
<td>Focus on social development;</td>
</tr>
<tr>
<td>Motivation</td>
<td>More intrinsic</td>
<td>More extrinsic</td>
</tr>
<tr>
<td>Concern</td>
<td>Hierarchical authority limits student development;</td>
<td>Lack of accountability; Competition impedes learning;</td>
</tr>
<tr>
<td>Goal</td>
<td>Learn how to learn; Share or shift authority and learning responsibility</td>
<td>Learn how to work together</td>
</tr>
</tbody>
</table>

*Note.* Adapted from Bruffee, 1999; Cabrera et al., 2002; Gamson, 1994; Millis & Cottell, 1998.
Historically speaking, the continuum could also be expressed as representative of a more traditional to a more progressive approach. Salient factors determining placement on such scales would be: (a) the learner’s competence (e.g. maturity, academic ability, and skill in interaction), (b) the demands of the learning content, and (c) the educator’s presumptions on the essence and absoluteness of the knowledge to be learned. This reinstates Bruffee’s (1999) fundamental principle that what knowledge is determines where authority rests and applications employed. Hamilton (1994) describes three models by Trimbur (1993) representing a more sophisticated engagement of the continuum. Clarifying differences between collaborative and cooperative learning allows for more meaningful research and effective applications over confusion and failure.

**Relevant Published Research Studies**

Singularly important to this qualitative case study is that the research literature on collaborative learning fundamentally based in a nonfoundational epistemology, separate from cooperative learning, is severely limited. As documented throughout the literature review, and closely associated with this epistemological stance is substantive interpersonal skills developing “socially justified belief” or intellectual negotiation and decision-making skills. Since the research findings are limited on this attribute, this synopsis illuminates the relationship of this problem to the existing literature.

**Collaborative research integrated with cooperative.** Cooperative learning is one of the most highly investigated instructional strategies (Slavin, 1989; Johnson et al., 1991). Collaborative learning shares multiple characteristics with cooperative learning and findings are ascribed to both by experts across the field. For the last fifty years, the analyses, meta-analyses, and review of research by D. W. Johnson et al. (1998) and D.
W. Johnson and Johnson (1996) on cooperative learning formed the resource base for collaborative learning. The bearing on collaborative learning research is important. Most of the cooperative learning studies in recent decades have occurred in K-12 grade levels for whom and where it was initiated (Cross, 2000; Millis et al., 1998; Natasi & Clements, 1991). Slavin (1989) reports this is true of collaborative learning. Johnson and Johnson (1993) assert cooperative learning has “generalizability” rare in educational literature and others concur (Bossert, 1988; Cooper & Mueck, 1992; Dansereau, 1983; Freirson, 1986; Millis & Cottell, 1998; Treisman, 1985). Millis and Cottell (1998) cite Bossert’s 1988 meta-analysis and conclude the “benefits affect students of all ages, in all content areas, for a wide variety of tasks” (p. 9). More specifically, Natasi & Clements (1991) concur:

Cognitive-academic and social-emotional benefits have been reported for students from early elementary through college level, from diverse ethnic and cultural backgrounds, and having a wide... Furthermore, cooperative learning has been used effectively across a wide range of content areas, including mathematics, reading, language arts, social studies, and science. (p. 111)

As reported earlier, cooperative learning research at the college level since the 1990s has been “rekindled” (D. W. Johnson et al., 1998, p. 31). In addition, explanations and taxonomies by noted experts indicate cooperative learning is viewed by some, not all, as a subcategory of collaborative learning (Cuseo, 2003; Millis & Cottell, 1998; Smith & MacGregor, 1992). Furthermore, the weight of extensive cooperative learning research within higher education is primarily quantitative. This leaves collaborative learning potentially referenced by what represents only a component (Bruffee, 1999; Cuseo, 2003; Gamson, 1994; D. W. Johnson, et al., 1998; Millis et al., 1998). Hence, findings
attributed to collaborative learning are frequently imbedded in and substantially dependent on the vast amount of quantitative cooperative learning research. This leaves the understanding and meaning afforded by a qualitative dimension deficient and skews a comprehensive understanding of collaborative learning from a nonfoundational, socio-constructivist position, its unique contributions and limitations. Bruffee (1999) writes:

What little research there is on collaborative learning in college and university settings tends to assume an inappropriate understanding of knowledge. Research that makes non-foundational and social constructionist assumptions has hardly begun. . . . Lack of appropriate research is due in large measure to the tendency of educational research projects to be dominated by the foundational (usually referred to as “cognitive”) understanding of knowledge and the authority of knowledge. Because of these foundational assumptions, the results of even the best educational research are foundationally biased. (p. 83)

In this “bounded system” of the phenomenon, the attribute of substantive dialogue (e.g. justify, explain, negotiate) is inextricably connected. Communication, “substantive conversation,” and community form the two core functions or components of Bruffee’s (1999) “pedagogy of re-acculturation” (p. 7).

**Substantive conversation skills.** Research findings from the body of literature reveal four recurring themes: (a) academic achievement (e.g. sustained knowledge retention, critical thinking), (b) substantive interpersonal communication skills (e.g. justify, explain, negotiate, delay judgment), (c) quality of relationships (e.g., social support, initiate engagement, increased sensitivity to cultural differences), and (d) psychological adjustment (e.g. self esteem, persistence, retention for degree completion).
Extensive reviews, syntheses, and meta-analyses attest positively to what we know about each. The strength of findings and analysis on student academic achievement, quality relationships, and psychological adaption is unmistakably evident (Cabrera et al., 2002; Cross, 2000; D. W. Johnson et al., 1998, 2007; McKeachie, Pintrich, Lin, & Smith, 1986). Cross (2000) acknowledged the challenge of “devising adequate performance measures for the interpersonal and teamwork skills” (p. 26). With its uniqueness less researched, this distinctiveness, if any, is less known. Inferred by Cross (2000), qualitative research offers more capacity to investigate the less empirically measurable attributes like “substantive conversation.”

While fewer attribute findings to “substantive interpersonal communication skills,” the literature, at times, is wide ranging with regard to quality and extent of conversation or substantive dialogue and the interpersonal skills required. Furthermore, the literature supports this active learning skill as more critical to collaborative than cooperative learning. In the context of collaborative learning, Romer and Whipple (1991) and Gamson (1994) discussed the role of authority, “power” and “enemy territory,” respectively, as related to faculty and student interaction.

For this study, several studies bear acknowledgment for findings related to: (a) peer group influence (Astin, 1993; Light, 1990) and (b) substantive dialogue (Abercrombie, 1960; Treisman, 1985). Bruffee’s (1999) reacculturation via transition groups explicitly addressed the dichotomies existing in the human interactions of belonging versus distancing and trust versus distrust. Astin’s (1993) large-scale quantitative study using hundreds of colleges and thousands of students measured twenty-two learning outcomes drawing the conclusion that “the student’s peer group is
the single most potent source of influence on growth and development during the undergraduate years (p. 398). Light (1990) interviewed 570 Harvard undergraduates and found students who maximized the college experience prioritized time with faculty and other students in “interpersonal activities...built around substantive academic work” (p. 6). Newcomb’s (1966) research reinforced this and credited the group’s power to “reward or punish.” The import of faculty and student interaction in relationship to “substantive academic work” addressed what Bruffee said is lacking in undergraduate education. Astin’s (1993) work does not indicate student and faculty interaction represented distributed authority.

Bruffee (1999) pointed to the work of M. L. J. Abercrombie (1960) to showcase a strength of collaborative learning researched as early as the 1950s. Conducted at the University of London, the study found medical students making diagnoses in small groups reached medical judgments with greater quickness and accuracy than by working alone. Treisman’s (1985) large and highly cited Berkeley study with African-American math and science students, noted continual academic conversations resulted in dramatic changes in academic achievement. Shared conversations tend to eradicate “unshared biases and presuppositions” (Bruffee 1999, p. 13).

**Classroom authority.** Of particular value is the classroom practitioners’ perspective on classroom authority. In Bruffee’s (1999) epistemological view where mutual inquirers engage in “substantive conversation” to address substantial and subjective issues, classroom authority shifts to include the students as well as the instructor. Gamson (1994) stated her “starting point” is “theoretical clues” for changes in authority relations and students’ understanding of what knowledge is. In discussing
instructional strategies, she underscored the practicality of “good theory” and argued for such to “help explain why they work and don’t work, how their effects carry over into other settings, and how they might be adapted to new populations and situations” (p. 47).

In this functional value, Gamson (1994) quoted a personal communication from scholar and educator, William Whipple, to accentuate contrasting roles of authority between cooperative learning and Bruffee’s position on collaborative learning:

Cooperative learning means noncompetitive learning, in which the reward structure encourages students to work together to accomplish a common end.

Collaborative learning is always cooperative, but takes students one step further; to a point where they must confront the issue of power and authority implicit in any form of learning but usually ignored. Either mode may employ group work; neither depends entirely on this technique. Collaborative learning always takes both the student and the professor “into enemy territory”; cooperative learning generally maintains traditional authority structures. (p. 46)

This role of authority in the “bounded system” of the phenomenon for this qualitative case study accentuates the scarcity of data that exists on the perspective of college faculty responsible for the application of collaborative learning. This contrasts with the capacious and highly positive research literature on student achievement (Barkley, Cabrera et al., 2002; Cross, & Major, 2005; Gamson, 1994; D. W. Johnson et al., 1998; Prince, 2004). Having said this, an uncommon case study on the instructor’s experience provided helpful insights on shared governance, improved student outcomes, and enhanced instructor satisfaction. Emerson, Phillips, Hunt, and Alexander (1994) reported findings in a “developmental math class” using collaborative learning after
exhausting all known ways to gain “students’ attention.” From this case study, three instructional components were credited with reinforcing and contributing to the academic achievements and classroom environment: (a) instructor and students generate a collaborative text in place of a traditional text often designed for lecture approach, (b) students log during last five minutes of each class, and (c) change groups two times per semester. Significant to classroom authority is the shared construction of a text for the course. Regarding faculty satisfaction, the instructor’s assessment of the transformative encounter reported, “Teaching collaboratively has enabled me to get through more material, students have achieved a deeper understanding, worked harder, and enjoyed it” (p. 83). Records kept over several terms documented 5 out of 240 students preferred the lecture format.

**College faculty understudied population.** Lastly, a review of the literature also disclosed little is known about the impact of collaborative learning on faculty (Barkley et al., 2005). Amidst the limited data, Emerson’s et al. (1994) case study on collaborative learning applications in the college classroom also reports “the benefits of group learning for students almost seems to glow. . . .But we do not read much about what it demands of the teacher, the amount of time it takes, or how psychologically draining it is” (p. 83). In view of this, Emerson et al. (1994) offered additional and contrasting rare insight to the instructor’s experience and stated preference, as “hovering on the brink of pedagogical disaster” and often “not a stable enterprise” (p. 83). This correlated with Bruffee’s (1984) personal reflection as at times exceeding “my highest expectations” and other times “it doesn’t work at all” (p. 636). In spite of rapid attraction to collaborative learning often attributed to swiftly attained “extraordinary achievements,” Gamson
(1994) also reported faculty’ disillusionment and exhaustion. This case study will seek to collect rich and descriptive data to deepen understanding from the voices of community college faculty.

**Pervasive confusion of terms.** Not previously expanded, an extensive interchange of terms in research findings was evident in educational publications and classroom application (Cross, 2000; Goodsell et al., 1992; Luckie, Maleszewski, Loznak, & Krba, 2004). Throughout the literature, the highly researched cooperative learning can be the focus of a study with subsequent references attributing findings, characteristics, or applications to collaborative learning. For example, Prince’s (2004) study on active learning distinguished between cooperative, collaborative, and problem-based learning (PBS). D. W. Johnson et al. (1998), authorities on small group particularly cooperative learning, described cooperative learning as “the heart” of PBS which can also be collaborative but unlike either comprises more self-directed learning. In addition, Cross (2000) wrote on collaborative learning, primarily cited cooperative learning research, and interchanged or fused the terms, attributes, and applications throughout the writing.

Scholars acknowledged and concurred this can be expected when multiple attributes are shared and terms are “buzz words” in a growing field of research and practice like collaborative and cooperative learning (Bruffee, 1995; Dillenbourg, 1999; Matthews, et al., 1995; Millis & Cottell, 1998; Trimbur, 1989). My personal encounters with colleagues, secondary educators, and community college personnel (e.g. instructors, administrators) correlate with the literature. Roberts (2004) wrote, “Often the title of a paper may use the word cooperative, while the body of the paper discusses collaborative learning, or vice versa” (p. 206). This explicit frustration reaches the core of Bruffee’s
epistemological stance, fleshed out in Gamson’s (1994) practical defense of “good theory.” The better we define our terms, the better we conduct our research, the better we “help explain why they work and don’t work, how their effects carry over into other settings, and how they might be adapted to new populations and situations” (p. 47). The better we think, the better we speak, the better we write, the better community we build.

Best Practices

Beyond the abstractions of theory and research, Cross (2000) noted the current high interest in collaborative learning is supported by a growing body of practical classroom experience. The following practices are presented for the enhancement of or experimentation with Bruffee’s (1999) “concern” for the relationship of the classroom application, social interaction, and the epistemology of nonfoundational thought. These concerns are congruent with the four prevailing attributes of small group learning reported under “rationale” in Chapter One. Most significant to this study, the best practices selected for this section substantially explain, support, or integrate: (a) knowledge as nonfoundational and (b) social interaction necessitating more sophisticated substantive conversation. In the higher education literature, these two attributes most distinguish collaborative learning from all other similar or small group learning instructional strategies for the college classroom.

Consensus building. Best known for his work in peer tutoring and writing groups, Bruffee has developed, practiced, and written about multiple models of collaborative learning (e.g. extended project work, consensual responses to lecture). Consensus building clearly demonstrates Bruffee’s view of collaborative learning and is the model referenced for the purposeful sampling of my research. Bruffee’s conceptual
framework directs the focus beyond joint efforts on common objectives to the “process of intellectual negotiation and collective decision-making. . .to reach consensus through an expanding conversation” (Trimbur, 1989, p. 602).

Procedurally, consensus groups engage in a narrow but “open-ended task” to collectively achieve a negotiated agreement, agreeing to disagree. According to Bruffee (1999), this classroom dialogue takes place sequentially: (a) in small groups to reach local consensus, (b) among the small groups to reach a whole class consensus facilitated by the instructor, (c) between the whole class and instructor representing the discipline’s larger community to reach a consensus with the latter’s established conventions. This process begins with the instructor first composing heterogeneous groups & designing an open-ended task and ends with explicit student evaluation. The assessment is based on how well students internalized and engaged in the language and construction of the discussion, not how much content was covered or accurately it can be reproduced.

Faculty facilitation (i.e. relational sensitivity, content competence, self control) and students’ interpersonal skills (e.g. assertive, expressive, empathetic) must exceed the sophistication necessary in traditional learning environments. Critical distinctions between consensus building and “mere group work” include: (a) group composition, (b) task design, and (c) transitioning authority roles for the different levels of consensus building. These transitions from refrained engagement with small group consensus, “refereeing” the analysis, comparison, and synthesis of whole class consensus, to representing the discipline’s larger community profoundly demonstrates the full implications of theory to practice and the demanding role of reacculturative facilitation.
**Substantive group conversation.** According to Bean (1996), an effective group is characterized by controversy, a task deliverable, and a time limit focused on a course learning objective. An illustration would be to review a poem, painting, commercial, or statistical table and collectively posit three to five good questions (Cross, 2000). Bruffee (1999) encouraged open-ended questions. For example, “How would you improve the weakest sentence in this essay?” rather than “What’s wrong with sentence five?” (p. 43).

In the literature, Smith (1996) and others promote positive interdependence, a key attribute of cooperative learning. Not a unique attribute of collaborative learning, the longstanding popularity of the jigsaw strategy devised by Aronson, Stephan, Sikes, and Snapp (1978), could have value in collaborative learning as an incremental step toward developing more substantive interdependence. In this activity, the same set of material is distributed equally among all group members and among all groups. Representatives from the different groups with the same module of material work together and become experts on that module. On completion, each group member returns to their original group to teach their segment and learn the other portions from their group members.

**Skills and techniques to get started.** Peters and Armstrong (1998) spoke of three types of “teaching and learning” (p. 78). Type Three represents collaborative learning, the “joint construction of knowledge.” The teacher is a member of the group with “special knowledge” which does not “supersede” other learners in the group. In Type One learning, the teacher and student convey and consume knowledge or information, respectively. The literature indicated it is often preferred by both and may explain, in part, the paucity of collaborative learning in higher education. “Once past their own assumptions about how teachers are supposed to act, how learners are supposed
to learn, and how knowledge is made, teachers and learners alike can begin to taste the fruits of collaborative learning” (p. 80). Peters and Armstrong (1998) recommend:

- Integrate a collaborative learning task early in the course or process.
- Help students “catch themselves” collaborating.
- Respect for everyone and everything in the group is paramount.
- Trust is critical.
- Facilitators need to be over-prepared and need additional content.
- Participant relationship is vital and content issues must be central.
- Facilitate “level-izing” - all see self learn; all see self seeing self learn (p.82-85).

**Developmental transitioning helps.** With a growing adult population in higher education (Benedetti, 2007; Merriam & Caffarella, 1999), four generations in the workplace (Hammill, 2002), current skill shortages, and a high critical mass of adult workers needing a baccalaureate degree for the United States to remain economically viable in a global economy (Turner et al., 2007), best practice considerations for adult learning needs as well as for other select populations in higher education are called for. The National Center for the Study of Adult Learning and Literacy (NCSALL), Adult Development Research group of the Harvard Graduate School of Education, found three elements, beyond entry and exit structures, critical to designing more consequential collaborative learning applications: (a) attention to attributes of support and challenge in small group context, (b) correlation of received support and challenge to developmental level, and (c) precedence of student-centered considerations over instructor preferences, “the new pluralism” (Drago-Severson et al., 2001).
When considering context or a “sense of community,” Drago-Severson et al. (2001) found adult learners across all three study sites describe their “dynamic transitional growth spaces” as “like a family,” “band of warriors,” or “fellow strugglers” maximizing both support and challenge. The support and challenge in these “holding environments” or “contexts” correlate with three functions attributed to Kegan (1982, 1994): (a) “hold well” - accept and accommodate present personal identity and meaning making process, (b) “let go” - challenge and permit growth, and (c) “sticks around” - accessible and dependable into new reconstructed growth. While the latter is most difficult to provide in a limited time frame, high support and high challenge can be implemented. This evokes similarities to Bruffee’s re-acculturation process.

Building on previous “meaning making” with collaborative learning implications, Drago-Severson et al. (2001) identified three qualitative developmental levels of transformational as well as informational learning: (a) Instrumental Knowers – a concrete orientation to reach specific behavioral goals, (b) Socializing Knowers – relationship to peers and ideas beneficial in midst of multiple social roles, and (c) Self-Authoring Knowers – appreciation for the imprint of different perspectives on project tasks. In studies at three sites, these participant “ways of knowing” bear a distinct resemblance to Hamilton’s (1994) description of Trimbur’s models of collaborative learning presented in a keynote address at the Indiana University Colloquium on Collaborative Learning in March 1993. A parallel is also apparent with Macaulay and Gonzales’ (1996) depiction of cooperative and collaborative learning as representing a continuum from teacher-directed to student-directed. Depicted as transitional development, as a continuum of theory, and mutually exclusive, these taxonomies can help to identify, clarify, and
support the instructor’s teaching philosophy and the students’ diverse learning styles or needs, to accommodate curriculum design and classroom practice (Drago-Severson et al., 2001; Hamilton, 1994; Macaulay & Gonzales, 1996). Figure 3 is a condensed portrayal.

<table>
<thead>
<tr>
<th>Drago-Severson et al. (2001)</th>
</tr>
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<tbody>
<tr>
<td>Instrumental Knowers ------ Socializing Knowers ------ Self-Authoring Knowers</td>
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Trimbur’s Model (Hamilton, 1994)

| Post-Industrialist Model ------ Social Constructivist Model ------ Social Democrat Model |

Macaulay and Gonzales (1996)

| Teacher-Directed -------------------------- Student-Directed |

Adapted from Drago-Severson et al. (2001) and Macaulay and Gonzales (1996).

Figure 2. Parallel Continuums for Transitional Development

Diversity is a key attribute of collaborative learning. Diverse instructor preferences and student learning needs or styles across the developmental spectrum from: (a) highly structured tasks with predetermined outcomes (e.g. Instrumental Knowers, Post-industrialist model) to (b) less structured with more student negotiation (e.g. Socializing Knowers, Social Constructionist model), and ultimately (c) a high level of conflict through expanded diversity in opinion (e.g. Social-Authoring Knowers, Popular Democrat model) can be more clearly identified and more effectively achieved.
Summary

The questions arose as Gamson (1994) in “Collaborative Learning Comes of Age” joined others in “a growing realization of the transforming potential of collaboration” (p. 44) yet acknowledged, “while the evidence for the impact of collaborative learning is growing, it is still sparse” (p. 46). Situating this case study in the existing literature revealed: (a) historically repetitive classroom patterns as relevant and significant to the contemporary context, (b) the insights and limitations of existing research, and (c) the direction for intentional philosophical and practical discussions. This study, therefore, seeks to respond to the emerging quandaries by: a) exploring the epistemological differences between cooperative and collaborative learning, b) pursuing a qualitative, not quantitative research design, and c) exploring faculty, not student experiences, using Bruffee’s (1999) view of collaborative learning as a baseline for further understanding.

Chapter Three provides an expanded outline of the research design.
Chapter Three

Methods

Introduction

This chapter explains the qualitative methods used to collect, analyze, and interpret data of a nonfoundational socio-constructivist concept of collaborative learning on the lived experience of selected community college faculty reported as lacking in the literature. The field site’s self-determination in 1995 to be collaborative in order to intentionally increase student learning-centered outcomes added richness. My intrigue was piqued by the parallel growing interest in collaborative learning in the college classroom and the increasing workforce demand juxtaposed with evidence lacking for increased application (Cabrera et al., 2002). Thus, this descriptive case study seeks to “deepen understanding” of the phenomenon for the stated disparities, add to the data base, enhance practices, and augment skill transfer to professional workplace.

Purpose Statement and Research Questions

The purpose of this case study was to describe and explain collaborative learning from the perspective of purposefully selected community college faculty members. The exploratory questions guiding this study were:

1. What elements constitute selected community college faculty members’ perspectives about collaborative learning in the college classroom?

2. What variables influence these elements?
Rationale for Case Study Approach

Qualitative case study was described as a “bounded system” (Stake, 1995; Merriam, 1998). Further defining and validating this type of case study for this research project, Merriam (1998) outlined three features: (a) particularistic, (b) descriptive, and (c) heuristic. Particularization focuses on a singular component (e.g. event, phenomenon). The case study boundaries, the “fencing in” of the distinctiveness and complexity of the phenomenon, were the particular descriptive elements used for the “purposeful criterion sampling,” key to participant eligibility. The criteria for participant selection were:

- facilitate collaborative learning (see Appendix A) in their classroom;
- one year of experience (minimum) with the described phenomenon;
- one year (minimum) full-time faculty member at the selected field site;
- willing and able to be interviewed on two separate and scheduled dates.

Merriam (1998) underscored the attribute of “particularistic” for “practical problems” (p. 29). The primary practical problem was what can be learned about collaborative learning when the work force demand and academic interest is growing but the college classroom application is not (Cabrera et al., 2002). According to Merriam (1998), this characteristic could also “suggest to the reader” dos and don’ts for similar situations and explore a specific instance while elucidating “a general problem” (p.30). A “serendipitous” opportunity has allowed for the contextual conditions of a learning-centered institution with a self-identified “collaborative culture” to ascertain the possible influence, or lack thereof, on the phenomenon under study. Not claiming a connection between the field site’s institutional collaborative culture and student learning outcomes, this further encompassed particularization for a case study approach (Yin, 2003).
The descriptive nature of a case study was intended to expose complexities of a situation, influence of personalities, and/or differences in opinions. To allow for the potential of such rich and vivid insight, the interview questions were designed to listen to the voice of the participants, let their perspective unfold, and his or her story be told. The questions were not intended to prove, control, or predict (V. Janesick, personal communication, February 17, 2010). Lastly, heuristics was intended to assist the reader’s understanding by: (a) illuminating possible reasons for the problem and the effectiveness or ineffectiveness of instructional applications, (b) evaluating alternatives, and (c) drawing conclusions for “increasing its potential applicability” (Merriam, 1998, p. 31).

**Role of the Researcher**

Situating myself in the study, I have frequently been immersed in collaborative principles, processes, and techniques (e.g. director, trainer, consultant, facilitator, lecturer) in the public and private sector, as well as higher education. Having received such enrichment, I have also been frustrated by the implicit resistance to or lack of sustaining collaborative learning applications (e.g. coconstructed knowledge or solutions, shared governance or authority, heterogeneous groupings) by organizations with whom I have interfaced at a professional or personal level. In exploring collaborative learning more deeply, my experiences paralleled what past and current research has documented. The techniques and processes of collaborative learning for skill or content mastery within a discipline were not sufficient (Cross, 2000). An intense curiosity along with a vision to investigate collaborative learning within the halls of academia to further collaborative skills beyond has developed. The research report described in Chapter Two, *Are They Really Ready to Work? Employers’ Perspectives on the Basic Knowledge and Applied*
Skills of New Entrants to the 21st Century U.S. Workforce (The Conference Board, Inc., Partnership for 21st Century Skills, Corporate Voices for Working Families, & Society for Human Resource Management, 2006), captured the larger social context and documented the demand and potential for the concept of collaborative learning being investigated. Significant to this study, the report spelled out Bruffee’s (1999, 2009) premise for the value of collaborative learning in the college classroom. In my opinion, higher education is historically and currently positioned to accept significant responsibility to develop collaborative learning skills in the classroom for transfer to personal, professional, and societal endeavors and responsibilities. Cabrera et al. (2002), Gamson (1994), and others reported in the higher education literature the growing interest and the sparse evidence. Through this study, I looked to find more opportunities for “informed hunches” and “serendipitous occurrences” to uncover “richer and more powerful explanations of the setting, context, and participants” (Janesick, 2004, p. 108) to explain this dichotomy.

In my role as researcher, I:

1. completed all requirements of the Institutional Review Board (IRB) including research permission, online ethics training, and all conditions of the institution sponsoring the research and the non-affiliate field site.
2. conducted the pilot interview for the interview questions (see Appendix B) to maximize refining and positioning the participant questions for richer data collection and management of the one hour and 20 minute time length.
3. used purposeful criterion sampling to select the study participants.
4. scheduled interviews to comply with interview check list.
5. conducted the first and second set of interviews.
6. customized Second Interview Guides (see Appendix C) to probe effectively.
7. developed and maintained a database management system to support analysis.
8. transcribed personally the interviews because past experience convinced me this engagement would significantly add to the analysis and interpretation.
9. kept a researcher’s journal (see Appendix D) to triangulate data collection and document the researcher’s bias for the study’s trustworthiness and credibility.
10. collected documents (see Appendix E) from the field site for analysis and integration (Janesick, 2004; Merriam, 1998; Stake, 1995).

All three data sources, interviews, journal, and documents are explained later in this chapter under Data Collection and Analysis Methods.

**Context of the Inquiry**

The following information adds clarity to this study at the field site: (a) current demographics, (b) overview of academic achievements from 1995-2010, and (c) educational changes resulting in a learning-centered institution.

Spread across multiple campuses in two counties, this community college has experienced “double digit enrollment growth” for the third consecutive school year (2007-2010). For 2009-2010, the FTE was 29,706.8 and the “for-credit student count” was 55,304. In this same calendar year, the enrollment for “total individuals served” was 64,506 which included Post-Secondary Adult Vocational (PSAV), Educational Prep Institute (EPI), Continuing Workforce Education (CWE), and Valencia Enterprises, professional programs. Primarily Caucasian, over 25% of the student body was Hispanic, more than 11% was African American, and all major ethnicities were represented.
Accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (SACS), this nationally recognized community college’s website documented its awarding of Associate in Arts degrees in “7 Articulated AA Pre-Majors, 4 AA Pre-Majors, 30 Transfer Plans, and 103 Associate in Science and Applied Science degrees and certificate programs which lead to immediate entry into the workforce.” Enrollment numbers, student body characteristics, and degree program information was secured at “Just the Facts” from the institution’s website, updated on November 19, 2010.

Achievements and challenges characterized this learning-centered community college in the 15 years from 1995-2010. In 1995, it was rated among the “best results” for graduations in the state. The National Alliance of Business named the field site the National Community College of 1998. In 2000, it was selected by the League for Innovation in the Community College, as one of 12 community colleges from 94 applications to be chosen as an International Vanguard Learning College (Kelley & Kaufman, 2007). Founded in 1968 to intentionally serve community colleges, this organization focuses institutional attention on how learning is being improved and how an institution knows it (Kelley & Kaufman, 2007). In addition, Kelley and Kaufman (2007) listed the Organizational Elements Model (OEM) and the League as instrumental contributors to the development of a sound strategic thinking and planning enabling the school to continue addressing dissatisfaction with too many students, especially at-risk students, not reaching “their stated goals.” In 2001, Time magazine recognized it as one of our nation’s best in the success of first year students.

An editorial in The Orlando Sentinel on December 22, 2010, “[Field Site]’s Commitments to Accessibility,” reported the board of trustees for the field site approved
the recommendation of the school’s president to rename it and add the “first 4-year bachelor degrees” (Editorial, 2010, p. A18). According to the field site periodical, *Vitae* (2011), an article titled, “Bachelor’s Degrees Come to [Field Site],” reported the new bachelor’s degree programs are “electrical and computer engineering technology and radiologic and imaging science” (p. 2). Another *Vitae* (2011) article titled, “Watch for [‘Field Site’] to Appear in Resumes Everywhere,” reported the new name without “community” will “more accurately convey its mission and program mix” and the core principle of a “learning-centered philosophy” has resulted in a national reputation “as one of the best community colleges” (p. 2).

I was told about the transition to a learning-centered community college in a serendipitous conversation at the field site with an administrator who lived the journey. Central to the transition was the question, “What is your change issue? The determination was “the learning paradigm in a collaborative environment” (personal communication, October 5, 2007). This identification of the change issue was fostered by an invitation to participate in a Kellogg Foundation project in 1995 which resulted in major adjustments in thinking and functioning within the institution. On the institution’s website was a “final report” titled, “Collaborating Among Faculty, Staff, and Administrators to Become A More Learning-Centered College: Improving Learning by Transforming Core College Processes.” High among the “lessons learned” was “Change in higher education is made possible by collaboration” (Blankenship et al., 1997, p. 20). On the institutional web-page titled, “Who We Are,” the mission statement reads “academic, technical, and life-long learning in a collaborative culture dedicated to inquiry, results, and excellence.”
In addition, an institutional webpage titled “Governing Council Structure” (2011) states “The Governance structure of [Field Site] is based on a shared governance model. As practiced at [Field Site], shared governance is a set of processes and procedures through which college faculty, staff, and administrators collaborate in making significant decisions about the college's strategic direction, goals, and related implementation plans.”

Bruffee (1999), Cabrera et al. (2002), Kolb and Kolb (2005), and others advocate for initiatives to create greater integrated working relationships between administration, faculty, and student affairs. Kelley and Kaufman (2007) reported these “working relationships” at the field site in which “the council with representatives from faculty, staff, and administration” met regularly throughout a school year and “devoted a portion of its meetings to a learning activity aimed at preparing the council to design and provide guidance to the strategic planning process” (p. 50). This explanation ended with, “In short, the council addressed its own learning needs first.”

Valuing collaborative agreement as conceptually stronger than a hierarchical approach, the field site made a distinction between the collaborative engagement that transpires to advance shared governance across the institution and collaborative learning as a pedagogical tool within the classroom. An administrator clarified that the institution has not “systematically studied the link between our collaborative culture and improved and sustained student learning outcomes” (personal communication, January, 15, 2010). Although anecdotal evidence has been forthcoming, the connection between a collaborative culture and a sustained increase in student academic success is “unclear” and “no clean data exists.”
Pilot Study

The pilot study field-tested the interview questions (Janesick, 2004) with one community college faculty member on January 27, 2010. The entire interviewee protocol was followed. The interview questions (see Appendix B) were revised to provide adequate questions for two in-depth semi-structured interviews with each participant. The interval between the two interviews allowed for: (a) the researcher’s personal transcription, (b) a member-check (see Appendix F) to validate the transcription’s accuracy, and (c) the researcher’s review of the transcription to develop the second set of customized interview questions (see Appendix C) for each participant following the procedure for question development explained under “interviews.”

Interview Questions

1. Tell me about your experience with collaborative learning.

2. What is your view of collaborative learning for the community college classroom?

3. From your experience, how extensive is collaborative learning applications for content delivery in the community college classroom today?

4. Tell me about how you view the relationship of learning theory to practice?

5. Reflecting on the whole of your encounter with collaborative learning, describe one to three individuals whom you have most influenced by using the collaborative learning approach.

6. Talk about your pedagogical strategies.

7. Describe a typical course session employing collaborative learning.

8. Under what conditions might you modify what you are doing?
9. What has been your best experience with collaborative learning?

10. What has been your worst experience with collaborative learning?

11. From your experience, when should collaborative learning be used?

12. From your experience, when should collaborative learning not be used?

13. As the classroom practitioner applying collaborative learning: What changes, if any, have you observed in your students?

14. Describe the institution’s influence, if any, on your practice of collaborative learning.

15. What impact do you anticipate for collaborative learning in on-line courses?

16. Is there anything else you wish to tell me at this time?

17. When you say _________________, tell me what you mean by that?

Selection of Faculty Participants

Immediately following IRB approval from my host institution, I electronically sent an explanatory letter (see Appendix H) to an approved list of 31 faculty (20 females and 11 males). A designated administrator provided 27 names. The first response to my electronic inquiry, later a participant, provided four additional recommendations. From the 22 responses, regrets included thesis completion, on sabbatical, or not interested.

Upon confirmed interest in participating, a seven-question inquiry (see Appendix A) was sent to 13 for design congruence and quality assurance. The instructional criteria represented four basic design components, the learning: (a) environment, (b) objectives, (c) tasks, and (d) assessment and the additional three criteria addressed experience, employment and availability. All questions required a yes or no response:
• facilitate collaborative learning (see Appendix A) in their classroom;
• one year of experience (minimum) with the described phenomenon;
• one year (minimum) as full-time faculty member at the selected field site;
• willing and able to be interviewed on two separate and scheduled dates.

The 13 responses ranged in fulfillment from “yes” on all criteria to less than three of the instructional criteria and/or not fulfilling the experience or field site employment criteria.

This process culminated in seven community college faculty participants (six females and one male) representing multiple disciplines. Five participants fulfilled all four of the instructional criteria and two participants I accepted fulfilled three. With some concern for recruitment and the possibility of attrition, I invited the pilot study interviewee to enter the study, one of the latter two only fulfilling three criteria.

**Data Collection and Analysis Methods**

Defined by Merriam (1998) and stated earlier, qualitative case study methods shaped by “particularistic, descriptive, and heuristic” (p. 20) elements outline the import of uniqueness, rich and thick descriptions, and illumination of the phenomenon for the reader, respectively. My field site, participant selection process, data collection, and analysis process fulfilled these attributes. Data sources were personally transcribed interviews, a researcher’s reflective journal, and on site documents. A thematic analysis identified, coded, defined, and organized categories and patterns inductively emerging. I synthesized for meaning, presented the case study data, and completed a cross-case analysis (Rubin & Rubin, 2005). I also developed codes deductively to identify, describe, and classify data from key themes in the literature review shaping my purpose and design. I decided against software to remain closer to my data for this process.
**Data collection.** The data sources were interviews, institutional documents, and the researcher’s reflective journal.

**Interviews.** For rich data collection, interviews are a “dynamic iterative process” developed to accommodate the changing needs of the researcher, interviewee, and the interview’s evolving focus determined by the study participants’ responses. Rubin and Rubin (2005) further described “a family of qualitative interviews” and the interviewer as one who “gently guides a conversational partner in an extended conversation” (p. 4). To uncover the opinions, beliefs, feelings, concerns, achievements, and possible failures in each participant’s voice about his or her classroom practices of a nonfoundational epistemology (i.e. Bruffee’s concept of collaborative learning or philosophical stance), I foresaw using a combination of the approaches recommended.

Broad open-ended questions were used to begin the first interview and gain the “general flavor.” As participant-driven patterns emerged, more specific semistructured questions were employed to probe themes, topics, or issues that materialized. Janesick (2004) described “basic descriptive questions” which include “follow-up,” “experience/example,” and “clarification” questions. Clarification questions focused on language, particularly terminology (Janesick, 2004; Rubin & Rubin, 2005), and more completeness for certainty in understanding the participant’s message. These types of questions, respectively, had narrowing aspects to them and were part of the first and the follow up interviews. Rubin and Rubin (2005) explained “elaborated case studies” as including questions to attain “what happened, why, and what it means more broadly” (p. 6). The intent was “to generalize to broader processes, to discover causes, and to explain or understand phenomenon” (p. 7). Janesick (2004) referenced “structural/paradigmatic
questions” to elicit cause for “problematic” interviewee responses or acknowledgments and “comparison/contrast questions” to draw out more rich description (p. 73). As just reasoned, all these types of questions comprised the 17 questions used for the first interview and responses were followed up in the second interview.

I conducted two semistructured in-depth interviews using the 17 interview questions (see Appendix B). I personally transcribed the first set of digitally recorded interviews to be closer to the data and completed member checks (i.e. verification of the transcribed interview). I customized seven plans for follow-up questions to: (a) explore gaps, (b) secure more focused and comprehensive data, (c) probe ambiguities, and (d) confirm, pursue, or reject emerging patterns. I had also transcribed raw notes of planned and unplanned interviews with community college faculty and administrative personnel at the field site for unrelated assignments before pursuing it as such. These proved to be auxiliary documents (e.g. confirm interview data, augment context).

As Merriam (1998) suggested, I: (a) tried out ideas and themes on FPs, (b) explored the literature on what emerged from the interview data, and (c) played with metaphors. With Professor Carol, the English instructor, I asked for her opinion of a learning activity in A Short Course in Writing (Bruffee, 1985). Intrigued by the similarities of her understanding to Bruffee’s (whom she did not know) view, I also showed her the expanded version of the four criteria and sought her assessment. When FPs brought up group grading, I sought out what others had written. And I “played” with metaphors emerging from the literature and interviews (e.g. “buckets of pebbles”).

This interview check list guided my completion of the administrative tasks and I:

1. ensured interviewees’ USF IRB consent forms were signed by interviewee and
interviewer (see Appendix G), provided a copy of the signed form and filed.

2. established the meeting time, place, length of interview, and later verified.

3. provided the interview questions (see Appendix B) ahead of time.

4. secured, organized, and checked needed resources (e.g. recorder, note taking materials, batteries) for operational status including a backup plan. I had acquired: (a) a Sony ICD-PX720 Digital Voice Recorder for voice operated recording (VOR) of fourteen one-on-one interviews with open-ended questions and (b) ample Sony LR03 (size AAA) alkaline batteries.

7. arrived ahead of time and be set up.

8. welcomed and expressed appreciation to the interviewee, identified myself, and succinctly restated the purpose of the interview.

9. conducted the interview by: (a) securing the purposed information, (b) closing the interview appropriately, and (c) ending on time including some extension requests willingly agreed to by the interviewee.

10. completed a post interview write-up: (a) checked recording, (b) filled in field notes, and (c) completed all written documentation to preserve the most substantive accuracy and detail for quality analysis and interpretation.

11. sent thank you notes to interviewees, provided copies of the transcriptions, and offered a copy of the final dissertation report. I delivered small appropriate gifts to further convey my respect and appreciation.

The unneeded participant replacement plans were: (a) a built-in margin, (b) a request at initial recruitment to consider potential alternate role, and (c) reactivate selection process.
**Researcher’s reflective journal.** Engaged in informal journaling for some time, I began in 2007 journaling in preparation for the dissertation. I sought to improve my writing of rich descriptive detail for the dissertation which has greatly benefited me. I now journal more purposefully, improving my writing skills and better cataloguing my experiences and critical reflections. This has developed my ability to construct rich, active descriptions to paint word pictures documenting the effectiveness of story and transforming my presentation of keynote messages and training modules. I used notations from field-based insights, e-mail communications, institutional documents (e.g. course syllabi, classroom handouts) and my journal during and following interviews.

As a primary data resource in the research field work and to comply with qualitative criteria for validity and credibility, I recorded facts, ideas, feelings, and my unspoken replies to situations and events. I became increasingly aware of my body language enhancing sensitivity to unspoken messages overtly communicated. As the research instrument, I used my everyday personal and professional experiences to improve my skills in asking questions and the researcher’s reflective journal to strengthen my writing and analytical skills, an unending shaping and honing. I used ideas from the formats recommended and revised by Janesick (2004).

**Institutional documents.** I procured institutional documents (e.g. administrative annual reports, faculty publications, classroom collaborative learning assignments, syllabi, institutional website resources) from the research field site and non-institutional documents (e.g. newspaper articles) that confirmed or enhanced understanding of the phenomenon or the field site. The relevance, potential usefulness, or substantive quality and time allotted to discern and analyze was judiciously allocated. As stated by Stake
(1995), a plan helped to alleviate “the setbacks and revelations” (p. 58). Merriam (1998) highlighted the need for a systematic approach, a “creative capacity” to find relevant or pertinent materials, and provided a list of questions to determine authenticity. Janesick (2004) encouraged anticipation of new data from the inevitable serendipitous, contradictory, and unanticipated every day events. For example, a serendipitous encounter was the action research on collaborative and cooperative learning by one faculty participant. I focused on course handouts, syllabi, faculty publications (e.g. articles, research), and administrative documents to clarify and validate the instructional strategy under investigation (see Appendix E). Some were already cited in the proposal.

**Data analysis.** Characteristic of qualitative research was the emerging nature of the design shaping this process. I foresaw an embedded analysis of a “slice of life” and was able to collect the described application of collaborative learning by community college faculty selected from multiple disciplines. For each of the cases, I identified the indigenous themes relevant to the study’s rationale, problem, and purpose, completing a within-case analysis to provide a rich, detailed description of the “slice of life” that occurred internally. Then, a cross-case analysis of common themes expressed by the community college practitioners was applied. The assertions or interpretation of the meaning of the cases was the final step reported. The intent of this thematic analysis was to deepen understanding of the complexities within the cases and the commonalities transcending the cases (Creswell, 2007; Yin, 2003). The unique context of a widely reported learning-centered community college with a stated collaborative culture allowed for the emerging potential of any institutional impact. The analysis steps of Rubin and Rubin (2005) were the primary source I followed.
**Analysis process.** As stated earlier I felt like a child, I was a novice, with buckets of treasure from the field site sea. I worked my hands into the treasured mounds pulling up sand, pebbles, sand dollars, sea horses, foreign objects, and sea weed, fresh and wet. Exciting, exhilarating, confusing, tiring, baffling, never boring, and with an indomitable spirit, I often felt simultaneously hopeful and helpless. Over the ensuing weeks, each word or phrase, fell through my fingers until not one had gone untouched, unnoticed, unconsidered, unrecognized, unmentioned. Slipping away from the beach and sea gulls, after all the sunrises and sunsets, here is how it was documented in my office.

**Getting started.** At each of fourteen interviews, my buckets were filled with seventeen hours of digital recording, documents, field notes, and my reflective journal. I revisited authors’ texts to determine the digging and sifting system that would work best. I welcomed the camaraderie of all. Amidst the exhilaration of interviewing, something reminded me this was not exactly a harbinger of what lie ahead. Still, I did not realize how little I understood about what I had or didn’t have in those buckets. Authors, a committee member, field site contacts, code checker, peer reviewer, and participants were at different times on the beach with me. Piantanida and Garman (1999) goaded me to “own the study” offering an “ahaa” moment comparing qualitative inquiry to “piles of pebbles” (p. 145). Janesick (2004) and Rubin and Rubin (2005) outlined check points to stay on a credible, dependable, and replicable analysis path of qualitative integrity.

**First phase of analysis.** The first embrace was the transcribing, the running of my fingers across and through the buckets of sand, pebbles, and unwanted seaweed. Not one “umm,” “uhh,” or “you know” was left behind. While transcribing, I began a conversation with what the buckets had collected and left my own first imprint, imbedded
conversational notes in red ink clasped by distinguishing parentheses. After this first sifting, the transcriptions with these private conversations were preserved. Then, a clean and complete original transcript with the private red-letter chats *etched* out were emailed to my beach side faculty partners who so richly filled those buckets with the requested sand dollars, sea horses, and occasionally more seaweed (e.g. vita, handouts).

How true the words of Rubin and Rubin (2005), “Transcribing the interviews yourself forces you to pay attention to what interviewees said and helps you prepare for the next interview” (p. 204). Sifting through each original transcription, again, I left out those *stalling* words and other noncontributory phrases until I had formed an outline with “follow up questions to pursue emerging ideas,” imbedded in a contrasting font. As the one whom “gently guides a conversational partner in an extended conversation” (Rubin & Rubin, 2005, p. 4), my Second Interview Guide was shaped (see Appendix C). I felt certain the right digging tool was in place for the next visit to the water’s edge. This instrument was sent three days prior to the second beachside visit. Whether or not my beach partner reviewed the tool, the contextual treasures from the first visit for the structural intentions of the second visit were in hand. This would and did expedite the process, raising the quality or the focus and integrity of our second digging. Transcribing each second interview, the brief imbedded conversations bubbled up again as my fingers lifted the sand from the beach where the waves of lived experiences really do roll in. I also charted initially any potentially relevant thought, theme, phrase, or code triggered by statements in the interviews (Rubin & Rubin, 2005). This was a help in gaining focus.

**Second phase of analysis.** The second sifting, the coding process, did not *glisten* for me like the first. Rubin and Rubin (2005) identified three approaches: (a) responsive
interviewing, (b) grounded theory, and (c) a hybrid. Rubin and Rubin’s (2005) model, responsive interviewing, used the interviews and the literature to foster ideas for concepts and themes from which to create a list of code names with definitions to apply to the interview data. My more natural inclination was grounded theory to not presumptively distinguish between what is “central” and what is “peripheral,” allowing topics and main themes to bubble up from the fresh wet mounds collected. The grounded theory model viewed concepts and themes as a more integrated process emerging from the data, not the literature. Preferring a more inductive model and to remain objective as well as sensitive, through trial and error I created my system. Influenced by Rubin and Rubin’s. (2005) hybrid approach, I incorporated aspects of responsive interviewing and grounded theory.

Using an “open coding framework,” I reviewed every line of all transcriptions, marked off and coded each passage. This resulted in identifying the peripheral as well as what was central to the exploratory questions and research design. I started with the two primary constructs, “people” and “practices.” People evolved to stakeholders represented by FPs, colleagues, institutional personnel, and students. Coding included their attributes, benefits, influence, and resistance to CL. Given my research purpose and exploratory questions, “students” proved to represent what was peripheral. Practices transitioned to pedagogical strategies, the umbrella for codes indicative of organizational structure, positive and negative modifying conditions, small group learning activities, and learning outcomes. These two overarching constructs, stakeholders and pedagogical strategies, represented Rubin and Rubin’s (2005) grounded theory approach or Miles and Huberman’s (1994) explanation of emerging data as “molded to the codes that represent them and we get more of a code-in-use flavor” (p. 58).
I soon was experiencing the danger Rubin and Rubin (2005) warned against, the mind-numbing and time consuming nature of a line-by-line emergent coding and the inherent changes. Too far along to quit, I established a third line of coding based on key aspects of the research design (e.g. sparse application, terminology, skill transfer, four criteria). In my Reflective Journal on September 24, 2010, I wrote, “I created labels based on my research design to see what might emerge in those categories.” This third major section was indicative of Rubin and Rubin’s (2005) responsive interviewing or a deductive approach. This proved prudent to tighten my focus for the cross-case analysis. Now I had the interview data shaped and labeled inductively as emerging data concepts and from the literature, more specifically key aspects in my research design. This was my version of Rubin and Rubin’s (2005) hybrid method. I created and entered codes shaping an eight-page codebook (see Appendix M) with clear and consistent definitions relevant to the transcribed interviews in the Microsoft Word text-to-table format (see Appendix L). The definitions are underlined in the center section of the codebook. This fluid process emerged, expanded, and contracted with some terms being “subsumed” within other terms under stakeholders, pedagogical strategies, and research design. The eliminated terms are in gray highlight (see Appendix M). Simultaneously I created an amplified codebook by cutting and pasting key phrases under the code and definition. In a third column I identified its location. For example, “C1/5.12,” identified the FP, the interview – first or second, the targeted question number, and the page number of the phrase in the text-to-table transcript. Approximately 100 codes were developed.

My code-checker reviewed the coded transcripts with my codebook to assure definitional clarity and coding consistency along with validating trustworthiness. We
jointly discussed her conclusions. In my Reflective Journal on September 17, 2010, I wrote, “[code checker] and I have separately coded additional interview transcripts in text to table format, compared coding, and discussed differences by clarifying definitions.”

The code-checking process helped to draw out my researcher bias. For example, what I coded as a faculty participant attribute (FPAttribute) my code checker viewed as resistance (FPResistance). In my Researcher’s Reflective Journal on September 28, 2010 I wrote, “Have to note my over eager selective seeing/hearing—my preferred findings.”

In the same journal entry I also wrote:

> [Code checker] picks up on more exacting pieces. What I called StudentCPE she challenged if it was continuing professional education. I explained I was trying to draw out the adult learner – that’s what my Ph.D. is in. I changed it to a better coding – StudentAdult – more integrity/authenticity/accuracy.

My peer reviewer assisted me in how to formulate the outline for my presentation of data in Chapter Four, checked my coded text-to-table transcripts with my case descriptions, and advised with other related issues.

As the sun began to lower on this sifting process, a silhouette of spires, rooms, and passageways began to glisten against the soft, warm waves at the water’s edge. I had formed a sandcastle of purged and purified treasure. Now, I must trust my beach work.

**Third phase of analysis.** The third sifting of treasure and seaweed from the sea of interview data formulated the outline for the Chapter Four case descriptions. This process was abetted by the repeated handling of all those buckets. The amplified codebook process illuminated what was central and what became apparent was a correlation of what emerged from coding line-by-line with the deductive listing or outline
of key research design elements. For example, what had been inductively coded as emerging “FPAttr,” faculty participant attributes (i.e. students teaching students, value of process, skill transfer awareness), gave voice to two aspects of the third section, the research design or the pre-determined outline. These two aspects were: (a) the criteria of shared learning responsibility and (b) workplace skill transfer, respectively. This same process of comparing and checking exposed what was coded inductively under “institutional influences” addressed term confusion and interchange a part of the research problem. In addition, what was coded under “positive learning conditions” also represented the literature gap for the instructional criteria. The same occurred in the emerging definitions of collaborative learning and the role of theory to practice from my interview questions addressed as key aspects of my predetermined outline.

**Trustworthiness and Credibility**

Trustworthiness and credibility for data collection, analysis, and interpretation in the qualitative paradigm was reported dependent on the integrity and competence of the qualitative researcher. In the literature, these attributes were said to lean heavily on the quality of the researcher’s commitment, head and heart, to qualitative inquiry. An inherent or determined bent for naturalistic inquiry did make the difference. The desire to challenge my intellectual stamina, creative capacity, and intrinsic resolve was critical. This included: (a) learning to write descriptively, (b) being disciplined in recording field notes and journal entries, (c) discerning detail from trivia, and (d) attending to the use of research findings. Enlisting the discipline of preparation, expanding sensitivity, exhausting curiosity, embracing detail, and executing a data management system that worked for me and allowed for access by others was the message I received.
The practical issue of rigorous techniques and methods was the third part of this “triangulated” statement to address the issues of descriptive validity. Triangulating data collection methods, full disclosure of events or occurrences, as well as findings set apart the qualitative paradigm. In view of this, I asked for member checks (see Appendix E) of my personal transcriptions to check for accuracy. Not stated prior to participation, I acquired a signed copy of the seven-question criterion inquiry, part of the initial recruitment process (see Appendix A), and electronically returned to me. I further determined the trustworthiness and credibility of the criterion sampling would be compromised without the faculty participant’s signature on a hard copy of the electronic response form. Each understood and complied easily. I secured a code-checker to review the transcripts and validate or challenge my identifying, defining, and classifying processes (see Appendix I). I also recruited a peer reviewer (see Appendix J) to review my emerging outline for presentation of data and critique for potential issues in advancing my cross-case analysis (e.g. theme validation, interpretation considerations).

As the researcher, I was prepared to address changes in the participants and myself. In regard to “research effects,” I had requested in the recruitment letter (see Appendix H) the possibility of sharing relevant artifacts and documents (e.g. Vita, handouts, syllabi) to provide documentation and reinforcement of classroom practices reported in the interview data. One faculty participant graciously and repeatedly offered a “packet” of information which I never received (personal communications, April 8, 2010, May 22, 2010, June 18, 2010, June 25, 2010, July 15, 2010, August 4, 2010, September 8, 2010). In compliance with the rigor of trustworthiness and credibility in my research design, I removed the participant from the study. During my analysis
process, I further narrowed my study from six to four cases because the research purpose had been met and saturation had occurred. By this I mean no new information was added by maintaining two of the six case studies. In addition, the male participant was one of the three case studies removed. All four participants retained fulfilled all four instructional criteria, represented different disciplines, and were all females. Chapter Four and Chapter Five, therefore, are a report of four case studies of female instructors as a consequence, not the intent. The title was changed and the issue of gender was included in Chapter Five under Implications of the Study.

In the same spirit, I was prepared to respond to changes in myself, “evaluator effects,” by staying sensitive to documenting any changes. I include a sampling of these under Lessons Learned by the Researcher in Chapter Five and in the Sample of the Researcher’s Reflective Journal (see Appendix D). This set of actions fostered transparency, established consistency, and hopefully allows the reader to assess my work in a more illuminating manner (Patton, 1999; Rubin & Rubin, 2005).

Methodological Trade Offs

Regardless of the paradigm, “value-free” research is nonexistent (Patton, 2002). The strengths of qualitative research can also be liabilities. Transferability of findings and researcher bias was prevalent in the higher education literature.

In reviewing the literature on how “generalizable” the findings were from one context to another (Merriam, 1998), I found the supporting rationales for the “generalizability” of qualitative research unworthy of consideration and agreed case study research lacks representativeness. With the intent to illuminate a “slice of life” (Merriam, 1998), I hold to the previously stated position. Case study research is intended
to offer rich descriptive insights to illuminate meaning and expand the readers’
experiences. Transferability, then, denotes the reader eliciting from the findings - the
commonalities, self-identity, and expanded engagement through the narratives and
interpretations. Van Manen (1990) believed other people’s experiences, even when not
my own, expand my experience and add to my understanding. I think of unanticipated
moments when one silently cries out, “By George, that’s me, that’s my world!”

**Ethical Considerations**

I was alert to potential ethical considerations (e.g. legal issues, plagiarism,
confidentiality) on behalf of the participants and was prepared to attend to and directly
address if they were to arise, as I agreed in the USF-IRB application, *Principal
Investigator’s Statement of Assurance*. Merriam (1998) listed a lack of training for the
novice researcher, unethical selection of data, and the political aspect when research was
funded by individuals or organizations with a vested interest in the outcomes as threats to
quality assurance. As stated earlier, this awareness as a novice researcher led to my
securing all faculty participants’ additional signature on the electronically returned seven-
question inquiry. This confirmed I did not misrepresent or unintentionally make any
wrong assumptions from an electronically received document.
Dissertation Timeline

Below is a listing of defining tasks or events during this case study research and documents benchmark occurrences in the chronological process.

Pre-Proposal Meeting

Field Site IRB Approval Granted

Proposal Hearing and Approval

USF IRB Approval

14 Interviews Scheduled and Completed

First Set of Interview Transcriptions and

Second Interview Guide Created

Member Checks

Second Interview Transcription

Coding Analysis and Peer Code Review

Field Site IRB Extension Approval

Chapter 4 Presentation of Data

Peer Review

Chapter 5 Analysis and Summary

USF IRB Continuing Review Approval Granted

Dissertation Defense

Revisions

Graduation

December 8, 2009

February 1 – September 30, 2010

February 16, 2010

March 15, 2010

March 31 – May 24, 2010

April – May 2010

April – July 2010

June 2010

July – October 2010

September 17 – March 30, 2011

November 2010 – February 2011

November 2010 – February 2011

February – March 2011

March 7, 2011

April 27, 2011

May 2011

August 6, 2011
Summary

I addressed the case study rationale and research design to explore the activity of a narrowly defined, a “bounded system,” within a unique setting. The serendipitous discovery of this learning-centered context determined the investigation of experienced community college practitioners. The triangulated data sources, their collection, and analysis were explained and a timeline was included. The role of the researcher and the context of inquiry were intended to meaningfully inform the research design. In addition, credibility issues, methodological trade-offs, and ethical considerations were described.

From my Reflective Journal, February 17, 2010:

Completing my Proposal Defense yesterday was indeed a milestone. I couldn’t be more pleased. I especially liked how succinct and clear my slide presentation was. Not asked to return the proposal, I was asked to fix several items (e.g. change timeline dates, reduce three years experience to one, simplify four-question inquiry and email in Appendix C, use pseudonym for field site, check out faculty websites for portfolios).

Choosing to narrow my concept of collaborative learning, my committee appropriately asked at the conclusion of my Proposal Defense, “Do you think you can find participants to fit your criteria?” I knew the question was well asked. After a brief reflection, I replied, “As you all well know, I’m not afraid to have egg on my face. In answer to your question, however, I will be surprised, if I don’t find them.” My reasoning was based on the literature and a classroom observation in January 2009. At the end, I was surprised, taken aback by the quality and intensity of their individual lived experiences in a nonfoundational socio-constructivist concept of collaborative learning.

Chapter four presents the interview data as a series of case studies.
Chapter Four

Presentation of the Data

Introduction

This study described and explained the perspectives on collaborative learning by selected community college faculty representing multiple disciplines at a learning-centered institution. The following exploratory questions guided the study:

- What elements constitute selected community college faculty perspectives about collaborative learning in the college classroom?
- What variables influence these elements?

To facilitate the intended purposes of Chapter Four and Chapter Five of four female faculty case studies, I consistently use three acronyms: (a) collaborative learning (CL), (b) cooperative learning (CpL), and (c) faculty participant (FP).

Context in Qualitative Case Study Research

“If only you could come and see . . .” captures the compelling fundamental intent to vicariously bring the interested reader what they cannot go and experience (Piantanida & Garman, 1999). Context, a core reason expressed in the literature for a qualitative case study (Merriam, 1998), was meaningful for this study. Holistic consideration sought to preserve what is inseparable from the CL practices. Three contexts are applicable: (a) the qualitative case study, (b) the setting, and (c) the coalescing patterns to present the data.
Context for the qualitative case study. Three primary attributes of descriptive case study central to this presentation: (a) particularistic, (b) descriptive, and (c) heuristic guided the analysis and can assist the reader in drawing his or her own conclusions.

Particularistic. “Fencing in” uniqueness or what might otherwise be denied, the “atypical” affords increased understanding within a field and intrinsic value or reflection for wider application. Four instructional criteria were imbedded to select FPs. Faculty views of the specified criteria were reported lacking, such “have hardly begun” (Bruffee, 1999, p. 83). Emerson et al. (1994) reported research on students “almost seems to glow” yet “we don’t know much about what it demands of the teacher” (p. 86). Patton (2002) classified findings with “innovative significance” (i.e. groundbreaking discoveries), or “confirmatory significance,” (i.e. support existing research). Both materialized.

Descriptive. Merriam (1998) defined a “descriptive qualitative case study,” often “atheoretical,” to intentionally present, “basic information about areas of education where little research has been conducted. Innovative programs and practices are often the focus of descriptive case studies in education” and help “form a database for future comparison and theory building” (Merriam, 1998, p. 38). With a nominal amount of research conducted or collected data reported, this approach was right for this study’s purpose.

Heuristic. With regard to the reader’s understanding, the intent is for those “By George - that’s my world!” moments to occur. For example, with much data on student achievement, a call in the literature was for when and when not to use collaborative learning (Gottschall, 2006). Positive and negative conditions emerged in classroom practices, the “how something happens” along with the “why,” distinctively characteristic of qualitative case study (Merriam, 1998; Patton, 2002).
**Context for the inquiry.** An overview of the field site documenting its learning-centered commitment, mission, and achievements is located in Chapter Three under Context of the Inquiry. Worthy of note, active learning, the learning-centered movement, and collaborative learning adhere to the same educational philosophy and principles. The connection of these three was evident in the findings.

**Context for the interview data.** Throughout my analyses, I often felt like the child I once was sitting amidst buckets of sand filled and dumped in my childhood sandbox, the Gulf Beaches of the west coast of Florida. From transcription, to coding, classifying, and interpreting the emerging patterns and themes, I was always close to the pure, natural, original sources of my data. As I worked my hands through the bucket-shaped mounds, each grain a word, fell through my fingers until no grain had gone untouched, unnoticed, unconsidered, unrecognized, unmentioned. More fully described in Chapter Five, sometimes I was lost in wonder and joy, sometimes overwhelmed and drained like a day in the sun with no umbrella.

From this beachside sifting of the faculty interviews and documents (e.g. vitas, syllabi, hand outs), this outline was formed to present each narrative: (a) the professional persona, (b) the understanding of collaborative learning, (c) the role of theory to practice, (d) the institutional influences, and (e) the positive learning conditions practiced.

**Researcher’s open letter.** The researcher’s first encounter with each participant, the instructor’s distinguishing credentials, and her first experience with collaborative learning as a practitioner are intended to enrich the themes that coalesced for the within case analysis of the data presented for each of the four case studies.
The faculty participant’s professional persona. In all the CL practitioners, an emerging pattern or line of thinking and conduct, highly relevant to the research design, was exposed in their professional mindset, instructional decisions, and classroom behavior or practices. For example, the commitment to students teaching students proved evidence of the first instructional criteria, instructor and students share responsibility for the learning processes and outcomes. The value placed on process was indicative of when to use CL, when process is the priority objective not the product. The FPs’ emphasis on skill transfer spoke to the literature’s premise and also the research design.

Understanding of collaborative learning and terminology. According to Merriam-Webster (1999), “semantics” is “the study of meanings.” In addition, the extensive nature of term confusion captured in the literature by Roberts (2004), “Often the title of a paper may use the word cooperative, while the body of the paper discusses collaborative learning, or vice versa” (p. 206), was profoundly evident in the data.

Role of theory to practice. Bruffee (1999) and others reported what knowledge is understood to be (i.e. foundational, nonfoundational) impacts practices. Beebe and Masterson (2006), Gamson (1994), Silverman and Casazza (2000), and others expounded on practical advantages such as: (a) makes thought patterns more memorable and useable, (b) facilitates identifying and correcting specific learning challenges, and (c) enables decision-making on appropriate instructional transfer to other settings (e.g. disciplines, populations). With use of theory reported lacking, this study sought further investigation.

Emphasis in the literature is often placed on definitional clarity and the role of theory for educational objectives and practices. The visual representation at the end of each case study focuses on CL practices in relationship to FP understanding and theory.
Institutional effects on usage. I begin with each FP’s comments about the extent of CL in her classroom. Usage is primarily explored by probing three influences, the field site, colleagues, and the discipline. In the Review of Literature, active learning and CL is linked to the learning-centered college and adheres to the same educational philosophy and principles. Evidence of this is in institutional documents (Blankenship et al., 1997; Kelley & Kaufman, 2007), the faculty competencies (see Appendix K), and the interview data. Emerging insights on the influence of the field site, colleagues, and the FPs’ disciplines further illuminated the study’s rationale for exploring classroom usage.

Learning conditions. In the literature, when not to use and when to use CL was reported as limited. When not to use CL, the FPs’ negative experiences, often became lessons learned and served to develop the positive practices presented in Chapter Four and discussed in Chapter Five. Four qualities on when and how to use CL emerged: (a) build community, (b) foster communication, (c) develop structure, and (d) evaluate assessments that support CL skill development. The faculty competencies (see Appendix K) secured from the institution’s website was directly referenced by most and outline supporting data. Not an intended criteria, two FPs practiced CL in online classes. Strategies and principles employed in one setting were often transferred to the other.

Explanation of Summary and Snapshot. Each case study ends with a summary of the five coalescing themes in the interview data. The visual representation captures a snapshot of the four classroom conditions, essential to CL and often shaped by negative experiences. The four conditions are supported by three dynamics coalescing to shape one overriding message - the student is at the center of what we say and do. A brief description of the snapshot is provided prior to the visual.
The Faculty Participants

In this chapter, I present four case descriptions of female community college classroom practitioners. All FPs were gracious and generous contributors and fulfilled all four instructional criteria for the specified concept of CL. As presented in Table 2, they represent distinct disciplines, multiple learning venues, and a wide range of professional training and classroom teaching experience.

Table 2

Relevant Demographics of the Faculty Participants

<table>
<thead>
<tr>
<th>Faculty Participant:</th>
<th>P. Anne</th>
<th>P. Carol</th>
<th>P. Danielle</th>
<th>P. Gina</th>
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<td>Math</td>
<td>Speech</td>
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Instructional Criteria for CL Practices

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<th>P. Anne</th>
<th>P. Carol</th>
<th>P. Danielle</th>
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The First Case: Professor Anne – Cause and Effect Thinker

Researcher’s open letter.

Researcher’s introduction to the faculty participant. Professor Anne was my first interview for my doctoral research study. Interviewing a young Jamaican adult learner in Kingston for a course assignment had piqued my interest in qualitative research but this was really for real. She was the first to respond to my electronic inquiry. Using the snow ball sampling strategy (Creswell, 2007), she contributed four additional candidates, two of whom accepted. Her faculty portfolio on the website of this learning-centered institution, indicated she taught “Earth Science with an emphasis in Geology.” Her vita identified her as a Professor of Geology. I incurred an abrupt flashback to my geology course as a community college student taken to by-pass an auditorium-packed earth science course that was no pass at all.

I arrived for the first interview on time and every apprehension melted away. I emailed her later that day, “I so enjoyed listening to your eyes as well as your words” (P. Anne, personal communication, April 1, 2010)! The interviews were sprinkled with her laughter, tears, and deeply felt beliefs. She conveyed a genuine concern for students and a strong commitment to learning through self-discovery in social interaction.

Faculty participant’s academic and classroom credentials. Reviewing her vita, she was presently a doctoral student in geology at a state university, her B.A. and M.S. in geology was completed at a northern university. Her experience spanned 10 years in two universities and two community colleges. She had just completed a role on an alternative text task force and had started serving on an “Individualized Learning Plan (ILP) tenure committee for new tenure-track faculty.” Completing the tenure process, she received
awards for action research, two science chair endowments used for student research resources in traditional and web-based field work, and her portfolio. Service on committees, workshops, and publications rounded out her institutional involvement.

When I interviewed her, Professor Anne was transitioning from all online classes to the face-to-face classroom “with some revisions” involving student research. “I’m trying to purchase equipment so we can do our own data collection. . . .So, they are gathering the data and doing their own research. . . .the whole thing of constructing knowledge from a very hands-on approach.” Constructing knowledge encompassed the third criterion. She employed all four and signed her response form (see Appendix A).

Faculty participant’s introduction to collaborative learning. As a full time faculty member, Professor Anne recounted her first two experiences with CL fostered by newness and necessity, respectively. A member of her tenure committee challenged her to “rethink my ideas about collaborative learning.” She was also asked to teach for an alternative schedule, a full course taught for eight hours on five consecutive Saturdays. Necessity caused her to try CL, again.

Novice instructor. Professor Anne reflected on her first CL experience as a new instructor at the field site:

I was doing some very, very limited kinds of collaborative things where I wasn’t using any kind of group work that I would grade or even count as a group grade. . . .I was very afraid initially of asking students to share a grade. I’m pretty sure I feared I would lose control of the class that I would be challenged [by students].

Professor Anne recalled some action steps (e.g. general basics, shared grades) as a novice instructor that mobilized her exploration of CL:
I had learned. . .start with your basics and build. I learned. . .the hard way I could do the same with CL. I inserted a few things asking people to work together. . . having them share a grade and other things not grading at all.

I asked Professor Anne to elaborate on the more intrinsic psychological aspect, her fear of losing control and being challenged. She had prepared this answer:

It all came back to my attitude. . . .It was a decision. . . “Well, I just need to act like it even if I feel like I don’t have control and don’t know what I’m doing. . . .

As soon as I did that, the students responded as if, “It’s okay!”

Out of Necessity. Challenged as a new professor to try new things, she was also asked to teach a course schedule new to her, further fostering CL applications:

It became very challenging to figure out ways to have people do things. There’s no way I could. . . talk that long nor expect anyone to listen. . . . That forced me. . . . to look at what I could do with students so they would be working together. . . .

Their time would be spent in. . . exploratory learning with me. . . facilitating.

She added, “Trying to find more ways to incorporate it, I was starting to say – All right!”

Faculty participant’s professional persona.

Commitment to students teaching students. At multiple levels, Professor Anne’s “stupid rock cycle” card game figured prominently as an illustration of her lived experience in CL. With rock component cards (e.g. igneous, sedimentary, metamorphic) and process cards (weathering, heat pressure, cooling) students not only memorized the separate cycles but gained understanding of the inter-relatedness. In small groups they built a concept map of the repeated cycles and when the cycles “got stuck”.

Ultimately, “They have to form relationships that are true.”
She described the impact of this learning activity, of students teaching students. She attributed her “getting it [CL]” to the moment when she thought:

Look what happens when you don’t have answers and you use the dynamic of what has happened in the group. I think that was the first time I said, “This is a dynamic that’s completely separate from the task and is the dynamic of what happens when people start working together.”

Drilling down to the heart of her experience, she disclosed, “And you have to be open to it. You cannot plan this. You have to see it when it happens and you have to take advantage of it. And that’s when the light went off.” She explained that “it” was not CL:

“It” was that moment when I recognized that when I switched groups. . .they could teach themselves, teach each other. . .I could take this group here that was doing “crappy” and by mixing them up would have them all of sudden be in a position where they were doing something very different than when they started. In her “getting it,” students’ questioning, justifying, and encouraging emerged:

The whole experience of watching these students that were having a lot of trouble come to a new table and say, “Can you do that? Maybe, you could.” And just watch them figure that out and go to a new table, “Well, back there. . .”

Professor Anne described the high point of this social learning interaction:

It was the middle group now being taught by the group that had a lot of problems. That happened repeatedly. It didn’t happen in all cases but you would have this group that said, “Well, over at that table. . .” They would correct something on the middle group and the middle group were pretty sure they had it right. And they would be like, “Well, over here they could do this. So, could you do. . .?”
She reflected on the unconventional encounter:

This whole process of people, who had not taken it seriously, or were clueless, or didn’t want to take it seriously, all of sudden became the expert for the people who started off in a better position. It’s always been a very exciting exercise.

Professor Anne expressed some logistics on students teaching students and I thought she was finished but she was not. More on this “exciting exercise” spilled out:

The really good students are all freaked out because they are like, “Oh, oh, we didn’t know we’d have to use this.” They usually do very well. Then, there’s this whole other group in a completely different place. I think the real equalizing is between the middle students and the ones who haven’t done as well. But the change is the good students, the ones who are [usually] doing the tutoring, it’s [now] the lowest group tutoring. That is a lovely thing to have happen early on!

She stressed that the less capable student becoming the expert “could never have happened had I not had a collaborative model that I was using. It was the sort of thing that only happened in collaboration.” She further illustrated this diversity value in students teaching each other with this scenario, “She was really not visual at all. And we got into some computational stuff. Everybody looks at it and she goes, ‘Oh, I can do this!” She became the expert, “It changed her attitude completely. . . .She could finally contribute because she could explain the math behind the graphics.”

I asked her to tell me more of what she meant in saying, “a lovely thing to have happen early on.” Interspersed with the “equalizing effect that happens early on” and “just changing the rules somehow,” she drew a comparison between, herself a “theoretic geologist” and a “born geologist,” “not made.” Laughing she contrasted the difference:
When you get in the field, it’s a completely different world. You are confronted with looking at . . . three and four dimensions and it’s the strangest thing. . . . Students getting “Cs” in all the class work. . . . would just walk out, see it all, walk through, and just map the geology - the expert the first time. . . . out. It was like, “How the hell did you do that?” They were, “Awgh, it was easy.”

Banging on her desk, a growing intensity developed and Professor Anne persisted:

Finally, finally these people were blowin’ everybody away and the “straight A” students were like, “Oh my, I’m gonna get a ‘C.’ I still can’t figure out how to map.” What happened was those who were tenacious enough, who stuck to it, who plowed through all the courses meant to get rid of’em ended up bein’ there.

I paused the recorder to afford her some emotional privacy. When she was comfortable to return to the interview, I acknowledged her feelings and she continued, “It angers me. It angers me. We take talented people and we discard’em.” She banged the desk again and softly sobbed, “Some of these people are my friends. So, you know, I feel very strongly about this.” With teary chuckles and a choked smile she resumed, “I haven’t talked about it for awhile. So, it’s what angers me about our education system. . . . It’s [geology] very spatially and very visually oriented and our education system doesn’t train, doesn’t support, doesn’t acknowledge that.” I asked, “Acknowledge, what?” She answered, “Spatially talented people,” and elaborated:

They do tend to be very kinesthetic. . . . very talented people who have a very gifted view of the world we have ceased to see as important. . . . They only made it because they were unwilling to be discarded. It bugs me, bugs me a lot.

**Values learning process.** Referencing her first two experiences with CL as “parallel journeys,” the place of process over product surfaced:

My parallel journey revised how I viewed teaching my subject. I was really kind of obsessed with feeling I had to cover everything. I finally was starting to be able to let go of that, an important part of this process. . . .I now state fairly confidently my ideal way of teaching is to use the subject I love - to teach people to think not to teach my subject. CL is an important part.

In her electronic faculty portfolio at the web address of the field site, I discovered a link to her “Core Competencies and Learning-Centered Teaching Reflective Critique.”

Following her tenure process less than five years ago, she wrote “It seems obvious now but I needed to begin viewing earth science concepts as a means of teaching people how to think and problem-solve.” (website, January 25, 2011)

In our conversations, Professor Anne talked about wanting her students to “become better consumers of knowledge and information,” “discerning citizens,” and “do a better job of reasoning things out.” She marked out her change in thinking:

My change in philosophy is what I really hope I accomplish in my classroom. That I do a good job of using earth science as a way of teaching people to think and to problem solve, not that they’re gonna come out of there knowing a whole bunch about earth science. They may, but that’ll be a great bonus, if they do.

Professor Anne’s rock cycle card game exposed fresh nuances on a healthy tension between learning outcomes or the product and the journey or the process. Also more fully described under Institutional Effects on Usage, her view on process bubbled up from her experience of “getting” CL:
I think there’s a difference of when I was comfortable with using it and when I really “got it.” I have to go back to that stupid rock cycle game and the day I went, “I don’t have to have answers. . . .Look what happens when you don’t have answers and you use the dynamic of what happened in the group. . . .The dynamic of what happens when people start working together.

Pensively reflecting, she continued:

It’s also just the unexpected. There’s a part of engagement you cannot predict . . .and that’s what is valuable, the unpredictable part because that can bring in something you would never expect. That can be a completely different lesson that . . .you never expected to teach or have them learn. They never expected to learn.

Professor Anne summarized the dynamic of what happens in this working together:

The fact it involves the dynamic of the interaction, not the task, is what is surprising. . . .If you combine the interaction and the unpredictability, that unprogrammed part. . . .you can’t plan for. . . .that’s probably the most valuable.

Now more than curious, I am compelled to know more about the “dynamic of what happens” in contrast to the “linear” essentials:

I think it’s the task thing because you know that’s the structure, the linear aspects of it is the thing that. . . .says, “This is where you’re startin’ and this is where we want you to end up. And here are some guidelines to help you get there.”

I interjected, “The scope and sequence.” She replied, “Yeah,” and added, “I can help you get there but the dynamic again is what happens, it is how you get there, not the steps.”

Continuing with this “what happens,” I inquired, “So, what you’re allowing for is everyone can’t get there the same way. So it allows for some of that?” She paused and
replied, “Umm, Yes. And it also acknowledges where I think we might be going - might not be where we end up!” She burst into laughter and explained this serendipity:

Going back to that whole thing of watching the people in that group who were the least prepared and had the most trouble with the concept map. . .all of a sudden being in a completely different position and watching what happened to them. . . . All of a sudden they were like, “Oh no, you have to do. . .” Their authoritative position. . .I didn’t anticipate. . . . And it was like, “Holy crap! Boy, was that lucky!” That’s what I mean. We still got to the end point we needed to be.

Wanting to spend minimal time here, I asked, “There is still a burden of responsibility for you to accomplish a certain linear task?” She answered, “Umm, hmm, yes.” And I probed, “Before the last day of class occurs.” And in a resolved manner, she replied, “And that’s not gonna go away and I’m comfortable with that.” I continued, “And so you have been able to navigate that?” She came back with a discerning assessment:

I think what I’m describing is what’s happened with the collaborative process for me. It has allowed me to not bring my creativity into the planning stage. Granted that may be there but it allows that to exist as an entity in and of itself during the actual activity where I can respond creatively and it’s a rush and it’s fun. It’s what makes it exciting. It’s like, “Oh, hey, we could do this!” And I’m surprised at how well, you know, I feel like I can really think on my feet a lot.

To check what I thought I was hearing, I added, “So, the creativity, another characteristic of the dynamic, is just as much in the classroom as in this office?” She responded:

Well, yeah, the preparation beforehand. ‘Cause I think, I really don’t get the creativity in the classroom as much as I get it where I’m planning something and
I’m going, “Oh, this would be great! . . . But I realize a lot of the times when it happens in the classroom it’s because I’ve allowed myself to be creative before I got in there. Now . . . some of it is really planning out the linear path so the other stuff can happen. But, again, I think it gets back to the best stuff happens when you have a plan and some kind of set up. But that’s just because that protects them and gives them a path. Then, when the time comes you can say, “Hey, we could go here!” Or they go, “We could go here!” “Okay, let’s go there!”

I added, “So, you’re saying that a substantive structure is also a part of this dynamic.”

She responded, “Yes, that’s the structure. . . you hang this on but who knows what’s gonna be on that frame when you get done. Who knows what that’s gonna’ look like?”

The frame is more fully addressed under Learning Conditions.

**Awareness of skill transfer beyond classroom.** Teaching online at the interview, Professor Anne disclosed an observed change in the online population directly revealing skill transfer, “I think I am seeing a change with some students who are clearly more comfortable with and have used group stuff more often. I get fewer saying, “I didn’t sign up. . . to do group work!” I asked if this was more “amongst older students” and she answered, “Yes.” Her awareness of the need for CL skills in the workplace began to emerge, “I’m not makin’ them do it.” She continued with their complaint, “I didn’t sign up for this!” She added this rejoinder, “Well, this is a great opportunity for you, then! Industry really likes to have people who’ve learned how to work with other people.” I asked her for elaboration on what “industry” wants. She chuckled, “Hey, ya gotta learn how to work with other people, ya wanna job? That’s what employers want ya to do.” So, that’s what I do. ‘You need to have this skill.”
Understanding of collaborative learning and terminology. Based on the interview data collected, Professor Ann’s definition of CL was limited and intertwined with the term confusion cited in the literature. A more comprehensive picture of her understanding of CL was revealed in her thoughts on theory to practice. Presented next, this expansion spilled out in her view of the Role of Theory to Practice. The meaning of CL arose when I asked, “Do you see the jigsaw as CL?” She responded, “Yeah. I think it can be. I’ve used it in such a way that you can’t get the full picture unless the different groups come together and complete the picture. So, I think it is possible to do it.”

Wanting more certainty on her view of the jigsaw activity in terms of CL or CpL, she made it crystal clear telling about small groups working on chemical mineral models:

I have them build. . .a single tetrahedron, individually. To see what happens with a single chain is not easy because this is a tough spatial thing. . . .Then, groups of four combine their. . .single tetrahedrons into a single chain. Then, they work with another group of four people. . . .So, one group has two single chains but they have to go to another table to build a double chain. They end up with a double chain. . . .the work of eight students – in one double chain.

She ended with, “That’s everybody working on a piece of it but bringing it together.”

The lesson on models of minerals applied an understanding of jigsaw and was more CpL than CL as reported in Chapter Two under Collaborative and Cooperative Learning.

Professor Anne also understood CL to be a transformative experience. She described faculty who “get what it can mean,” are those who understand, “it actually transforms a classroom” and “changes the tenor of the whole class.” She added, “It changes you [the instructor]. Gives you a rush like you wouldn’t believe, too. I think!”
More than a good practice which “is very helpful,” she laughed, then seriously tagged on, “The practitioner gets the idea behind it and understands the spirit of what it’s supposed to accomplish.” Those who do CL “because it is a good learning practice,” do it because it’s on “the list of good practices and that’s what they’re supposed to do.” In saying “list of good practices,” Professor Anne referenced again the faculty competencies (see Appendix K). Delving deeper, she distinguished between these two populations, “[It’s] the difference in the sense that it transforms a classroom as opposed to linear, I’m expected kinda to do this and it’s a good idea to have students talk to each other.”

**Role of theory to practice.** With a soft laughter, Professor Anne began, “This [emailed interview questions] got me thinking about it -- what’s my learning theory?” She transitioned quickly to, “I really believe it’s important that students’ construct their own knowledge.” At the end of our conversation on theory to practice she rated her belief in its importance, as an 8 on a 10-point scale. She continued, “Yeah, I think it drives me. It has driven me repeatedly. As a scientist I want to be able to prove the cause and effect. That’s the challenge in education, I guess, isn’t it?” Grounded in “students constructing their own knowledge,” highlights included: (a) role of research, (b) inductive reasoning, (c) students’ prior knowledge, and (d) researcher’s realization.

So important was student construction, Professor Anne was in transition from completely teaching online to the traditional classroom with some revisions (e.g. purchase equipment and develop structures for students to collect and compare their own research data). She “wanted to emphasize” that through “active” inquiry a student’s “erroneous understanding of something and what they do helps them to reframe or clarify information. Hopefully believe something different at that point because they’ve proven
it to themselves.” In regard to coconstruction, she added, “It is much more powerful if you have somebody else going, ‘But that doesn’t work.’ And it’s one of your peers.”

In this context, Professor Anne had a learning goal, “Spend more time confronting common misconceptions. . . .in geology and earth science. And it’s rife with it. . . .We all have personal experiences but our intuitive understanding as kids is often very flawed.” Her reasoning was captivating, “I have done some research and my understanding is some studies are showing when you directly confront the misconception you reinforce it.” Findings showed “the most effective way in most cases to help people” is to provide self-discovery experiences like, “Oh, wait that doesn’t work.” And she added:

When a peer says, “That doesn’t work!” I think it has a greater impact. . . .You want to follow it up with an experience where they discover for themselves, not only that it doesn’t work but why it doesn’t work. And then, hopefully, have an avenue to construct something that does work. And say, “Okay, I can buy that!”

Being the “scientist,” she personalized the theory, “So, I kinda have to find these things out for myself as best I can.” She did this by “doing a lot of surveying of my students [online]. . . .on a very regular basis” and “will be transferring [the survey] into the face-to-face class in the Fall [2010].” In her online classes, she had, however, “a really hard time verifying that [sources for what students know].” Professor Anne was “trying to set up something where they can reevaluate their alternative conception and come up with a conception based on good inductive reasoning. . . .information they’ve collected.” Then, “they are actually challenging their own belief and they can kinda’ clean the slate.” Later, she added, “So, if that doesn’t work, why doesn’t it work?” With a soft chuckle, she added, “As long, as they don’t go, ‘Oh, if that doesn’t work than I don’t care!’”
When asking students about their experience or their belief on a stated topic, her challenge was profound. They tended to tell her, “Well, I saw it on TV.” This contrasted with her better students. “When I was a kid my Dad and I went outside and we dug a hole and what we saw was this and this and we were trying to get to China but we didn’t.”

Frustrated with students’ difficulty in building learning from what they know, she applied her theory to practice and described the journaling activity students completed:

I have them, at the start of each unit. . .do a journal exercise. . . .Several questions that ask them about their experiences with the topic. . . .They have a hard time understanding I really want to know about their experiences. It surprises me how little they are accustomed to actually starting with what they know.

Professor Anne reiterated, “And so, what I really want them to do is that I want them to build on what they know.” Later, she added with satisfaction, “And when they get done, I feel convinced by their write-up that they have really connected with that. And so, it makes sense to me they are starting off in a better position and I see that.” The scientist in her kept popping up in the role of grades and the journaling value to internalization:

But I don’t know if they are doing it because they have better grades or their grades are better because they are doing it. . . .By chronicling they really are doing something that is very personal, as opposed to saying, “I saw it on Discovery.” That is an example of how I try to integrate those things.

Beyond her intuition and research studies, she conceded, “I have not set up anything that really convinces me of the relationship or that I can tell cause and effect.”

Professor Anne had talked about constructing knowledge, misconceptions, inductive reasoning, and building on what they knew to improve reasoning abilities. She
never used the word constructivism in either interview. Cognizant or not, her explanation of her learning theory in practice was clearly such. Svinicki (2004) contrasted the difference between a cognitive interpretation and a constructivist view as based on “who is doing the work” (p. 35) and whoever is doing the work (e.g. instructor, student) is doing the learning. Her practice clearly demonstrated who she primarily wanted to be “doing the work.” In linking learning theory to practice, she paralleled Svinicki’s (2004) explanation of constructivism and socio-constructivism as stated in Chapter Five under Models of the Study. Her use of theory in practice was a classic illustration of Silverman and Casazza’s (2000) integrated approach to learning, “called TRPP (theory, research, principles, and practice)” (p. 57) and discussed in Chapter Five under Responses to the Exploratory Questions.

**Institutional effects on usage.** Acknowledging “a very strong bias toward CL,” Professor Anne viewed “the small class sizes” of the community college an asset. “The personalization...lends itself to really exploiting the use of CL. Also this is getting to some of the things I am concerned about.” Among those additional emerging concerns was her advocacy for overlooked students (e.g. the spatially-talented), addressed earlier and in this section under Discipline, whose giftedness or intellect she saw as neglected in traditional education. Other institutional effects shaping her usage of CL were: (a) the field site (b) her colleagues’ influence, and (c) her discipline’s effect on her CL practice.

**Field site.** Regarding her institution’s influence, she emphasized the support of faculty to experiment and the institution’s ethic, “a value we hold for our faculty”:

There is permission to try things out. I’ve been very fortunate in being supported by my deans. I think this institution’s ethic is very supportive of CL. I don’t feel
it is overly stressed. I think there is probably some wisdom in that. Because I think there would probably be some pretty heavy resistance if it were forced down people’s throat. But I think it is very important that those who are interested in exploring and using it are supported in doing so. I wish we had more of it but you have to discover for yourself under the right circumstances.

She spoke of the “institution’s ethic” as “very supportive of CL” and referenced the faculty competencies (see Appendix K), “I remember watching for it and seeing CL was definitely there.” Appendix K under “Learning-Centered Teaching Strategies” reads “The faculty member will use cooperative/collaborative learning strategies.” This does not distinguish between CpL and CL as reported in Chapter Two. Her lesson on models of minerals, addressed earlier, applied the jigsaw activity and was more CpL than CL.

With the literature advocating for more administration and faculty interaction to improve CL classroom practices (Cabrera et al., 2002; Harvey-Smith, 2007; Kolb & Kolb, 2005; Smith & MacGregor, 2000) and the field site’s documentation of a “collaborative culture” (Blankenship et al., 1997), I asked, “Are there any times when administration and faculty work together?” She answered, “Oh yeah, absolutely, most of the time.” She pointed out the “Professional Commitment” (see Appendix K), “collaborate with colleagues and dean/director to assure and to demonstrate progression of student learning across courses and programs.” She explained:

When it comes to different things that happen here at this institution, faculty is often involved and if they’re not directly involved they are at least informed. But a number of things happen because faculty makes them happen from ground up and sort of stops at faculty and doesn’t even get involved with administration.
She relayed a recent satisfying experience on a “two-year committee” for textbooks:

Our recommendations are going to faculty council and I don’t know if [the] administration knows anything about it. But it’s the sort of thing where that expectation is there and you follow through. And I think it’s some of the best committee work I’ve ever been involved [with] so I’m pretty excited about it.

**Colleagues.** In her first experiences with CL, addressed earlier, the influence of colleagues on her was positive. Negative classroom experiences limited her usage and are under Learning Conditions. Her influence on colleagues was evident in her initiative to recommend four potential candidates for this research study. On her faculty web page, a link to her “Core Competencies and Learning-Centered Teaching Reflective Critique,” told about the tools and resources afforded through workshops, seminars, websites, and her finding out how other “earth science instructors develop critical thinking skills”:

I also find talking to other [Field Site] faculty to be very useful. Presenting the results of my [a project] to [a Field Site campus] and of my [project] to [another Field Site campus] science faculty has helped me to clarify my existing goals and to recognize new ones. (website, January 25, 2011)

The complexity of layered interaction with colleagues surfaced when mentioning she is a “scientist” and “cause and effect” is important to her. She acknowledged, “I believe in my own intuition. I am an intuitive person. I respond very well to situations. And I love getting new ideas.” She conceded “it becomes an issue when you start talking to faculty about what you’re doing [CL].” Then, she described the tension and dilemma between her scientific and intuitive nature as related to CL and sharing with colleagues:
I act as if what I do has a cause and effect response. I behave as if that is true. It’s very possible the things I do provide me with the effect I’m looking for. But it’s the how do I prove it? And it becomes an issue when you start talking to other faculty. It’s like, “Well, I do this.” But to be honest. . .when you tell other people what you do it’s like, “I don’t know if it would work for you.” ‘Cause I don’t. I don’t know if it’s what I’m actually doing. I sense that it may be. Sheepishly she laughed, “You hope… well, not even hope. It’s a dangerous area.”

As discussed earlier, Professor Anne further distinguished between instructors who use CL because they see it as their obligation and those who view it as their opportunity. She added, “I think the big differences are the people who do CL because they have had experiences and they get what it can mean in a classroom. Then, there are people who do it because it is a good learning practice. . .and kind of don’t get it.” She summarized her view on the extent of usage by colleagues at the field site, “I think it is an ethic that is being expected and supported in new faculty. With faculty in place for awhile there are definitely pockets of people who are very comfortable and very involved in using CL.” I asked, “As it is spelled out in this [study] criteria?” She answered:

I think so. . . .I think there are far many more who do something that involves a jigsaw once in a semester or twice in a semester and consider that CL. Perhaps, more often, but it’s more of a sort of break up the monotony sort of thing. More of her response was presented earlier under Understanding of Collaborative Learning and Terminology and was more representative of CpL.

**Discipline.** From an active learning perspective, Professor Anne voiced her concern to keep interest alive in the field-based sciences as more students turn initially to
community colleges. She believed “undergraduate populations” in community colleges missed out on exposure to lab activities and field work indigenous to geology and earth science courses, “undergraduate experiences that bring people into this field.” She is “hopeful” the “decreasing” undergraduate population “at the universities” will afford community colleges the facilities and resources now lacking. In the meantime, “it requires being a little more creative.” She accentuated the collaborative component:

I think the whole experience of students in the sciences. . . involves hands-on direct inquiry, classroom research activities, best done in collaboration when a team of students or a pair of students tackle a problem. You have one collecting data, one recording, one using equipment, and working together to figure it out.

She referenced research that reported:

If you want to keep somebody involved in science, get them doing research as soon as you can, get them doing some of those experiences. Those are often very collaboratively-driven exercises. . . . I can’t envision doing what I do without CL.

In describing her rock cycle card game, presented earlier and discussed later under Learning Conditions, she also explained, “So, they have to form relationships that are true.” Unlike the active learning instructional concern, this epistemological position of foundational knowledge or what is scientifically defensible or undeniably right, is also indicative of a course curriculum’s effect on the use of CL in the college classroom.

Professor Anne offered this unsolicited description of “those things” in how her “field of study which is very hands-on” naturally lends itself to CL. “Geology is an extremely spatial science. . . . It’s not just visual. I try to use a lot of spatial activities. I want them to build stuff. . . . physically construct. . . . I have them go up and draw things.”
Professor Anne painted an additional picture with these spatial applications:

It’s like you are never on your own. You have a whole group of people, your team, three to four people or whatever. . . . “Don’t let that person be up there by themselves.” or “You go up there with them.” Or they’ll shout stuff out. It’s a combination of moving, doing stuff, talking. . . keeping each other in the loop.

At the interviews, Professor Anne’s experience using CL online was current. She shared a key effect on her and a change she was noticing in her online students. Strongly believing in the potential of CL for web-based classes and pride in her accomplishments, she reflected on trying to improve “group rubrics” and “group score sheets”:

It was just every semester ironing out more bugs and I would get it tighter each time but I could not get it tight enough where it wasn’t a lot of work. It was just a lot of work. It was finally like. . . . I want to give them some good homework questions and let them work together if they want to. So, I changed what I did.

Discussed earlier, she was receiving fewer complaints particularly from older students.

**Learning conditions.** Professor Anne used CL to “advance what I want to have happen.” Her good practices partially evolved from negative ones or when not to use CL.

**Negative experiences.** Her experiences were so bad, “I don’t remember” them. In probing their cause or effect, she credited students’ lack of being “enthused” and not having “any repertoire in which to deal with that [student disinterest] because I hadn’t started to develop any.” I asked if personal or professional efficacy was part of it:

That. But I also think I didn’t have faith. I also think I didn’t believe in it [CL]. . . . I think that, uhh, I was afraid. I didn’t know I was afraid. I didn’t know how afraid. I didn’t know how much fear was an issue until I confronted it [fear].”
She listed not believing in CL, fear, and no “repertoire” to deal with student disinterest. These pointed more to “attitude,” about which she self-assessed, more than aptitude.

**Positive practices.** These psychological attributes or her mindset contributed to lessons learned shaping Professor Anne’s foundational practices: (a) build community, (b) foster communication, (c) develop structure, and (d) evaluate process and product.

**Build community.** Professor Anne’s overriding concern was to create and foster safety beginning with the simple task of knowing other students’ names for the ultimate purpose of “coconstructing knowledge.” What emerged was her “awareness” and desire for safety, her responsibility to eliminate competition, foster trust in others’ diverse strengths, and empower students by the oft-repeated statement, “You can figure this out.”

She began by describing the learning community as a safe place:

I think most of the time what I want is for people to feel like they are part of a learning community and I want them to feel like they are safe. I think that’s part of being a community. And I want them to feel like they have unlimited resources when they really don’t (soft laughter). You know what I mean? So, I think most of the time I will err on the side of work together.

Her exasperation on students not knowing names underscored how she viewed the human resource of community as in plentiful supply, easy classroom access, and not being used:

By mid-term I have tables beside each other where we don’t know the names of everybody at the table. I’m like, “Aaahh, you guys never use your names with each other!” That sort of stuff. So, I am aware when that sort of thing happens. Her disbelief on students not knowing others’ names and emphasis on knowing names was connected to working together, expectations, and fairness in grading:
My expectation is that this [knowing each other’s name] is a form of community building. I think of it as a way of providing safety, a safe environment. In that, when you open it up I think the expectations become clearer, the fairness issue becomes overt, it is not hidden. You are now saying, “Okay, if we are going to be working together then I don’t stand over here and say, ‘You know, I’m going to give you points because you do stuff and points because you didn’t do stuff.’” I’m going to be there saying, “Where are you?” . . . It’s more driven by the culture rather than the grade book or whatever. “You are here. You are part of this.”

She elaborated on collegial relationships as part of the group culture:

They have come to know each other. They might not be friends but they certainly are collegial. Many times they become friends. They study together. My experience is that is an accepted and expected responsibility.

For this reason, she “loved” her Saturday class, the “tightness in the group. . . . It was just very big on community building” because of the “very intensive experience.”

Trusting others’ abilities emerged when asked about changes in students. Professor Anne began, “I cannot think of anything where I could directly say that learning with other people was what made the big difference. I can say I’ve observed stuff that indicated to me that it was.” Her main point was, “I have observed the sense of camaraderie and trust that develops, not just trust in the sense of friendship but the trust in people’s abilities.” Then, elaborated:

I have seen changes in how people treat each other from the first day of class until the last day of class, in terms of their recognition of their ability and skills, their level of contribution. I’ve seen changes from the more insulated view of what a
group is to an expanded view of what a group is. I have seen insulated groups become part of a larger classroom. And I have seen that classroom thing develop by the time the semester ends. They are no longer working against each other. They are working together, a lot of qualitative things, in terms of the classroom, ethic, classroom atmosphere, class attitude, and individual attitudes within that.

I probed, “When you say work together, are we coconstructing knowledge as you spoke earlier or are you just telling them to work together?” She answered:

In the classroom, they are there. You have different perspectives. You have different understandings. You have different skills and competencies. You have some guidelines. You have this modeled. You can figure this out. You can do this. And you can do this together. . . .The underlying message is that none of you have to work on this alone. And I like both of those things.

Then, I asked, “Students ‘can figure this out together.’ Tell me more of what you mean by that.” She replied, “I mean that all those things that have led up to this point have put you in a position where you have what you need.” I asked, “And how does that affect the learning outcome? Or does it?” She answered, “I think it does. I think it’s the difference of succeeding and not. . . .of being prepared to deal with the problem or not. It’s the difference of trusting the people you are working with or not.” My last question was, “Do students come out with individual responses to you or a collective response?” She answered, “They are going to come out with a collective response.”

*Foster communication.* I asked Professor Anne, what it means when students are learning each other’s names and building community. As she told me the impact on her and the students, the fostering of communication emerged:
What it means for me is I truly become more an advisor or consultant. It means they [students] initiate the questions. It means they challenge each other. They sit there and go, “I don’t think so. Well, you can’t do that because here you have to take these two things and look at them together. You can’t just look at that.” I asked, “So the substantive conversation really comes into play?” In describing her five-Saturday class, she answered, “Yeah, it does. I can just be in the room and especially as you get into week three and you start having people really interacting.”

Professor Anne unfolded the deepening layers of interaction between students and with her, fostered by students teaching students, discussed earlier, and not competition which she disdained. Having already described this social interaction in her traditional classes, I asked her to tell me more about students “really interacting” after a few weeks:

They start out with the polite kind of exchanges, some a little more gregarious. By the third week they’re droppin’ stuff off, talkin’ about what they did before they came in there. They’re comin’ 15 minutes early and sayin’, “What did you get on that? Did you get this?” Then, one group comes in early and another and two groups are gettin’ together. “Yeah, well, what did you guys do with this?”

On the institution’s website, the web-page link to Professor Anne’s “Core Competencies and Learning-Centered Teaching Reflective Critique,” revealed additional thoughts:

Many of them arrive and spend this time talking or working with other students or myself. This has made arriving to class very pleasant for me and I believe for them. As I discover and become more comfortable with my style of teaching, I have become more confident interacting with my students. The time I spend before class is some of my most valuable time with them and I intend to continue.
She spoke of the expanded group engagement and communication at the semester’s end:

They are comin’ back when they have something to report on in their thing but they’re goin’ over and sayin’, “We’re thinkin’ that such and such.” And they’re goin’, “Well, yeah, we thought about that.” So, they’re going through these other groups and it’s like they’re ambassadors to other groups. . . . And the room of people becomes this organism by the end of the semester where there’s a very different exchange and that’s something I didn’t start out fostering.

She ended mentioning what she read “the other day about using Jeopardy for increasing efficiency and effectiveness of the group dynamic” which revealed this:

But. . . I didn’t like that idea because it was based on one group competing with another group. One of the things I love about my classroom is that by the end of the semester competition is gone. What happens is individual groups will negotiate on a question. If they don’t agree with another group there will be a conversation about it. Then the individual groups will have to come back and negotiate with each other. . . . If they’re gonna go with what they think or they’re gonna take this other information from this other group and include it.

Intrigued, I asked, “So, am I hearing some consensus building develops out of the whole class?” She heartily replied, “Oh, yeah.” Wanting to make sure I understood I continued, “Because here all the groups have worked out their own solutions and now they’re kinda’ checking it out.” She answered, “Yes.” Then, I asked, “Is there a time when they reach a conclusion, a singular consensus or come close [as a class], or not?” She responded, “They’ll tend towards that. Before starting, she gives them this “caveat”: 
It’s okay if the whole class comes up with the same answer. But you wanna be really careful about what you agree with and if somebody has a question that you think makes some kind of little siren go off in your head, follow it up because you could also all get it wrong. . . . Very typically there’ll be two groups get it right and two groups get it wrong. . . . I don’t have a lot of the whole class getting something wrong. I do have a lot of the whole class getting something right.

I asked, “There’s a lot of interaction?” She replied, “A lot of interaction,” and continued: There’s enough practicing, working in answering these summing questions, and coming up against barriers because a lot of these things are not easy. So, there’s also a healthy skepticism you will see and a lot of times it involves an explanation. So, I not only ask for the answer but it’s, “Now, how did you get there?” And that a lot of times, that process, can really help people clarify things.

On how group grading worked and discussed later, assertive questioning and challenging materialized. With criteria to create accountability in group participation established, she stressed, “That’s a responsibility to deal with people in your group, if you’re not getting what you need out of them.” She reiterated, “You should be talkin’ to each other. If you’re not talking to each other and somebody’s not contributing, you should let’em know they’re not contributing.” In working through building silicate chains or creating group accountability, “It’s asking for more clarification or saying, ‘Whoa, what about this point here, how do you get past that?’ It’s the reasoning process become public, open, something you talk about instead of just going on in your head.”

_Develop structure._ With a background in the traditional and virtual environments, as stated previously, in the face-to-face classroom Professor Anne’s structure included
the traditional semester schedule and an alternative schedule of five consecutive eight-hour Saturdays. True to her theoretical persuasion and her personal persona of having fun she determined early the “model” she wanted, students doing the work:

I need to set it up so they are doing the work and I’m doing more of the, “That sounds good.” Or “Well, think about this. . .” Or “How did you get that?” Or whatever I need to do to encourage the learning process but the onus of the work hopefully will be on them. It means I need to prepare very well. But it still means the classroom is much more fun. . .I don’t like lecturing anymore.

For her to address “problems” or “do some clarification” was fine but focus was “them figuring out what’s going on rather than me trying to tell them.”

Professor Anne offered detail of her “step-wise” approach listing “simple kinds of tasks, with good directions, with modeling, with walking them through that, with giving some guidance, and then pull that back.” In scaffolding, Professor Anne stressed “different levels and stops” to allow for learner diversity. For example, a group assignment might have three tasks, “And the first two are the ones I’m expecting them to work on and submit. . .The third one is what’s there if you get done.” The third activity was “an analysis level with a question they can take it a little bit further. As a whole class, they can discuss it “but some will have a little bit of a heads up on it.”

Group formation (i.e. size, selection, roles, rules) never emerged on its own, therefore, I said, “You obviously must have divided them into groups to work.” She quipped, “How did I do that?” Group size was between three and five but her “ideal” was four. Two educational factors overlapped and figured into Professor Anne’s reasoning on group selection: (a) diversity, a key consideration in collaborative learning
and (b) the nature of the discipline, “very visual and spatial.” Professor Anne “wanted a mix of ideas.” Describing her procedure as “really kind of a sloppy method” she used the BARSCH Learning Style Inventory. Another reason for the inventory was earth science:

I would just make sure I had a kinesthetic, the visual, and audio learner in each group. . . . A very visual and spatially driven science, I wanted as many resources and ways of coming at a problem. . . . I would see the difference of somebody who is good at one thing, all of a sudden excelling when they hadn’t excelled before. I liked that. I tried to get a mix. I wanted. . . what different people were good at.

While she claimed to not “direct” group roles, establishing the make-up or diversity within a group and the “rearrangement” of groups for maximum benefit from “a mix” of students was a high priority. Rearrangement was perhaps even more important. She explained what she “envisioned” and what she experienced:

I was going around and looking and some people had read this section of the book on the rock cycle and they understood it. Some of the people had had this beautiful, you know, rock cycle concept map all over the table beautifully done. And other people were just be-filled with mistakes.

Walking around as the guide on the side, she observed, “These guys know what they are doing but these guys don’t. These guys are doing pretty good.”

Professor Anne’s facilitator role came in to play. She rearranged established groups and determined new learning communities, “I told everybody to shift tables but I told them which table to shift to.” She articulated her intent, “I made sure people who were having a lot of trouble went to a really good table. Those doing pretty well went to another table doing pretty well. Some chance for people to see different things.”
The next instruction exposed her desire for students’ self-discovery and her use of constructivist learning theory “who is doing the work” (Svinicki, 2004):

When they got there what they were supposed to do is not change anything. Just turn over whatever card they thought might be a problem. And then I had them switch again. So that the people who were doing very poorly had gone to a second table and saw, “Ooh, you can do this!” Then, they head to another table and said, “Well, if that was true, than this could be true.”

She launched groups and rearranged them to lean into diversity and promote self-discovery. What followed represented her focus on CL, “that whole experience” of students teaching students, discussed earlier, and growth in substantive conversation addressed under Fostering Communication.

Making it clear she does not get involved in determining group roles, she said, “Someone will be good at the images. Someone else will be really comfortable with the instructing of the other ones of why you are doing what you’re doing.” Her lack of involvement with group roles was clarified when she explained that every group member has a role because “that’s the nature of the group but not because I have anything to say about it.” I probed the lack of instruction in establishing group roles and she said, “I might have the first day,” otherwise, “It happens. Yes, it happens.” I asked her to tell me more about how small group roles “happen.” She talked about her “expectations.” She made a written list of what she wanted, the “steps” students follow to get started, and then, “you [students] have to tell me what steps you took.” Professor Anne continued, “Without telling them, they sort of takeover.”
Professor Anne “had one more comment” on “assigning tasks.” She revealed, “When I was trying out the group thing,” she “thought it was a miserable failure because I thought it felt very artificial.” I asked, “Assigning roles?” She replied, “Yes,” adding: There was artificiality about it. . . A lot of it was my own attitude about it. “Well, why should I be telling people what they should do?” What was important for me is to develop a cooperative attitude without imposing one.

Related to group formation was making group rules. Professor Anne’s view of group contracts in a CL environment was for traditional and virtual settings and included the conventional syllabus items. “I put everything that I can that I need to have in the syllabus. . . .Whatever I really want them to be agreeing to.” And she added a “rule” that was always in place, “They couldn’t ask me anything except logistics stuff,” in other words, nothing about sedimentary rock or a limited circular cycle. I asked, “Do they get to create a new one with each course, each class?” She breathed a deep sigh, “That I have done, limitedly, when it’s like, how are we gonna approach an assignment?” On her way to the traditional classroom she was “having conversations with friends” about cell phones, roles, responsibilities, and absenteeism.

On group functioning, Professor Anne’s classroom practices, the more linear aspects, were illustrated best through her rock cycle activity used in face-to-face courses and the group processes spawned in her eight-hour Saturday class. She made clear what was explored or initiated in one setting, often of necessity, was often transferred to other learning venues or a different course scheduling. The rock cycle card game illustrated her “setting them up,” and “letting them go,” then, sticking around to facilitate. This best described Professor Anne’s approach to healthy functioning groups and parallels Kegan’s
(1982, 1994) outline of learning in community. Her view was accommodate their starting point, let them go and grow, and stay nearby to guide, as presented in Chapter Two. She began with instruction and scaffolding, to launch the groups, until they ultimately “get to the point where they are telling me.” The steps process continued with “kind of build and . . . create your local experts,” an early step in creating group roles.

She explained what her facilitator role was and was not:

I don’t direct that [group roles]. I acknowledge it. And if I see someone who’s not really doing something at some point in time. . . . I’ll talk to them kinda while they’re still doing stuff, “Do you know what they’re [student’s group] doing?” And I ask them to explain it to me almost as if I was new here, “Can you tell me what’s going on?” My idea is that if there’s somebody that’s not real comfortable in taking the lead, they’re at least still doing it, if with nobody else - with me.

She described this as “two adults who respect each other and are exchanging” questions, challenges, and information.

Professor Anne’s requirement is “they give me what I ask them to give me.” She explained it this way:

What I’ll do is I’ll go around and say, “Well, is somebody writing this down? Sounds like you’ve got good ideas here.” If they seem surprised they should have something written down she might reply, “So, are you just going to make this magic?” I try not to get sarcastic. But, I’ll say, “Do you have this recorded?” And the way she remembered it is “not having to tell them to write it down” but ask.

The facilitator role verified for Professor Anne, “they know what is going on.” And as the facilitator, her theory to practice was verified when she said, “Well, having
them figure it out on their own and me just kinda being there, settin’ it up so they can figure it out on their own. My goal is to set things up.”

Following the “setting it up,” came the preparation to “let them go.” Professor Anne explained it this way, “But the second one is where I’m really doing a step-wise modeling, dragging them along, and then, letting them go.” She made clear, “Rather than give people tasks I’m pretty sure they are not going to be invested in,” she preferred “to model the kinds of things that they need to have [and do]. . .so that in the future ones [small group tasks] somebody will pick up on that and then model it to their fellow students.” I recapped, “Just like breathing. They won’t have to be told to do this and then do this. It will be like breathing, they’ll do it.” She answered, “Yes. Yes.” Seeking clarification, I asked, “You call that increasing the participation level?” She responded:

It’s that step wise. Don’t start with too difficult a concept. Don’t’ ask them to do a task they haven’t seen done or they don’t see how to do it. Tell them how to do it. Show them how to do it the first few times. And do this often enough.

Professor Anne continued to describe the modeling until the teacher is being taught:

In my three hour block, they’re going to do that quite a few times and I’m going to get to model something different for the different kinds of exercises. The next time I’ll ask them to do it. The next time I’ll remind them to do it. The third time they’ll be volunteering or the fourth time they’ll be volunteering.

I interjected, “They’ll be telling you, “Hey, wait a minute! We haven’t done thus and so yet.” She burst forth, “That is my goal! It is my goal with these things that at some point they’re saying, ‘Whoa, what about this? We already know that you’re going to ask us this!’ Get to that point where they are telling me.” I tagged on, “They have ownership.”
Professor Anne with a pensive energy added, “Yeah. Yeah. That’s it. Isn’t it? I hadn’t thought about that. That’s what it is! Yes.”

Other factors in how linear structure supported what “happens,” Professor Anne reiterated expectations and also listed: (a) fairness, (b) fun, (c) kinesthetic, and (d) group contracts. Expectations encompassed consistency and safety:

Students know the course is set up, so, that if it’s somethin’ new I’m gonna Provide them with what they need to get started. Umm, if I haven’t done that they will let me know and then I’ll make sure that I do it. . . .One of the things I have made a point of doing is that if something isn’t working finding out why it doesn’t and then [fixing] it. . . .And it gets back to that safety factoring.

She added that students not only know what to expect, they anticipate it, “I know there are people who do come in looking forward to it like, ‘What are we gonna do today?’”

Professor Anne highlighted fairness as a “right up front” task to address. She made the point, “If I ask you to do something, I ask everybody to do that.” She added, “Yes, there’s not going to be any ‘backroom’ negotiating here. . . .part of feeling safe.”

The import of fun is sprinkled throughout Professor Anne’s interview data:

They tell me it’s a lot of work but they act like it’s fun (laughter). I just hear my students going, “Fun? Who says this is fun? Huhgh, boy, let’s do this!” One of the things I enjoy is that they are willing to play their role, too, and that is that, “You are really a tough teacher! So, what’re we gonna do today (laughter)?”

Conceding, earth science and geology are not easy, she ended with, “Rocks for jocks!”
For Professor Anne the kinesthetic factor was critical and not to be overlooked: They have to get up and walk around and that always tends to make a huge difference. I try to make my students get up and walk around a lot. I sometimes think students who have had the hardest problem with classroom work are often the ones who benefit the most from doing something physical, just changing the rules somehow. They’ll be the ones who I’ll have act out stuff, as much as I can.

I interjected, “The simplicity of just getting up and walking around.” “Yeah,” she answered and closed out her lived experience with a soft laugh and this deep delight, “And I have to say, that’s the sort of stuff that kind of gives you shivers every now and then, too, when you watch it. ‘Oh, hey, that looks so cool, how did that happen?’”

Professor Anne’s Saturday class, as mentioned earlier, was one of her first experiences in CL and much of what is reported here was born out of necessity. Not wanting to lecture for eight hours nor expecting anyone to want to listen, she explained the required and expected preparation to better function as CL groups. The homework handout included pre-class and in-class work to give students some idea of the “flow” in seeing the whole plan. “They would come and they would usually take the test that was the most consistent summative I had,” a weekly individual test. Her assessment process is explained later under the subheading “evaluate process and product.”

After the individual summative test each Saturday, the “reading guide” was reviewed with the weekly homework assignment to determine readiness for group activities. “Anytime I spent explaining things was based on their need to know or what they addressed.” On the handout would be the homework questions answered before class and the “special” questions enclosed in a box. “They didn’t have to answer
[questions in box]. What I wanted to do was give some flow. . . .I wanted them to see what they’re going to be working on when they get here before they come to class.”

Following this review, they entered into three or four sequentially-designed activities:

They may be building chain silicates that day and have to be combining, doing the concept map, or the rock cycle game. We’d do some conclusions. Then, I’d have them do questions where they’d use what they learned in new situations.

“We’ve got that. Now, look at this. Tell me what you’d do with this?”

At times, Professor Anne combined groups so they could “pool knowledge.” She used her unit on ground water and the “images” to illustrate the the give and take,

“What’s going to happen to the water if this happens? If you have pollution here, what happens to water over there?” Eventually this “day of back and forth,” moved on to, “Okay, we’ve got a little bit more information. Let’s go on to the next section.

Spawned out of a need in her alternative schedule class, she was able to “transfer that wholesale into my weekly class.” Her assessment seldom varied:

It was always fun. It was a great day! It was one of those things where when they would look it up in the syllabus and go, “Oh my God, I did it or I didn’t do it or what?” By the time they had gotten to the fifth day, they knew each other so well and they were so comfortable with working with each other that it was just one of the more pleasurable things. I really enjoyed that day. And so, it was fun.

This was an activity transferred to the traditional course schedule, “So then, I transferred that into the weekly class so that the last four times they meet they do group testing.”

Evaluate process and/or product. As reported above, Professor Anne often transferred her assessment practices to other course schedules or learning environments.
In talking about integrating learning theory to practice, a primary goal was to “deal with misconceptions.” She described formative and summative assessments.

On formative assessment, she talked about concept tests to elicit misconceptions. Working well in her online teaching, she planned to employ it in her face-to-face classes:

“I do a lot of formative in my online class and that’s really convinced me about the importance of it. [I do] just a ton of it. I don’t even grade it. But it’s one of those things they can work with it until they get it right, some of it, anyway.

She explained concept tests came out of physics education “back in the 70s.” Today a power point is used to pose, “a question with multiple choice answers and with the clicker technology you [students] vote on what you think is the right answer.” She continued, “A concept test is one that gives you [instructor] information on how comfortable people are with a particular concept and whether you need to address it further.” The CL would come into play in using the results, the multiple choice responses, “as a guide to providing the kinds of activities to challenge misconceptions.” This explained her desire to “to do that more actively than I’ve been doing, sort of tackle that.” She clarified what she wanted to “tackle”:

When I discover that half my students are still thinking that our distance from the sun is what causes the seasons, instead of just demonstrating the seasons, I’ll have them come up and demonstrate it. But I’m going to do something where they work with their peers and the ones that are not seeing what we’re all of sudden [seeing]. . . .Then, see something where they go, “Oh, that doesn’t work!” That’s what I want to do. I want to create those experiences where I’m not directing it. They’re discovering it. . . .That’s a shift I really want to incorporate.
During her explanation, I thought of her words, “I will try to use CL whenever I feel that. . .really advances what I want to have happen. I think most of the time what I want is for people to feel like they are part of a learning community.”

Summative assessment, individual and group grading, surfaced when she talked about her Saturday class where CL was motivated by necessity or survival due to her newness to the alternative structure. Professor Anne used individual test scores for the mid-term, final, and a summative test given at the start of each Saturday. The mid-term and final were “the only time I’m going to guarantee the person who signed up for the class is actually doing it.” She described the individual summative test and quiz:

They would come and take the test that was the most consistent summative I had. That was usually the only individual thing I had them do, except they would have a quiz on the stuff that we’d done the last time. It was questions directly based on the activities they did. So, I would test them on their understanding. They were usually how did we apply this and give them something to apply to. They were usually not trivial. I didn’t test on knowledge. I tested on, “What did we do in class? How did you figure this out? Now, if I gave you this, how would you figure this out?” So, this was the two main assessments I used. They would come in and they would take that test. They would have like 45 minutes. Usually it would take them all 45 minutes to take it.

From the beginning of her teaching career, Professor Anne did some very “limited kinds of CL things.” Initially she was “afraid of asking students to share a grade.” When she started using group grading, “I never had them do group work where they got graded individually. I did some tasks where they didn’t get any grade. Then, I just added to it.”
I asked how she designed and executed a “shared” grade. The two roles emerging were her facilitator responsibilities and the students’ part as a group sharing a grade. She described her part as a three-fold process: (a) her mind set, (b) her facilitation of the group’s responsibility, and (c) her “step-wise” tool, the criteria for assessing group work.

Initially her approach was, “This group is going to be sharing a grade and just treat it as if it’s the most normal thing in the world” Then, she repositioned her thoughts, alluded to a philosophical perspective, and explicitly addressed professional confidence:

Students can sense the chink in your armor, you know. . . .They sense when you’re tryin’ somethin’ new, when you’re not really sure what the outcome is.

When that happened, people would be talking about how they were concerned about what happens if somebody in the group doesn’t do any work, the loafers. She had thought about “loafers” and could not remember her response but she “dealt with it” and that changed her “feeling level.” Expecting “something bad” to happen, “nothing bad happened,” and from then on it was:

Well, why wouldn’t you do the work? You know, you wanna get a grade, don’t you? I mean you know you’re working together. So, if somebody’s not doing something that’s going to affect the group, why would you want to do that?

To assure she “normalized it again,” Professor Anne put it into a, “Well, that’s a ridiculous idea!” If students were not doing their part, she had a “criteria for them to judge.” She stressed, “That’s a responsibility to deal with people in your group, if you’re not getting what you need out of them.” She walked around as the guide on the side saying, “Yeah and you should be talkin’ to each other. If you’re not talking to each other and somebody’s not contributing, you should let them know they’re not contributing.”
Finally, she implemented a “tool,” a “step-wise” protocol so the students were not “operating in the dark or have to guess what they have to do.” She described her role:

That’s me going around, especially early on, when they’re working on these things and saying, “Well, did you do this? Now, did you set out the problem? And remember you need to do this first.” And just going in there... being very proactive, especially early on, and then starting to back off more and more.

I interjected, “Okay, you’ve been very consistent and intentional about sequential steps.” She responded, “Yes! I think it’s extremely important.” I probed, “And so, it’s the sequential steps that you go back to determine the grade this group gets?” She said:

Yes. I use it as a guide for whether they are gonna be successful in this assignment. At some point in time, they have to hand it in... They’re gonna hand it in and they’re not gonna have gone through the process and they’re gonna get a grade that’s gonna be knocked off for whatever they’ve missed or whatever they’ve ignored or overlooked. And then, they’re gonna have that feedback, when they get it back graded. “You missed this step.” “You came to a wrong conclusion because you didn’t have this piece of information and you needed it.”

I recapped the steps she told them they missed and she talked to the group of five students as if they were one student. On continued probing, she responded, “Yes, absolutely,” more than once. Reviewing her online reflective critique on her progress in core competencies following her tenure process, she had this group grading entry:

I have cautiously experimented with a few collaboratively-graded assignments. My main concerns have been that students will resent receiving a grade they feel is lower than they would have received working alone. At present, I believe some
of these problems might be reduced by developing rubrics that clearly explain expectations and criteria for successful completion of the assignment, including individual and group responsibility. My greatest reluctance resulted from wanting to avoid unpleasant scenes between students.” (website, January 25, 2010)

On her progress in addressing “unpleasant” student interactions, she ended with a comment quoted under Practitioner’s Professional Persona.

Group tests were a primary development from her Saturday class. Not wanting to lecture for eight hours nor expecting anyone to want to listen, this is what she did, “I developed four different chapters on four different things that had to do with meteorology and I developed four tests that they would take that day [on four consecutive Saturdays].”

In regard to resources:

You can use any materials, you can go online, you can talk to anybody you want to in this classroom except for me. You can do this together as your team and your team is going to come up with your answers.

On developing substantive communication, “You can fight it out with your neighbor, you can argue about it all you want to but each group has to present to me their answers to these questions by the end of [the given Saturday].” Each small group would:

Write them up. Each of them usually had maybe 20 multiple choice or true and false questions which were really typically tough and usually used images. Then they had a bunch of questions where they had to draw stuff or would have to write up stuff or they would have to figure out what was going on. Maybe they would have a table where they had to complete a formula or relate to a chart.
When asked if she used personal reflection papers, her response centered in her online class and what she intended to transfer to her face-to-face classes in the Fall 2010:

Since I’ve been doing the online class, I’ve been doing a lot more of that [personal reflection papers on processes used]. . . .I tried a couple of things . . . .I think I tried some of that stuff early on beforehand and didn’t have a purpose or a direction with it. Now I have a very different attitude about students being aware of what they’re doing and why they’re doing it. And with the journaling I’m having them do in the online class, that’s changed my perspective.

Now, with a purpose, direction, and different attitude, Professor Anne continued:

I’m going to make a very upfront part of their grade, step-by-step, a much more detailed accounting of what they’re doing and why they’re doing it. I think that’s a really important part. . . .when you’re doing this open-ended kind of inquiry. Be aware of what you’re doing. . . .That’s not something that I, in the past, did in my face-to-face classes. It will be a very important part of what I will be doing in the future because of the lessons I’ve learned from online.

**Summary.** Professor Anne’s self-description as the “scientist” who wants the “cause and effect” and to “find it out for myself” spilled into her practice of CL. Her professional thinking and conduct was highly characterized by students teaching students. She talked about “self-discovering” what you can’t plan for but must be open to, “see it,” and “take advantage of it.” “It” was the “magic,” the unconventional combinations of students (e.g. diagnostic levels, cognitive skills, learning styles) teaching each other. Process was valued so she could “teach people to think and to problem solve.” Learning “a whole bunch about earth science,” was simply a “great bonus.” Skill transfer had the
least intensity of these three connected attributes. “Hey, ya gotta learn how to work with other people. Ya wanna job? That’s what employers want ya to do.”

Professor Anne’s expressed understanding of CL and CpL, for clarity and differentiation, was best voiced in describing individuals, small groups, and combinations of groups building single and double tetrahedron chains (i.e. jigsaw activity) and the transformative potential, respectively. In the chemical mineral models it was “everybody working on a piece of it but bringing it together.” She added, “I’ve used it in such a way that you can’t get the full picture unless the different groups come together and complete the picture.” She spoke of “collaboration” as “best done” when “a team of students or a pair of students tackles a problem. You have one collecting data, one recording, one using equipment, one recording and then working together to figure out what to do with this information they have collected.” She further distinguished CpL as “more often” done because it is listed among the “good practices” (see Appendix K) and faculty who “get what it can mean,” it can “change the tenor of the whole class.” “It gives you a rush like you wouldn’t believe, too. I think!” Term interchange also was evident.

Definitively, Professor Anne stated, “Theory drives me. . . .As a scientist I want to be able to prove the cause and effect. That’s the challenge in education, I guess, isn’t it?” Students constructing and coconstructing knowledge was the priority. She wanted students to discover their own misconceptions about the world around them and compare and collect their own research data. Her research showed it is more “powerful” if done with peers. Aware or not, she put forth Svinicki’s (2004) explanation of constructivism and socio-constructivism. In her use of theory, she outlined Silverman and Casazza’s (2000) TRPP model as if she was familiar with the model and maybe she was.
Institutionally, CL was part of an “ethic” supported and expected but “not over emphasized.” In her desire “to find out for myself” and likewise for her students, she appreciated faculty being able to “discover under the right circumstances” the value and “hopefully” the transformative potential. Explained earlier, “pockets of people” “get what it can mean” even changing “the tenor of your whole class.” Yet “many more” do CpL, a jigsaw activity, one or two times per year from the “list of good practices,” to “break up the monotony.” Mentored in CL by colleagues, she recommended candidates for this study on CL. Initially fear and lack of belief slowed her CL usage. She is conflicted in knowing how to talk to faculty about her CL practice because she used both her intuitive as well as scientific nature and she could not consistently prove or explain what worked and why. Active in her institution and engaged with colleagues, I asked about faculty and administration working together as advocated by CL researchers and practitioners in the literature and reported by her institution (Blankenship et al., 1997). She answered, “Yes,” accentuating “most of the time” and provided personally satisfying examples. She viewed earth science as a very “spatial kinesthetic activity” requiring “hands-on, direct inquiry, classroom research type activities” with peers and well suited for CL. She reflected, “In my field, I can’t imagine doing what I do without it [CL].” She also talked about her discipline having “right” and “wrong” answers. Students doing the “stupid rock cycle” game in small groups “have to form relationships that are true.”

Build community was the overarching consideration of safety to promote trust of diverse abilities. “Mixing” cognitive skill ability (e.g. middle group being taught by lower group) to watch the unexpected happen provided “unlimited resources” and greatly energized her. Knowing each others’ names was a starting point for eliciting fairness,
fun, camaraderie, and accountability. Her delight was offset by an expressed anger with “education” that “doesn’t train or support” the “spatially talented,” those with a “very gifted view of the world we have ceased to see as important.”

Fostering communication she was true to her theoretical view, professional preference, and personal persona, respectively. As an advisor, she prompted students to “figure it out” or “fight it out,” to minimize lectures and have more fun. She advocated for students to challenge others’ academic thinking and confront any irresponsibility because students could primarily only ask her “logistics” questions.

Linear directions and modeling allowed for incremental scaffolding structures to protect the learning “path” and provide for the unexpected. Graduated levels of tasks accommodated different learning styles and ability levels. Formative and summative protocols were used for individual and group evaluation with well-defined rubrics. Individual and group tests and grades, peer review, reflection papers, and journaling supported CL. Activities and assessments developed for her online or face-to-face venue and semester or alternative scheduling were often interchanged.
**Description of snapshot.** At the core of Professor Anne’s classroom practices was building a safe community in order to trust diverse abilities for transformative individual development and working together. Fostered communication progressed from learning names to consistently confronting peer thinking and group accountability. Depth and extent of well-prepared linear instructional plans supported the transformative “what happens” that cannot be scheduled in but can be expected. Formative and summative assessment was implemented.

![Characteristics of CL Practice](image)

**Figure 3.** Professor Anne – A Snapshot of Classroom Practices
The Second Case: Professor Carol - Reflective Action Thinker.

Researcher’s open letter.

Researcher’s introduction to the faculty participant. A recommendation by another study participant, Professor Carol was brought to my attention via snowball sampling (Creswell, 2007), as a potentially rich and relevant case study. Receiving quick and vigorous approval from my field site liaison, I reviewed her faculty website. A few emails later, the first interview was scheduled for 8:00 a.m. on Professor Carol’s campus.

We first recognized each other in the ladies room and said nothing. With firm handshakes, her winsome discernment set the stage, “With heels and lipstick at 7:45 a.m. in this building – I knew that must be you!” My mind smiled knowingly of not having been incognito. Such began a shared intensity for, delight in, and commitment to CL. Her energy and engagement was poignantly illustrated a few weeks later when I emailed my Second Interview Guide at noon on the day before (not the three days prior), I received a lengthy response by early evening. Shocked and grateful, I read her responses, revised the interview guide, and emailed it back before going to bed. Surely she would not be able to respond before I arrived. The result was the equivalent of three interviews.

Faculty participant’s academic and classroom credentials. A strong work ethic to support her high expectations of herself, Professor Carol’s lived experience also spoke of sensitivity to adult learners in the community college. During the interviews, I was not truly mindful of how completely her academic journey chronicled an adult learner in higher education. In receiving her Vita and other documents, I learned she completed an Associate of Arts from this Field Site with honors and a scholarship, a B.S. English Language Arts Education (e.g. Summa Cum Laude, GPA 3.98), and a M.A. English
Literature all within five years of the last ten. I took note that English is the academic discipline of Kenneth Bruffee, CL expert and practitioner primarily cited in this study. While adult learners figure in to this study, more germane is Professor Carol’s Action Research (AR) Project, “Owning the Prep II English Exam.” Conducting original research, she “explored the effects of CL in small and large groups to help students master skills and improve test scores” (Vita, 2010). The abstract of her action research report noted “collaborative and cooperative learning.” In the literature, her academic journey and professional attainment aligned with the trends of adult learners.

**Faculty participant’s introduction to collaborative learning.** Professor Carol “really started thinking” about CL as an instructor at the field site where her academic studies as a student began. Initially, she told of a faculty development event:

They offered some additional classes with guest speakers to explain to us what exactly that [CL] was. . . .I started thinking about my own practices and realized I was already doing many of these things, large and small group work. . . .I decided I would make it intentional to continue using collaboration within the classroom.

First experiences with CL occurred in completing her undergraduate and graduate work:

Thinking about classes I have taken, I was asked to do quite a bit of collaboration. If I think about what I studied, it was half of the purist of English and literature and half English education and it was much more prevalent on the education side where we did the collaborative models and even talked about using some things like that in the classroom. On the other side it was almost all lecture-based.

As the first conversation layered down, her understanding of students’ dislike for group work came in part from defining her own negative perception:
People hear it. They run. They scream. They don’t like it because it always means one thing. In the group, there’s going to be one person doing the work and everyone else is there for the free-ride. So, I try to dispel that and I know where I’m comin’ from because I couldn’t stand group work at any level of schooling, even college because I did see that happening.

In my first prep for the second interview, I asked for more on her student experiences:

Working on my bachelor’s degree. . .I was often put in small groups for things like “think, pair, share.”. . .I didn’t usually care for these in K-12. They were not set up to assure equal task distribution—only group grades. The College of Ed. showed me some new ways; still, I remained skeptical. . .By the time I attended [speaker’s] presentation, I knew I may have dismissed a worthy idea, and I was willing to give it a try (P. Carol, personal communication, May 4, 2010).

Wanting to know what triggered her comment about, dismissing “a worthy idea,” I quipped, “Was the speaker so fabulous?” Without hesitation she responded:

The big thing for me was the fact everyone at this institution [Field Site] was willing to call it a learning-centered institution. When I pushed for a definition of that term, that word kept popping up. . . .What we really mean is the student is at the center and they must construct their own knowledge and take responsibility for their learning. That was parallel with the idea of learning in a collaborative way so they had the tools they needed to become that kind of active learner.

I asked if she saw “CL as integral to being learning-centered?” She rejoined, “I do.” I reacted, “Don’t let me put words in your mouth.” And she responded:
No. That was how it was presented to me here and that was reiterated by the fact they were willing to bring in this guest speaker to talk about that. And she made that distinction clear also that these two things often were hand-in-hand.

Professor Carol’s early dismissal of “a worthy idea,” her experience as a community college practitioner, and how “these two things” go “hand-in-hand” continued to be revealed and aligned with the literature reported in Chapter Two. Increasingly evident was her thinking, reflecting, and wondering how she could put her thinking into practice.

**Faculty participant’s professional persona.**

*Commitment to students teaching students.* A tip-off came early in the first interview, “Oh, I think it’s the old tradition of lecture-based is best. And this is the delivery method and I’m the giver of information and those people are the receivers of the information and the power stays with the lecturer.” More hints surfaced:

It’s so very exciting to see students take ownership of something that they never thought was in their realm at all. And I think that it’s probably most pronounced in students that had some issues with self-esteem. As we know the collaborative model helps that tremendously with the socialization acquired for the group.

Professor Carol was prepared and eager to share outcomes from her research:

I think about an older nontraditional student. She was very apprehensive coming to college for the first time feeling under-prepared in every area. . . .She landed herself right in remediation and was ready to give it up. . . .The groups reaching these consensus ideas within each others’ thoughts, picking each others’ brains, teaching one another, and sharing with the larger group. . . .a blossoming happened with her. She talked more, wrote more, she did everything more. . . .That’s one!
The right follow up question was, “You have another one?” It was a foreign student:

Different reason, same result. . .This was a man. . .English as a second language.
This is why the collaboration model works so well. He had all the same fears. . . .
even though skillful with the language that allowed him to see he. . .was able to
share what he knew with native speakers. It was unbelievable! He found he
knew more because students learning another language are usually more familiar
with the grammar and mechanics. . .He blew them out of the water. They were
amazed that someone only speaking the language for a couple of years knew so
much more about their language. Immediately it was empowering.

She had both for multiple semesters affording consistency in practice and follow through.

Later, Professor Carol underscored the usefulness when these developmental
English students were struggling with new grammar concepts:

So, learning it from one another seemed to work better than just me, standing up
at the front on the board with power points. And so it was good in that way and
all the sentences and paragraphs that they created for this project were coming
from their own experiences. I never told them what to write about.

As the facilitator, watching her students teach students, sheer delight was in her words,
“It was so great to be able to circulate amongst those groups and hear them talking about
things, the rules of grammar in order to make the question.”

Wanting to make sure I had reached saturation on the best experience inquiry,
Professor Carol sent this response in her surprise email:

I notice students are more likely to seek out small group collaboration when it has
worked for them in the past—I saw them planning their schedules together
outside of class and. . .arriving to class early “visiting” members of other groups to ask a few questions. . .almost as a comparison. They seemed to feel free offering unsolicited advice to others. Sharing the knowledge—some educators don’t even like to share. (P. Carol, personal communication, May 4, 2010)

An abrupt transition occurred to educators sharing. Presented under Institutional Effects on Usage, included here is an excerpt from her AR project, “I believe students will best learn the 22 competencies by creating the test questions themselves and explaining, justifying, and teaching given skills to the others within the small group – the very definition of learning-centered teaching.” She quoted an “expert” who “reminds educators the ‘power is shared, rather than transferred wholesale’ (28),” and concluded:

I will need to shift the power to my learners in order “to give students an authentic role in making decisions about their assignments but [also] to create a context or framework that positively influences the kinds of decisions they make” (Weimer 33). (Carol, 2008, p. 6)

**Values learning process.** In her first professional encounters with CL, Professor Carol talked of expanding her CL practices in “both the things with the products and things with the process.” In reference to her AR project, she admitted “creating test questions to better understand how they are being created because that process is so very slow.” In conceding a slow process, her focus was unswerving:

I never gave them a sheet with the skill. It was never about grammar so read this. I mean they have a text book. I didn’t need to write that down. We rarely used a textbook anyway. But my direction sheet was simply how to make the question.
She, then, explained her rationale:

I found this worked because it made it feel like this question creation was very important and put the grammar under it. It took the grammar skill to be able to do the question. But they didn’t see it that way. This leveled the playing field even with the people who knew grammar better because no one knew how to make the question. . . .Under the guise of making questions, grammar skills were learned.

Through the student “who was supposed to be typing and saving all these things and disappeared,” her value of process further developed. “It wasn’t creating this test that was my most important objective. It was the process of learning these skills and teaching them to one another. . . .Their skills in communicating, written and verbally, far transcends that test.”

Presented earlier, a meaningful narrative on process was evident as a student with more “collaborative models” on “the education side” than with the English content:

I think the educational foundation required for one to train to be a teacher would be remiss if it didn’t model methods. . . .Future teachers should at least be aware that studying English literature or grammar are disciplinary and content-based—no one teaches you in those classes how to actually teach it to another person—and here lies the rift between English Ed. Majors & English majors! (P. Carol, personal communication, May 4, 2010)

**Awareness of skill transfer beyond classroom.** She acknowledged faculty resistance but the first of more comments on skill transfer followed:

As far as what I have heard other people say is that sometimes people don’t think it [CL] has a place in our classrooms. But I think we would be doing a disservice
not to try to follow these types of models. I think the reason for that is because it’s not going to end when the education at this institution ends and these are things these students will be required to do in their careers.

In preparing to explore this more in the second interview, she responded in her email:

In addition to seeking even higher education, these students have career goals, careers that will demand their collaboration within small groups—we have a large EMT program, and EMTs work as pairs with common goals of patient care. Likewise, we have many aspiring nurses. Even our architecture program requires collaboration between architect and client for a common objective—I just don’t think too many careers will be spent by people working alone within the walls of an office. (P. Carol, personal communication, May 4, 2010)

From the mutual engagement, social interaction, or social learning (e.g. students helping students), Professor Carol emphasized the link to skill transfer, “They were forced through the empowerment they got from one another to make sense of this and to make this more meaningful. I think they really did see how these things affected their lives. She connected this to “coming up to that point” and “going forward from that point.”

Along with CL, Professor Carol was also aware of the inherent inclusive nature and dynamic of her discipline. In response to an inquiry, she emailed:

Students often think “school life” is separate from their “real life.” Language connects at every turn. For example, if my students learn about standard written English—rules of mechanics and grammar—they also understand that although our conversational English is based on the same rules, it often bends them—I use songs as examples, or we do comparisons of how we would say something to
different audiences—once we shared how different it would sound if we told a five year old about 9/11, a family member or a person from school administration. We often speak in ways much different from ways we write (I am cringing at how bad some of my speech looks on paper—I would NEVER have said things this way if I had written it. Maybe that’s a lesson for me. 😊 But for many students, they can’t see a difference, their language, written and spoken, is never standard, mechanically correct. (P. Carol, personal communication, May 4, 2010)

**Understanding of collaborative learning and terminology.** Professor Carol’s understanding of CL and CpL was influenced by her student experiences, faculty workshops, classroom practices, and AR project, “Owning the Prep II Exam: Cooperative Creation of Mock Exit Exams to Master Skills.” At a faculty development event, “That’s when I found this other interesting term, cooperation, that kind of started sticking its head in and I had to make some decisions about what I was really trying to accomplish.” The resources for her graph were her AR project, a guest speaker’s idea, and “the rest I pieced together from how I think I understand things” (P. Carol, personal communication, May 4, 2010). These experiences formed her view of CL through: (a) her visual representation of concentric circles (presented below), (b) her definitions of and differentiation between CL and CpL, (c) her confusion of terms, and (d) her view of individual learning.

The concentric circles with their “inner circles” are to be “imagined” as “broken lines for fluidity” and the accompanying explanation present Professor Carol’s CL view.
Based on her experience, I asked Professor Carol to define and distinguish these two profoundly interchanged terms. She said, “I’ll do cooperative first.” This followed:

It’s more than one person cooperating or working together to accomplish a goal. I think that it’s almost always instructor-driven. ...You’re given a task and an objective, something you’re supposed to produce at the end. You’re told to do it with these people within these boundaries. Here are your tools. ...I look at it like the three-legged race. You need to cooperate. ...to do it successfully. But what do you get from it? You just get the end result. ...Cooperative is here’s
what we need to do. Let’s just do it and get done because we need to cooperate
and work together to accomplish this end product.

She described her Fall 2008 AR project as an example of this definition:

A teacher-structured thing that I was asking them to do which for me is more
cooperative. Very, very much focused on here’s what you’re going to do and
produce for me. Here’s how you’re going to do it. This is what a sentence looks
like, now, do it. So, it was kind of like circles within circles. I like to think of it.

She added, “The outer circle is collaboration and in that is the circle of cooperation—
meaning the smaller circle is always part of the larger (must cooperate to collaborate), but
not necessarily the other way around” (P. Carol, personal communication, May 4, 2010).

She spoke also of roles and “a right answer,” foundational knowledge, presented under
Role of Theory to Practice and Institutional Effects on Usage:

I think there is more of what we would call a right answer. . . .The instructor or
the authority in charge. . . .usually has something in mind they’re hoping students
will reach, unlike the collaborative where it might be more open-ended. I think
it’s more structured and I think the people within the group do have roles, just like
in collaborative but the roles are different. It’s more, “Here’s what I need to do
within this cooperative group. This is my role and I’m contributing to the group
but I think it’s less interdependent on the other people in the group.

This explanation fit with her telling about her developmental English classes:

So from within these groups, I used a lot of strategy of peer-to-peer teaching. I
guess we could say it’s a spin-off of a jig-saw model where everyone learns
something well and brings it back to their group to share and produce the whole.
In this dialogue, key words or phrases included teacher-directed, structured activity, a group large or small, less interdependent roles, less open-ended, and a right answer.

Defining CL, in terms of her concentric circles, Professor Carol viewed “the whole thing” as collaborative and continued, “From within that, we can have the other circle [cooperative] going back to the collaborative because they [students] were forced through the empowerment they got from one another to make sense of this and to make this more meaningful.” The group’s empowerment reinforced what was illustrated in the nontraditional learner where “reaching these consensus ideas. . .teaching one another and sharing that with the larger group” occurred and “a blossoming happened. . . .She talked more, she wrote more, she did everything more.” Further confirmation was:

Collaborative. . .uses cooperation, but I think it’s something beyond, “What do I need to do to get the task done?” It’s much more of the empowerment. I’m taking responsibility as the learner. The focus is more on doing a process well.

Professor Carol began to more explicitly differentiate between the two terms. Probing to clarify, I asked, “You’re telling me collaboration moves beyond cooperative learning?” She replied, “It does.” I continued, “And it involves empowerment?” With a nod, she responded, “Umm, hmm.” I followed with, “What else might you put in that [CL] list?” She returned, “Responsibility, personal responsibility, I think that the collaborative, not the cooperative, is where we see the increase in self-esteem.” She elaborated on this statement, “More of a student’s personal philosophy of learning; a willingness to both assert and share authority to gain knowledge and experience” (P. Carol, personal communication, May 4, 2010).
Professor Carol saw CL as, “More of a focus on doing a process well to accomplish those things in CL. To get self esteem and this responsibility, it is the process and the division of duties for a common goal.” In the email, she further differentiated CpL as “duty division with respect to making the GROUP better—less individual competition. The former is more focused on making the process better for the common goal and the latter on making the group better” (P. Carol, personal communication, May 4, 2010). She defined CL as more empowerment, personal responsibility, increased self-esteem, asserted and shared authority, making the process better for the common goal over getting it done and making the group better.

On a continuum, Professor Carol further depicted her understanding of these two terms by using a different visual representation:

It’s got the looser structured things and it moves all the way toward that end where the cooperative would be. . .the more structured things for me. They all fall under collaboration. I think it’s up to the instructor who’s trying to facilitate this to figure out where on the continuum this group. . .needs to be for whatever given task. I would like to train to get closer to the looser side. . .so more of those benefits can come forward. It’s toward the looser side we will see increased self-esteem, greater responsibility, and empowerment as the knowledgeable learner.

In her email response, her use of a continuum to illustrate the “looser” to the “more structured” further elucidated her understanding:

I always thought true collaboration was at least somewhat voluntary, if not the project or the process, then the grouping. I have reasons for not doing grouping that way—I want to avoid cliques (can prevent others’ full participation) and also
a “majority” by getting two or more people who will just agree/disagree by
default because of friendship” (P. Carol, personal communication, May 4, 2010).
Regarding her small groups in her developmental English classes, she had earlier
disclosed, “Well, they didn’t get to choose which for me would have been completely
collaborative,” therefore, not as teacher-structured.

As she continued with this “looser” versus “more structured,” she characterized
“my own faulty teaching” as getting “lazy sometimes and it dips a little bit lower.” She
necessarily defined “lazy” as “giving them more structure than I intended to give them
and really turning it into, “This is the right answer. This is all I want you to do is come
up with that.” I probed, “So your CpL is a good thing? She answered, “Yes. But I think
maybe sometimes I give them too much even to be calling it cooperative. I asked, “You
give them too much what? She responded she “might be guilty” of giving them, “Too
much information rather than making them more active in looking for it.”

Professor Carol’s view of CL paralleled Bruffee’s (1999) concept:
I would define collaborative learning as a process that students use with one
another. I think that it’s a peer-based learning, always, no matter what those peers
may look like. . . .I think that there is a common goal but I think that it’s less of
finding a right answer and more of exploring many possibilities sometimes of
what those goals might look like. I think that it’s more open-ended than
cooperative learning. I think it’s less structured. I think it needs to be because I
think it involves more risk-taking. I think students become more responsible for
creation of their own knowledge based on what they already know.
This aligned with Kenneth Bruffee’s (1999) assumption that an epistemological position is related to classroom authority and application, what knowledge is determines whether authority is centralized or distributed.

In this context, Professor Carol upheld individual learning. She inserted what she viewed as a collaborative attribute, developing individual student responsibility and describing the relationship of CL to individual learning as mutually inclusive:

If the benefit for CL is to increase individual responsibility within a group, accept the idea one has to learn things on their own to be able to share within a group, to have the responsibility of working with others or achieve any group goal.

She concluded, “Without the individual work the collaborative work falls apart.”

Later, I asked her to read an expanded description of the criteria as presented in chapter two and comment, more completely, on what characterized or did not characterize her practitioner experience. She applied her concentric circles graph and the continuum to her own courses along with some other emerging insights:

All of them [the criteria] are not found in any one class which is important to note because I think there is a progression with these skills and these criteria, as there is a progression with my little circles here. It just came to me, now, that probably more cooperative things are done with the lower level classes which is why it was so significant I did that project. . . .It could be the inner circle of developmental moving to Comp I and then the higher level things are more Comp II. It’s perfect that I have these perforated lines here because with Comp I and II, there is that gray area, just like there is with developmental moving towards being ready for Comp I. I’m likin’ my circle idea more. It’s making more practical sense to me.
Professor Carol transitioned to her use of the continuum:

I think that idea we’ve talked about with the continuum is very much in play here, both with practice and these items with collaboration and cooperation, just as it is a continuum with the course of study students are expected to take as they elevate.

With a soft laugh of pleasure and satisfaction, she added, “Isn’t that interesting?”

Her learning journey in discovering and exploring her understanding of CL and the role of theory to her practice, unfolded throughout the interviews.

The profound term confusion reported in the literature was distinctly evident in her AR project. CL was the predominant term in her report; however, CL and CpL were terms used interchangeably. For example, she stated: (a) the AR project in her vita as exploring “the effects of CL” and (b) the purpose in the actual report as testing CL and CpL, and (c) the term cooperative, only, in the title of her AR project report. This mirrored what Roberts (2004) described, “Often the title of a paper may use the word cooperative, while the body of the paper discusses CL, or vice versa” (p. 206).

**Role of theory to practice.** Professor Carol began describing how theory related to her practice by saying, “I think that one is the other. If your learning theory is not what effects your practice, I don’t know what would.” She talked about her view of learning theory and all four of the practical values outlined in the Review of the Literature under Role of Theory emerged at some level. Some lack of clarity or term confusion was also apparent.

I asked her to define her use of “learning theory.” In her surprise email she wrote, “With a theory being one way to explain something, my thought is there are very different ways in which people learn and so there are also these theories to explain them.
The one that comes to mind is Pavlov.” She added, “We think about collaboration as a theory then it would affect how we plan to reach objectives in the classroom. It became for me a theory, a collaboration model” (P. Carol, personal communication, May 4, 2010). Discussed in Chapter Five, I was hearing either a need to clarify terms or a misunderstanding of theory.

Professor Carol admitted not remembering “all the theories, just the ones I respond to the best” and not being “fond of behavioral methods.” Her preference was “learning how to learn which I think falls under cognitive theory.” What she told her students about a “most important lesson” further unfolded her use and understanding:

I tell students the most important lesson I learned in my undergrad work was just that—how to learn. It’s something my students struggle with. I think it falls under “student success” skills, but it’s something all disciplines should reinforce. From the “learning to learn” idea, I get more concerned with students trying to fulfill their own personal potential and become more self-directed, which is where collaboration comes in. (P. Carol, personal communication, May 4, 2010)

The literature indicated less is known about when CL should or should not be used. In preparing to probe a first interview response to when CL should or should not be used, Professor Carol emailed this reply and told more about her use of theory:

I think this goes back to that “learning theories” question—if the desired result or objective is behavioral (like Pavlov!) instead of cognitive or humanistic (the theories I best relate to), then, maybe collaborative isn’t the way to go. I can learn to stop for a red light so I don’t get a ticket without a group. ☺ (P. Carol, personal communication, May 4, 2010)
In the first interview, I asked how extensive she thought “CL applications for content delivery” were and the relationship of knowledge to theory surfaced. She honed in on what I later considered my poor choice of the word “delivery.” However, she proceeded to differentiate between foundational knowledge (i.e. grounded in fact) and nonfoundational knowledge (i.e. socially constructed), central to employing theory:

I think the word you used there, delivery, speaks to the model most people use. I have the information and I will deliver it to you. It could be done. . . .this creation of understanding of the knowledge could be transferred to the student and the delivery becomes quite minimal, just a basic framework of skills. Then, it’s given to the group and the group constructs the knowledge, instead.

No longer regretting my poor choice of the word delivery, I asked her to clarify in my first second interview guide her use of “delivery,” “transfer,” and “the group constructs the knowledge.” In her email, she wrote, “Just because information is being ‘delivered’ (lecture), the ‘transfer’ would only occur if learning actually occurred. I point to the difference here between passive and active listening with only the latter being a conduit to actual learning” (P. Carol, personal communication, May 4, 2010).

On groups constructing knowledge she wrote, “Throughout the group interaction, the discussion and questions will allow each member of the group to create individual meaning and clarify not only the objective(s) of the task at hand, but also clarify personal understanding of new concepts or skills.” I heard active learning, student-centered learning, and CL linked to shared or distributed learning responsibility evident in her AR project and throughout the interviews.
I asked what “triggered” her concern for students to be self-directed learners and the practical value of theory surfaced, again. She replied, “I think for me ‘learning to learn’ which is what I told you I feel like I did with my entire Bachelor’s degree education. That was not something I could have constructed by myself. I needed the people around me.” She continued:

I learned what it was I needed to learn. Meaning I understood that people had different levels of where we all were and where other people were didn’t affect where I was. I was still in the same place. It made me understand to increase my knowledge base I had to take steps to do that, if that was my motivation.

Like those four practical values outlined, Professor Carol used theory to make sense of the pieces of her experience, improve student learning, choose better instructional tasks, and determine what would work where, beginning with herself. Evident was the need for a common language to better articulate theory and practice and discussed in Chapter Five.

**Institutional effects on usage.** Professor Carol described her classroom usage of CL as intentional and effective, often leaving her puzzled by “why I wouldn’t do it more.” Other institutional effects that shaped her usage of CL were: (a) the field site (b) her colleagues’ influence, and (c) her discipline’s effect on her CL practice.

“Asked to do quite a lot of collaboration” in her education classes as a student, Professor Carol spoke with certainty and directness, “I purposefully put it in there.” She added, “So I try to use it on all levels of the English classes I teach,” stating that “with the developmental English” she did “a lot of group work.” On balance, she said, “I didn’t do it every day. I didn’t want them [developmental English students] to think that every day. . .they’re going to be with their small group because there’s something valuable
about the large group.” Subsequently, she used group work “at least one” of the two
times the class met each week. Throughout this conversation, the extent of her usage and
her reasoning or motivation unfolded, even her self-assessment.

Believing “there is always a way it [CL] could be used,” she found “when should
it be used” a “kind of a trick question.” because when “it should be used is always to
benefit the students and their learning which would indicate it should be used all the
time.” Asking her to elaborate, she began with this disclaimer, “But even as I feel
strongly about it, I know that in all my classes I don’t do it either.” Then, she added,
“There’s always a way to use it!” As presented earlier, it was here she explained her
view of the benefit to “increase individual responsibility” for “learning things on their
own to be even able to share within a group.”

Employing her definitions of CL and CpL, respectively, I asked her to quantify
the kind of student interaction she tried to attain and attained based on a 10-point scale,
one represented least usage (e.g. collaborative, cooperative) and ten most. For CL, she
said, “What she tried to attain a “10” and probably achieved an “8.” For CpL, she said, “I
think I’m gonna go more toward mid-range with that, ideally maybe about a five.” Her
explanation drew my interest:

I think I probably get lazy sometimes and it dips a little bit lower. By lazy I mean
giving them even more structure than I intended to give them and really turning it
into, “This is the right answer. This is all I want you to do is come up with that.”
I probed, “And so your CL is a good thing?” She responded, “Yes. But I think maybe
sometimes I give them too much even to be calling it cooperative. I probed, “Giving
them too much what?” She responded, “Too much information rather than making them
more active in looking for it.” I asked, “So you’re real world characterization of your classroom CpL practice would be?” She answered, “Probably a three.” Not very scientifically set up, I found her CpL assessment reinforced her overall perspective.

With her strong belief in “always” applicable established and her classroom usage somewhat clarified, I asked, “Why not do it all the time?” She responded:

It doesn’t seem realistic to be able to do it all the time because it takes a lot of time to do. Even the part of establishing the groups and what the goals of each group will be and what the roles within those groups, I think those things make it a little bit prohibitive of what we tend to do, real work in the classroom. But I always think it’s beneficial. So, I try to get it in there somehow, through any semester with any class I teach. But the semesters I’ve been talking about where I was really entrenched in it every day, I feel like I saw a lot of benefits there. So, it would make me wonder why I wouldn’t do it more.

By “really entrenched,” she explained, “Those semesters with my developmental English classes were structured specifically to use collaboration—I don’t usually try to accomplish EVERY goal with it, but it did pan out (P. Carol, personal communication, May 4, 2010). I had also asked why she “wouldn’t do it more,” and she wrote:

Again, I do use collaboration, but in smaller doses—my experiences with that developmental English project just got me thinking about what it would be like to utilize those strategies more—I would say in my Comp classes (I and II), I use lecture/videos, collaborative (includes small and large groups/discussions) in this approximate ratio: 60:40. (P. Carol, personal communication, May 4, 2010)
**Field site.** Professor Carol’s comments about the influence of the field site on her usage of CL centered on: (a) the relationship of CL to the learning-centered institutional focus, (b) an institutional openness, and (c) extensive faculty development opportunities.

On the influence of the field site on her practice of CL, she responded:

We have a lot of different classes offered. . .to CL models. Ours is a learning-centered college and those two go hand-in-hand. . . .The college is very supportive of learning-centeredness, meaning the student is at the center. That’s why I think they offer all those classes that we might take.”

In preparing the first Second Interview Guide, I inquired about the “hand-in-hand” relationship of a learning-centered college and CL. She replied:

When learning is at the center, then the learning—and the student learner—is the focus . . . .But we can’t just put any student out there to learn individually—some can, but others have no experiences to tap. This is the time when CL comes into play—let the students learn from other students as well as the teacher; let students ask questions, have some say in what they do/write/say/think. . . .The more ways we can help students learn to think and learn to learn, the better. There’s that cognitive approach again! (P. Carol, personal communication, May 4, 2010)

She also spoke of extensive faculty development and an “open door policy”:

And they also have made it very clear that it’s a very open door policy. So, if we want to talk to colleagues who are doing something or to get ideas for what to do or to throw ideas by someone, it’s really open that way.

**Colleagues.** On how extensive CL was in her colleagues’ classrooms, her knowledge was based on “hearsay.” She offered a possible reason for the lack of usage
and talked about colleagues not sharing. She began by stating she had “only sat through one other person’s classes” and was “in the dark about, what they [other faculty] really do in their classrooms because it’s very easy to say what you do, but what do you really do.” She added, “That one is always an interesting point that I think about.” Then, she added:

It would be unfair of me to guess what any of my colleagues do in their classrooms. So, it’s only hearsay, of what I hear them say that they do and the overall impression I am getting is that when they try things that would be collaborative they don’t usually work.

Later, I reiterated what she called “hearsay” and asked if she had ever wondered “if more colleagues used CL or if not, why not?” She answered, “Not yet, I think because I have enough reflection to do with my own practice.” She added:

I wouldn’t want to go around looking at what other people are doing with the purpose of seeing, “Are they using it or not?” . . . I see what works for me. I don’t think it would work for everyone because just as we have a learning style, we have a teaching style. If you are not the type who can do that easily or make that happen, then it wouldn’t work for you. . . . I concentrate on me where I have seen it work because of that I want to do more.

This seemed to counter other statements wanting to encourage colleagues to use it.

What did materialize on Professor Carol’s view of the extent of colleague’s usage of CL was more directed to the lack thereof. From her experience as well as colleagues, these reasons included limited time, not working, and may not fit their teaching style. To this list she added, negative labeling. Labeling, positive and negative, was a serious issue for her discussed under Learning Conditions. For example, not giving her remedial
English students their diagnostic assessment scores, she reported students exceeding the evaluations. Relevant to use of CL, she contrasted positive and negative labeling:

But I mean that shows, to me, the power of labeling, you know, labeling like that is, uhh, is positive, in that way but labeling is normally negative. So, I didn’t want to say, “Here’s the low group, here’s the medium group, and here’s the best group.” That never works for me. I’ve never seen that work.

Labeling was another possible explanation for the lack of classroom usage because, “I’ve never seen that work and I think that’s what some of my colleagues fear with group work and I think that’s what students fear with group work.”

Her direction for this conversation also focused on faculty “sharing” or following a more cooperative or collaborative model, beginning with her willingness:

Although my project focused on developmental education, it goes beyond that and I would be very willing to research that more to share with colleagues because I think that that’s a powerful thing. If I am able to come to the table and say to them, “I know that you don’t normally do this but I tried it for two semesters in a row and look at what happened here. It was a great thing!”

Layered beneath this willingness was colleagues’ sharing or lack thereof. The narrative continued to unfold with a warning to her as a student in her education classes.

A comment in her email transitioned from her developmental English students sharing to “some educators don’t even like to share,” mentioned earlier. She had also written, “People can be very possessive about a lot of things but I try to model that knowledge should not be one of them.” I asked her to elaborate, “Well, I think educators should always be willing to share. I think it should be one of the tenets that we make our
own. That education is for the good of many and that things shouldn’t be kept in.” She disclosed a warning in an education class, “You’re going to run across fellow educators who don’t like to share but they are the minority.” She and her classmates asked why and the answer included, “Some educators think they have this great idea that works with their classes, want to use it with their classes, and don’t want others to take it.”

I asked how this warning had affected her and she reflected:

I thought that was really odd because I know all the things people have given me. . . .I just think what a shame it is to keep a great idea to yourself just because of reasons I don’t really know about. Maybe so that one group of students does better than another group. The whole thing seems anti-productive to me.

Following up on her it “seems anti-productive,” I queried, “Have you reflected on what limits or creates this resistance to sharing?” She answered:

I have because it’s still a puzzler to me. I think it’s just. I don’t know if I want to use the word “selfish,” but I think it falls under that category of – if you have a really good idea, then, you know, you don’t want to let everyone know because then they’ll all have a good idea. In education that makes zero sense to me.

So, I prodded, “And what do you think fosters that?” With serious reflection, a lowered voice, and a soft staccato cadence, she added:

I really don’t know. I don’t think it makes the educator look better amongst his or her colleagues. . . .I don’t know if it’s because people are trying to work on their own project. . . .It’s a top secret thing but people around here who do that tend to get a negative label. Most educators I’ve come across, and I try to be one, share. I don’t mind giving out if it can help someone. I thought we had a common goal.
I asked her to elaborate on what fosters the sharing:

I think those reasons are that most educators see we have a common goal in trying to educate these people who are put in our charge. . .especially within the same discipline. . .I love getting ideas from others. I think that’s what typifies most. “Here’s something that worked for me. It might not work for you. You might have to change it.” We try to meet learners where they are, not always the same.

**Discipline.** The influence of her discipline on the use of CL bubbled up from Professor Carol’s first experiences with CL in higher education as a student and her journey in defining CL and CpL. As presented earlier, she distinguished between her English and English education course. The former was “almost all lecture-based,” and the latter was identified as more apt to use CL, or “some things like that in the classroom.”

In addition, epistemology surfaced and other fields of study. Professor Carol defined CpL as engaging students in “more of what we would call a right answer” or foundational knowledge. This contrasted with CL, described as students constructing knowledge together, nonfoundational knowledge, open-ended tasks, and creating consensus. Presented earlier, she addressed other academic areas preparing students to be EMTs, nurses, and architects working with clients “for a common objective.” She ended her email reply with “I just don’t think too many careers will be spent by people working alone within the walls of an office. (P. Carol, personal communication, May 4, 2010)

**Learning conditions.** Professor Carol had advocated using CL “to benefit the students and their learning which would indicate it should be used all the time” and she wondered why she “wouldn’t do it more.” She provided negative and positive reasons.
Negative experiences. Professor Carol admitted, as addressed earlier, CL was
time consuming to establish groups, group goals, and group rules. She continued, “All
the time, I’m a modifier. If it’s not working I change it up immediately. . . .Nothing
works 100% of the time.” I asked what “not working” in CL would be and she told
about difficult concepts, poor attendance, rigid deadlines, and irresponsible students.

Difficult concepts included what was hard for her “to tell them how to do it,” as
well as “difficult” for them to do. Professor Carol easily conceded, “We do have a
problem with attendance at times” and “it’s a major factor.” She would “always just
restructure in a way they could master skills in a different way.” She added, “There was
always something that could be done with the people who were there. I did not want
them ever to think they were wasting their time because after all that was what I needed
was bodies in the chairs.” On “rigid deadlines” she referenced the “utopian” goal of
creating “40 questions in a period of 15 weeks.” “Surprising” described her discovery,
“The test scores after we had even only done half, were amazingly higher than they had
been. I understood the value was in this process and by transferring the responsibility to
them, they understood what it was going to take.” I probed for certainty on the “higher”
student scores. She exclaimed, “Still much better! I had to learn to let some things go.”

Lastly, she told about the “old standby” of when students “don’t follow through
which sinks the whole group.” Professor Carol minced no words in explaining the
reality, “And it was tough because it had already been many weeks of collaborative work
that the person had lost. So, we just had to pick it up from right there.” She further
delineated how she and the group members “picked it up”: 
I assured them they’re grades were not going to suffer because we still had the check list of what they had been doing all along. . .and that was important. I reminded them they still had the benefit of doing those things. I said, “If we don’t have that at the end with what you turn in, then, we’re just going to go by what we have from here forward and we’re just gonna restructure it because I don’t think we’re gonna see him again.” And we sure didn’t. We sure didn’t.

I asked, “Did that modify moving forward for you?” She admitted, “It did. And it was, it was a bad feeling. I generally like being in control of things and things like that nobody is in control of.” I had prepared to ask her to tell me more about her feelings and her moving forward. She wrote in the email:

These modifications were just as important for me as the students, maybe more so. It’s hard when things in the lesson do not go as planned. I have only been teaching for six years. I have gotten much better at flexibility. It was hard at first, thinking about how my well-laid plan was going astray. But now I really just look at problems like that as inevitable challenges—and I do love a challenge. I think that as I create the lesson plans now, I ASSUME that things will not go this exact way, but I like to start with a good framework. It’s a GOOD feeling to be able to confidently tell my students it is OKAY that such-and-such did not show up/do his work because whatever you have done is still quite valuable and we can work around the gaps. (P. Carol, personal communication, May 4, 2010)

Professor Carol explained how this past worst experience has impacted her present classroom practices, “It forced me out of my comfort zone because I had to come up with something that was a better alternative for the good of these small groups.”
Probing I inquired, “So, did you find a way to accommodate the future potential of the same reality?” She unabashedly conceded, “No,” and continued to explain:

It was an important lesson because I understood full well, then, that this could happen again and likely would. Outside of recommending they keep files in more than one place. . .I was deciding that that would be one of those things that I was going to have to put in my, just let it go file. That ultimately it wasn’t the creation of this test that was my most important objective. It was the process of them learning these skills and teaching them to one another. . .I learned my lesson.

**Positive practices.** These negative classroom experiences were contributors to shaping four positive learning conditions Professor Carol practiced: (a) build community, (b) foster communication, (c) develop structure, and (d) evaluate process and product.

**Build community.** In Professor Carol’s lived experience, her remedial English and more advanced composition courses, the community experience provided safety leading to empowerment or ownership. Her concerns were drawn toward moving beyond poor learning experiences and attitudes from the past and developing voices confident in their own thinking. Professor Carol explained how the collaborative model “lets them rethink the whole thing” about “whatever they did in high school” or “whomever they don’t talk to now because they are worried about their language skills.” Besides creating safety and empowerment, another major highlight was embracing others’ abilities.

Professor Carol described community, “In this group, it is safe. They are with other like-minded students, even if they don’t like what I’m giving them to do.” She required, “They have to work together and bring something to the table.” The merging dynamics of low self-esteem or self-efficacy, socialization, and diversity challenges:
Number one would be self-esteem, self-confidence, their understanding that they are intelligent and they can do these things. That’s pretty big. Socialization is also big. Especially in the population of developmental education we get a very diverse mix, everything from non-traditional students who have been out of school a very, very long time, to people just learning the language, to people who admittedly did nothing but slack in high school. So, we have all these people coming together and they all have one thing in common. They all have at least somewhat of a chip on their shoulder about their own abilities.

She continued, “They don’t like being labeled the remediated group. There is a conflict with how to resolve that because they feel they are in the remedial group because of these problems that many times they have created.”

Professor Carol provided a motivator and reinforcement by positioning the leaning into others strengths to showcase the benefits. She explained, “I think the idea of seeing the roles within the group divided. Here are the roles that we have to all do. Here’s what I’ll do and here’s what you’ll do.” She added the alternative motivator:

If I’m asked to do an assignment of any kind and I’m not in a group, then, all of these roles are mine. And I think it was a big light bulb moment for many of them to understand that maybe that’s where they went wrong in the past.

Quickly becoming aware of the smart value, Professor Carol laughed:

It is worth it! That these things, I’m responsible for all of them, I have the benefit of my group right now. But if I don’t, then, it’s me worrying about teaching myself or seeking the information that I need if I’m not getting it. And I type everything myself. . . .I think that was a big moment.
Then, she explained what they soon learned:

It empowers them with their knowledge old and new. And they can finally do something that many times they are proud of. And they have told me that. They have said, “I’m not usually the one who does anything in the group. But this time, I was showing my group how to do this.

Professor Carol employed a distinctive technique in how she built community to get them to the point of learning pride, empowerment, and accomplishment. As reported earlier, she formed the groups using “diagnostic tools.” When the assessments were completed, she quickly told them, “I let those small groups know they were in these groups and they were selected as an expert in one area.” In her view, the lack of labeling enabled the students to move beyond what they might have. Her use of the “being expert” role is also described under Develop Structure.

_Foster communication._ To develop substantive conversation, Professor Carol used the creation of test questions, the language of language, peer review, response papers, the “old Greek ways,” “four languages,” consensus building, and the role of individual learning while encouraging students to challenge her role in their learning.

Professor Carol designed her developmental English course for students to create their “own original test questions that would mimic those taught on the exit exam.” Equivalent to the K-12 Florida Comprehensive Assessment Test (FCAT), the purpose was to understand “how they [test questions] are being created.” The questions teach the basics of sentence structure and parts of speech. Since every question had four choices, students had to “think about how to come up with good wrong answers,” demonstrating
that “sometimes the negation is more powerful.” Three levels of substantive conversation were evident instructor to student, student to peer, and student to instructor.

As instructor to students, Professor Carol deftly moved the lines of conversation between the students within the small groups to “let them figure it out”:

When they said, “We don’t understand this.” I’d say, “Well, someone in your group does. So, someone’s an expert in there.” Always somebody would step up. I think it was so powerful because, not knowing if it was them, they had the confidence if no one else was saying anything to think, maybe, it is me. And to look at it again and pull up from themselves something they didn’t know was there. So, under the guise of making these questions, grammar skills were learned and it was so great to be able to circulate and hear them talking about things.

Additional student to student conversation opportunities would develop when they had to create a correct sentence in order to develop wrong answers. She explained:

You could hear them talking, “Well, that’s not right. You can’t use a semi-colon there. You’re supposed to use a comma after a dependent clause in the beginning.” And the language of this new skill was coming. It became part of their everyday language and it was so exciting to me! I knew they had never used terms like that. I feel like maybe that’s where I saw the most increase of skills.

This was further enhanced by “the language of language,” I asked her to elaborate on the “language of this new skill.” She wrote back:

I like to call it the language of language—clauses, phrases, parts of speech, punctuation—all of these words represent and identify the language the students use, but the terms are often new to them, so even learning the “technical” names
creates knowledge, enhances skill, broadens the communication experience. (P. Carol, personal communication, May 4, 2010)

Students were also encouraged to augment instruction and challenge the instructor. In her email, she continued to depict the small group communication, “I tell students I am open to clarifying any instruction I can and I also ask informally afterward what might have been better” (P. Carol, personal communication, May 4, 2010).

On peer review and response papers, Professor Carol’s Comp I classes “work on several essays.” At the end of each essay there is a “workshop day.” Each student brings “two copies of what is supposed to be a near perfect. . .draft of the full essay” to their small group of three to four students. In her email she wrote, “Once all essays in the small group are read by two readers, the two readers of the same essay discuss aloud their findings – these 2 then AGREE on one score, according to the rubric” (P. Carol, personal communication, May 4, 2010).

I asked for a word picture of what a peer reviewers’ conversation “sounds like”: When it’s time to discuss, they just get the draft of that person’s paper they’ve written on and they say, “Well, I noticed this about the introduction.” Or “I didn’t think that was a strong thesis statement.” Then it becomes a little bit of a debate because these are gonna both be handed back to that writer and that writer is going to grade each of these two people.

Professor Carol found, “This prevents the slacker nature because they know that they’re being graded by their peer.” Then, she continued on the need for agreement: So, if they disagree on something or if someone found something the other one didn’t, they can certainly add that to it, as long as they agree. But they have to
agree on what’s being said. It works out really well in that the person who wrote
the paper just gets to sit back and listen and sometimes they turn to that writer and
say, “What did you mean here?” It becomes kinda of a three-way conversation
and at the end I ask them to use the rubric... to grade it. No surprises there.

In the peer evaluation, discussed later, substantive conversation was fostered through
what is generally considered a nontraditional assessment. Professor Carol continued:

And just say, ‘If they [the writer] were to turn this in today, what do you think it
would get?’ They come up with that and the writer has to agree. I don’t want
them to say, “It would get a 75” and the writer say, “I think you’re both wrong.”

Student evaluation is discussed later. Yet peer evaluation intentionally or
unintentionally fostered communication and the essay writers’ “grading” of the reviewers
improved communication skills. The five-question survey asked, “Did the person
complete the checklist? Were the suggestions helpful? Do you feel it was honest? Were
they trying to be constructive?” I interrupted, “So, we kind of get in each other’s face a
little? “Yes!” she exclaimed and continued:

So, the honesty is important but at nowhere does it say on there, “Do you agree
with what they said?” ‘Cause we have a problem with our own words and we
know that that we like them very much and we don’t like people to say negative
things about them even if that’s what we need to hear.

Ethos, pathos, and logos surfaced when I asked if students needed to intentionally
learn how to debate or engage in challenging, justifying, substantive conversations. She
replied, “Um, hm. It does happen.” In “tying in” the essay writing and the workshop
activity, she explained the Comp I response papers, “In these response papers, they have
to take a stance and justify, using textual support. . . . We just take it back to the old Greek ways and we talk about ethos, logos, and pathos.” Professor Carol wrote about these “old Greek ways” in her email. She spoke fondly of the response papers, “And those days are the collaboration I really enjoy because the aggressions are many but the value is very high. Intrigued, I asked for more on “aggressions”:

I start all Comp I discussions with the reminder that all opinions are valuable and to be persuasive, we must use ethos (credibility), logos (evidence) and pathos (emotional component). It’s really fun and effective—if someone starts ranting—I just say “Too much pathos, give us the logos and your ethos will elevate”—and they get it. (we have examples prior). There are so many “hot” topics that we talk about that push people’s buttons, but I tell the students that the sooner we practice “debating” effectively, the sooner, we can avoid sounding like a ranting lunatic.

😊 Example: When a Hispanic student in class talks about how he is AFRAID to speak more English for fear of being made fun of, the white girl on the other side of the room says “Oh, maybe I shouldn’t be so quick to judge those people in Walmart.” They learn from one another. It’s just great—a life lesson, not just a classroom one. High value. (P. Carol, personal communication, May 4, 2010)

When talking about Comp II, Professor Carol used the term “four languages,” listening, speaking, reading, and writing. I asked her to tell me more about what she meant. “Understanding every sentence that comes out of their mouth or is the result of their pen across the page is going to be one of these four. It is not random.” She later mentioned, “critical reader, thinker, listener, speaker.” I asked her to elaborate:
They’re all related to one another. And when I teach them how to be critical readers, that one’s the easiest to teach because we have a tangible. So from there, we just kind of take it to the next level and say, “Well, here’s something that I found when I was reading.” And that helped you to become a critical speaker of saying these ideas and then when other people interact with those and ask what you thought about them that’s where you’re critical thinking comes in.

Bruffee’s (1984, 1999) two key components of CL, community and communication, along with his “thinking, speaking, writing” cycle, central to his explanation of communication, came quickly to mind and I was all ears. So, I reiterated, “You have to be a critical listener, critical speaker, critical thinker, and critical reader.” She replied, “Right.” With intensity in my voice, I proceeded, “Tell me why you put them all together like that.” She explained, “Okay. Well, those are four vocabularies.” I asked her to explain why she referenced them “together” and how they are related:

The speaking and writing are the delivery methods and, of course, the listening and the reading are the intakes. . . .I don’t see how they couldn’t be related. For example, when I was writing these answers, isn’t that similar to what I would do if I were sitting here with you? But I chose different words because I had more time to think with the written one. . . .With reading I can go back and look. It’s easier to be a critical reader than it is a critical listener. “But what did I just hear you say?” Even if you ask for a repeat you’re not getting the same exact thing ever. . . .They’re all related. . . .We understand that that has everything to do with audience. Who is picking up our message? Or who are we speaking to? Some students don’t have those skills. Sometimes we start there and work on those.
In her unexpected email, she wrote, “Again, Comp I and II---audience and purpose—listening (not just hearing), and speaking, plus their counterparts of reading and writing, are our human tools of communicating and being judged. We should use these tools with care” (P. Carol, personal communication, May 4, 2010). I inquired further, “So, they move from being non-judgmental to being accepting? Is that what you are telling me? “Right.” she replied and continued:

If not accepting, at least tolerating and still understanding there can be two to four different views on this. The big thing happening is I see a progression from what we do with the grammar-based things in developmental English. It’s much more worldly in Comp I and Comp II but we get to see where they stand. Sometimes they don’t know where they stand. Pulling that out of them makes them have a realization of their values, beliefs, and experiences, as valuable and worth sharing. I asked her to define “more worldly.” In her email reply she wrote, “WE read current events as well as classics, they chose their own research topics in Comp II. It’s much more open-ended” (P. Carol, personal communication, May 4, 2010).

I came across a CL activity on consensus building in a Short Course in Writing by Bruffee (1985) for “paragraph coherence.” I asked her to read the activity to see what her response would be. Her assessment was not anticipated but insightful:

It sounded like it might work. Except for the problem I could see is when you start sharing things aloud from one group, the other groups will change what they have because they’ll perceive the teacher’s response as being more correct than another. . . .The last groups are going to say, “We found everything they found.”
Her comments did not seem to align with the model of small group conclusions merging into one whole class consensus. So, I asked, “Within each group you have a consensus? She replied, “Umm, hmm.” I asked if she ever facilitated small groups reaching a whole class conclusion. She paused, “Uhh, no, I don’t think we’ve come up with things that they’ve constructed within the groups and pared down to choose one from amongst those.” She added, “I would say with my developmental classes that would be kind of what we did in constructing those mock test questions.” Amidst laughter she explained:

From what I collected in folders, I would put together examples for the whole class. They could see which one was theirs. ... These are all good but here’s what everyone else was doing. They could offer some feedback on those, too.

I recapped, “So the small group work is where it all begins and ends within each group.” She verified, “Right, in that class [Comp I] for that activity [peer reviewed essays].”

For additional probing and verification I asked, “Do you ever integrate the small group work into a whole class outcome?” She responded:

The closest one for that would be the response paper discussions I use in Comp I because those don’t start with a group. Those start with individual papers. According to guidelines, the students are required to write and bring in to use as their own springboard for discussion. So, they already have something here.

Professor Carol used the tool of individual learning to build substantive conversation and her tone lightened as she addressed the individual learning component:

The beauty is to see their original ideas. So, when we start discussing that event that doesn’t happen. ... Where they hear someone else and they think that’s a better idea or the right one and they say, “Well, that’s what I was thinking.”
Instead, they’ve got this tangible paper they have to hand in. This is always so illuminating to me. I often write on those, “Why didn’t you share this?” From the “beauty” of these individual papers, her experience caused her to conclude: People don’t like to be the minority thinker. So, I think it’s good they come to one discussion from their single papers. I think everybody tends to learn things from hearing other viewpoints. But sometimes, even then, they’re reluctant to share their individual work toward that discussion.

*Develop structure.* Professor Carol formed groups for her developmental English and Comp I and II courses by following a progression of her view from CpL to CL, respectively. In developmental English, she expected some to “end up dropping”:

I broke the 25 people into five groups of five. Those did dip a little bit but it tended to work out alright. How did I group them? Well, they didn’t get to choose which for me would have been completely collaborative, if they grouped themselves. Again, that was teacher-structured and I did use diagnostic tools. I used an essay and a 40 question multiple choice test. Finding the weak areas and the strong areas allowed me to put people together for those reasons.

On roles, the basic framework, a “cooperative structure,” played out as, “You’re in a group, here’s what your goal is, here’s what you’re going to do, here’s your roles.”

The only time she said “right from the beginning,” she revealed the “psychology”:

Right from the beginning I let those small groups know they were selected as an expert in one area. I never told them what the area was but it worked well. Now, something about our psychology, to know I was put in this group because in this group I’m an expert at something but not knowing it, then, really freed things up.
Professor Carol facilitated the “psychology” component with, “Someone in the group does know. So, start thinking.” When students told her what they did, she responded, “Well, maybe that’s what you’re an expert at, wink, wink, right? Maybe you’re the expert on that. So, good, thank you for showing that to your group.’ And I don’t know it just works that way.” I asked, “So, maybe they went beyond?” She retorted, “Oh, definitely.” As presented earlier, her concern about negative labeling was not only expressed as possibly influencing student and instructor fears or resistance to small group learning but capitalizing on the positive power of not labeling.

In Comp I, Professor Carol explained, “They are allowed to choose their groups.” She believed, “Three is ideal. Four is possible.” She added, “I don’t go bigger than that because with only two copies, the group of three will have one person to give these other two their paper.” Four took longer and was “harder to accomplish.” In Comp II, the groups had fewer essays and I assumed the group formation process was the same.

Professor Carol’s practices for group functioning differed from group formation in that elements of CL as well as CpL were evident in her remedial English classes as well as her more advanced Comp I and II. Relevant highlights from her developmental English class were: (a) the scope and sequence of a typical day, (b) her facilitator role, and (c) the potential for diversity in small group CL.

In her developmental English classes, “utopia,” create a 40 question test was never reached. The more important objective, presented earlier, was teaching grammar by focusing on the process, how to create test questions. In that context, Professor Carol mapped out a “typical group work day.” They all brought their completed individual work and chose “one or two depending on the skill” needed from within each group:
Instruction one would be written on the board to get in your groups, saves time right at the beginning. Each group has a folder I would give them. . . .They have their chart to record what they’re doing on a given day. We keep track of who is doing which role. Within the folder, not only would I be returning things I looked at and commented on. . . .but I would usually give a new sheet of directions for how we were going to go about constructing the next question for the new skill.

Professor Carol said, “We would talk about that together.” Then, it would be time to “question within your group” and let the students “figure it out.” She continued:

So that would go almost until the end of [the class]. They would kind of hash it out and the assignment would be, “Alright now, from what you have created today, we need somebody to type this up.” And that was one of the roles. The last instruction was, “Make sure you are choosing someone that’s going to keep it and be responsible because everybody’s going to have a grade at the end of this.

Professor Carol spelled out her facilitator role as a guide on the side:

Just going around, uhh, clarifying the grammar parts, how to construct the sentence parts. But most of that I didn’t really need to do, too much, after initial instruction because a lot of this turned out to be review. Being the remedial class, they knew more than they thought they knew.

Diversity in the group demographics reinforced the assumption of Vygotsky (1965) and others that as heterogeneity expands within learning groups the potential learning power increases for the individual. For example, the small group interaction to construct the test questions afforded a non-native speaker the process “to construct a sentence because it was broken down into these parts he could grasp as far as how he was
being taught the language anyway.” Professor Carol quickly clarified sentence structure (e.g. subject, verb) and added the unexpected emerging component, “What emerged was he knew a lot more about these parts of speech than others who spoke the language.” I repeated, “Who were English-speaking.” She exclaimed, “Right! So, he thought he was not going to be able to be a big contributor and it totally flipped around.”

Professor Carol had provided much about remedial students, I wanted to probe her more advanced classes because the research literature was reported as more limited. The highlights presented here include: (a) contrasts with developmental English, (b) the response paper process detailed, and (c) the integration of consensus building and individual work in a reciprocal nontraditional peer assessment.

She began by outlining contrasts between Comp I, II, and her English courses:

I do the collaboration much differently. It’s much more what they choose. It’s not at all what I consider a cooperative structure. . . .In Comp I, the collaboration comes with always more of a large group kind of situation because they do these response papers. When they write these papers on an article, film, or movie, I tell them to respond with the set of guidelines that we have the day we discuss them.

As she stated earlier, “Those days are the collaboration I really enjoy because the aggressions are many but the value is very high. Her extended comments on “aggressions” is under Foster Communication because of the substantive conversation.

In Figure 5, Professor Carol referenced the faculty development CL workshop, early in her career, where she “realized I was already doing many of these things,” the classic adult learner. I prepared the first Second Interview Guide and received an explicit outline of the consensus building and reciprocal evaluation in her more advanced classes.
[The workshop] definition led me to believe my essay workshops for Comp I & II were collaborative:

* Each student brings in 2 copies of his/her essay

* 3 or 4 students in a group: the two readers of a given essay read their copy and make notes/suggestions individually, according to the guidelines.

* Once all essays in the small group are read by two readers, the two readers of the same essay discuss aloud their findings— these 2 then AGREE on one score, according to the rubric – * essay writer then grades the efforts of each of these 2 reviewers according to a short survey

* Discussion continues until all in small grp have had their 2 essays read,

Discussed, & graded (P. Carol, personal communication, May 4, 2010)

* Figure 5. Professor Carol’s Reciprocal Response Paper

Professor Carol later illuminated how her collaborative Comp I classes “mostly” function setting down the consensus building process in the reciprocal peer review, a nontraditional assessment integrated into the group functioning process:

These are workshops. I do these for all classes that have essays. . . .This is mostly Comp I. . . .We work on several essays and do it three times. On the workshop day, these students have to bring in two copies of what is supposed to be a near perfect . . .draft of the full essay. . . .The distribution gets a little bit tricky because people tend to want to just hand it to whoever is next to them but I encourage them to get some “fresh eyes” on that paper, especially by the second or third
workshop. After some reading time, 15-20 minutes for each essay, these students follow my checklist and make comments or suggestions throughout.

What I found deserving emphasis was this statement, “I want this to be individually done first, not affected by the other person. Then, when it’s time to discuss they just get the draft of that person’s paper that they’ve written on.” An explanation of the discussion can be found under Fostering Communication. A more complete understanding of how substantive conversations affect assessment is under Evaluate Process and/or Product.

She offered this distinction between her Comp I and II classes, “I have done it with Comp II but there we mostly work on one big essay. So, we only get to do it one time.”

**Evaluate process and product.** Summarizing a variety of classroom practices, Professor Carol said, “What else?” She began, “They assessed one another. They evaluated themselves both as people within the small group and their group went up against other groups, competitive things to show off our skills a little bit.” Professor Carol’s experience in assessment could be categorized by: (a) a rubric chart within the small groups, (b) fun competition between the groups (e.g. grammar bites), (c) the role of individual work in evaluation, (d) reciprocal assessment, and (e) faculty frustration.

Within the groups, Professor Carol passed out folders with “a chart for them to fill out daily with what they did to contribute to the group.” Any attempt to misrepresent or avoid honesty and accuracy was not tolerated and openly confronted:

There’s no way around that one. When it’s on the chart, [if] you have somebody who’s trying not to do anything than that person gets to check nothing. Others were pretty good watchers. “Don’t check that. You didn’t do that! I did that.” It forced participation. You didn’t want to be [told], “You’re not doing anything.”
Between small groups, Professor Carol created “a little bit” of competition, “usually using grammar bites” it was “an interactive website” where “you fill in the blanks and make choices. . . .It’s good for arousing attention.” She further explained:

They looked at them as fun things, the competition parts, even though it was, of course, reiterating the skill and practicing. They looked at it as our group against their group and that worked really well because then everybody had to do something. You couldn’t choose one person from the group to be your spokesperson. . . .So, they knew that they were going to be accountable.

Deciding to be “intentional” in using CL in the classroom, after her first professional workshop, she “constructs lesson plans” to include at least one collaborative activity each week. What followed spoke to evaluation, “But I am careful to try and make all students active participants with individual grades.” Her reason was to counter the common fear of group work, “I don’t want them to hate group work, but rather to see it as valuable and even preferable to all lecture and individual assignments” (P. Carol, personal communication, May 4, 2010). Professor Carol pointed out, “All the quizzes we did were matters of individual first. Then, I would give them a minute to talk to their neighbors. We would even open it up to the whole class.” She reminded them, “Change your answers all you want but when you turn this in it’s your grade on your paper.”

Reciprocal assessment or review between students to the instructor as well as instructor to the students was part of her protocol. And I asked her to tell me more about her intent to “dispel the fear of group work.” She wrote:

I dispel the fear by using individual grades and record sheets that clearly indicate who is doing what—I model “reciprocal engagement.” For example, in my dev.
English classes, I give written directions for the group, but I tell students I am open to clarifying any instruction I can. And I also ask informally afterward what might have been better. In Comp I, for our response paper discussions, I always play “devil’s advocate” to offer whatever different/opposing view is needed—I do this instead of imposing my opinions. The goal is really to listen to and offer different experiences and sides (“conversation skills,” “increased ownership,” and “whole class discussions.”) NOTE: Quoted phrases are from your 4 points. (P. Carol, personal communication, May 4, 2010)

In Comp I, reciprocal peer evaluation occurred. She explained wanting to “see if I could produce even greater results both the things with the products and the process”: For the workshops, I wanted the process of peer review to affect the writer’s understanding of how “audience” perceives a piece of writing. Because we always have a final revision AFTER the workshop, students must carefully evaluate all comments/suggestions and decide which to use/ignore. The final paper always benefits from additional sets of eyes giving feedback.:) Plus, given the process that students must read critically, they automatically become more critical readers of their own work, too. (P. Carol, personal communication, May 4, 2010)

In return, the writer evaluated the two reviewers’ work on the writer’s paper. Professor Carol’s rationale for this writer assessment addressed the common fear: “That writer grades each of these two people. I find by doing that prevents the slacker nature because they know that they’re being graded by their peer.”

Presented earlier, this peer evaluation spawned substantive dialogue. Professor Carol further noted, “Sometimes they turn to the writer and say, ‘What did you mean here?’

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So, it becomes kinda of a three-way conversation and I ask them to use the rubric we use to grade it, no surprises, there. She further described the kinds of conversations:

Let’s just say, “If the writer were to turn this in today, what do you think the essay would get?” They come up with that and the writer has to agree. I don’t want them to say, “It would get a 75” and the writer say, “Well, I think you’re both wrong.” It’s usually a three-way agreement between the readers and the writer.

Intrigued with the writer’s assessment role, I asked Professor Carol to tell me more:

The survey is just five questions. . . .The first one is, “Did the person do everything on the checklist?” The others concentrate on was the suggestion helpful? Do you feel it was honest? Were they trying to be constructive?

I inquired, “So, we kind of get in each other’s face a little?” She responded:

Yes! So, the honesty is important. But nowhere does it say on there, “Do you agree with what they said?” ‘Cause we have a problem with our own words and we know that we like them very much and we don’t like people to say negative things about them, even if that’s what we need to hear.

Recalling her worst case scenario when a group member “disappeared” leaving a huge role of responsibility and much of the work unrecovered, Professor Carol recapped having the folder with their “individual” work “combined with the charts” and she could determine which skills “they had been working on.” I reaffirmed her new “letting go” skill and this frustration followed, “Yes! You know why that’s important for me? Because we, the instructors, that teach these classes can’t stand that test. It’s our FCAT, if you will. We can’t stand it! It’s not the relevant way.” We laughed. She continued:
It is! And we don’t want to teach to the test. Is what I’m doing teaching to the test? I would argue, no. Even though I am having them create test questions. It was another way to come around through the back door. . . . It was a big moment for me that reminded me that it is not about that test. It’s about their skills in communicating written and verbally that far transcends that test. Even though I’m making a mock version of this test I hate, I keep that in perspective now.

**Summary.** Professor Carol, the reflective action thinker, was recurrently “thinking” and “reflecting” on what she had learned, how she taught, what she observed in her students’ learning and doing and what could it mean to enhance their learning.

Professor Carol described students teaching students as “picking each others’ brains,” “reaching consensus ideas,” taking “ownership of something they never thought was in their realm,” and shared power with the instructor. She told of two students who shared the same fears (e.g. questioned ability, lacked self-esteem) and she “blossomed” and he “blew them [other students] out of the water.” From her AR project (2008), she wrote, “I believe students will best learn the 22 competencies by creating the test questions themselves and explaining, justifying, and teaching given skills to the others in the small group” (p. 6). She placed process over product, “It wasn’t creating the test question that was my most important objective. It was the process of learning these skills and teaching them to one another.” Conceding “some people [faculty] don’t think it [CL] has a place in our classroom,” she held CL skills “will be required to do in their careers.”

Profoundly interchanging terms, her articulated understanding of CL and CpL paralleled Bruffee (1999) and Millis and Cottell (1998). Evidenced in concentric circles she created, she also described CL and CpL on a continuum with CpL less demanding
than CL and her AR project contributed to her view of CL and CpL. On how theory relates to practice, “I think one is the other” and “could or should affect your objectives.” She contrasted a behavioral objective to CL, “I can learn to stop for a red light so I don’t get a ticket without a group” 😊 (P. Carol, personal communication, May 4, 2011). Her description of CL was decidedly stronger than her explanation of theory to practice. Since all students do not learn well individually, “collaborative learning comes into play.” She also stated, “Without the individual work collaborative work falls apart.”

Professor Carol saw her institution as “very supportive of learning-centeredness, meaning the student is at the center,” CL models as going “hand in hand,” and “why they offer all those classes.” She advocated for students learning from each other and faculty shifting learning responsibility to students to “learn to think and learn to learn.” She spoke of the field site’s “open door policy” encouraging faculty to share ideas. She welcomed sharing and expressed her thoughts on why some instructors do not share. Wondering why she does not use CL more, her knowledge of others usage was limited, based on hearsay, and conceded CL was time consuming and some dislike the “labeling.”

While students separate their “school life” from their “real life,” she viewed her discipline’s influence as holistic, “Language connects at every turn.” Aligning with the literature, she viewed her English and English education classes as a student with the latter more inclined to CL. She also saw CpL as more appropriate when “a right answer,” foundational knowledge is the objective and CL to coconstruct knowledge.

For Professor Carol creating safety for empowerment by trusting diverse abilities shaped the core of building community. Keenly sensitive to students’ past academic failures and universal dislike for group work propelled helping them work together by
pointing out the value of sharing the workload. She stressed to small groups “someone is an expert” and “figure it out.” In all classes, she facilitated questioning and confronting one another as student to student, instructor to student, and student to instructor. To learn grammar, create test questions, write essays, and complete reciprocal peer reviews, the “old Greek ways,” the “language of languages,” the “four languages,” and consensus building were employed. Finding students “don’t like to be the minority thinker,” she challenged them to speak up, even inviting critique of her work.

Although only some absorb it, she addressed the “language of language,” the technical names (e.g. parts of speech) to “create knowledge, enhance skill, broaden the communication experience.” In her Comp I and II classes students have reciprocal peer reviews requiring agreement on the third person’s essay with the essay writer critiquing the peer reviewers. In response papers, “ethos, pathos, and logos” helped students justify their position by providing textual support. She talked about the “critical reader, thinker, listener, and speaker” paralleling Bruffee’s (1984) think, write, and speak cycle. Individual learning was upheld as critical to CL. Group formation followed the progression of her view of CL and CpL on a continuum with her remedial class having assigned groups and roles, based on diagnostic tools. Comp I and II chose their own groups. Group functioning evidenced both CL and CpL for both remedial and advanced courses. Peer and individual assessment was employed.
**Description of snapshot.** A safe place for student empowerment by learning to trust diverse abilities grounded Professor Carol’s approach to building community and communication. Interaction compelled learner ownership (e.g. group expert, peer review, critique instructor). Individual learning was upheld. Small group tasks included creating test questions to learn grammar. Mutual critique by the essay writer and peer reviewers fostered critical reading, writing, listening, and speaking. Shared governance, diversity, substantive conversation, and nontraditional assessment were extensive in all classes.

![Diagram](image)

**Figure 6.** Professor Carol – A Snapshot of Classroom Practices
The Third Case: Professor Danielle – The Holistic Thinker

Researcher’s open letter.

Researcher’s introduction to the faculty participant. Deciding to include criteria for classroom practices in my research design, I needed to gain some understanding for how rich a potential field site setting might really be. Assisted by administrators at what would become the field site, Professor Danielle and I had a lengthy discussion about my topic and quest to find the right research location. I worded my questions to not hinder this potential, a preferred future choice. She answered my questions, loaned me her dissertation to review, and invited me to the first day of her new classes (P. Danielle, personal communication, January 7, 2009). A few days later, I visited the “crucial first day” of her developmental math class. I walked away intuitively certain this would be the right place for my research but not fully knowing what all “right” meant.

It was “the end of a long Friday,” when Professor Danielle met with me for the first interview. On arriving, she had students at her door and an unscheduled “conference call” she would have to honor (field notes, April 9, 2010). In talking about educational research and learning theorists, she mentioned the conference call. “Actually I just got off the phone with Minnesota,” a reference to Johnson and Johnson, the foremost cooperative learning group. With some regret a Friday afternoon was the only scheduling option, I left quite late with my heart skipping.

Faculty participant's academic and classroom credentials. Professor Danielle completed her doctoral degree in Community College Specialization. The title of her dissertation was “Supplemental Instruction in a Community College Developmental Mathematics Curriculum: A Phenomenological Study of Student Learning Experiences.”
For four years, Professor Danielle was the campus-wide project director for a nationally funded program to increase the success of student populations underserved in higher education. Co-founder and co-director of a consulting practice, she spoke of professional engagements, as presented later, that included “going out and talking to other community colleges that are doing what we are doing” that referenced work in collaborative and cooperative learning programs. Using these instructional strategies for 18 of her 19 years as an educator, she has taught mathematics in high schools, community colleges, and a state university. Conference presentations, publications, consulting, and awards in her specialization of developmental math were also part of her vita.

*Spillin’ the beans* was how she described herself and her transparency supported her characterization. With a strong holistic approach to education, laughter, “having fun,” and “funny” things were woven throughout the interviews. Some of the most substantive contributions of her lived experience ended with a soft ripple of laughter that became a signature attribute of her demeanor. Equally true was a serious commitment to people learning and working together. When CL from Professor Danielle’s perspective “happened,” it was “magic,” the result of expecting the unexpected.

**Faculty participant’s introduction to collaborative learning.** Professor Danielle’s first experience with CL began almost simultaneously with her teaching career. A high school mathematics teacher in the early 1990s, she could not remember teaching without using CL. With CL reported in the literature as a “growing interest” with “sparse application” (Gamson, 1994) and college faculty reported to be “subject matter specialists” yet not serious “professional educators” (Fink, 2006), Professor Danielle was an anomaly:
I think I am in the minority of math educators when I say that my degree is in education with a minor in mathematics. Actually that’s not true. I majored in math and minored in education. I have a big background in math but I kept going on to school which is important because many of us who are in education particularly at the community college have a Masters. . .but there’s no focus on an education base. I think that is part of why early on. . .I used my education background to help me do what I knew was right for students. . .actively engage them in a CL process.

The length of time employing CL and degree of focus on being an educator in contrast to a content specialist coupled with the foundational nature of her discipline did not tend to provoke or fit such applications.

**Faculty participant’s professional persona.**

**Commitment to students teaching students.** In a line of inquiry about small group rules and roles, Professor Danielle advanced to, “Then, they make sure they teach each other.” To make sure “the whole teaching of each other happens,” Professor Danielle had everyone in the group individually complete an assignment (e.g. *Home Improvement* project). Unannounced, she would, on occasion, select only one from each group to grade, as discussed later. Therefore, “they have to help each other.”

At the end of the first interview she said, “It changes you as a person what happens in your classroom.” I asked her to tell me more of what she meant and she talked about the “family feel” of the learning environment:

The environment is what it’s about. You feel like you’re walking into a family.

I’ll use the word cohort. . .We work together, not only to learn mathematics, but
also to help each other. . .solve problems. . .Mathematics happens to be the core that brings us together. At the same time we’ve got these other parts of our world that collide and we learn from one another because everybody’s different. . .I will talk about. . .how my father was a public speaker. We traveled the United States. They’ll tell me they’re from Utah. “Oh, I loved Utah - one of my Griswold family vacations!” . . .Once I’ve modeled that. . .the students do that. . .It’s not always math. . .It’s real life and learning from one another.

She talked about students she had had or presently had in class who were Supplemental Learning (SL) leaders or peer tutors. She told of a student who this semester said, “I feel better about how I am able to have these outside of class sessions and I am able to reiterate how you teach in the classroom.” Some of the SL leaders, took a personal interest, asking how students they had tutored were doing in her class.

**Values learning process.** Professor Danielle described herself as a “minority” by placing learning over mathematics which helped her, “do what I knew was right for the students. . .actively engage them in a CL process.” I asked “Are you saying what you bring to the classroom goes beyond the discipline?” she answered, “Yes, absolutely.” Probing, I asked, “Then, you’re as much or maybe more focused on how to learn rather than what to learn?” She replied, “Oh my gosh, yeah.” She illustrated her response with an encounter “in the past year” that “surprised” her:

I was talking to a philosophy professor who said, “I teach philosophy because I love philosophy.” And I said, “I teach mathematics because I love the student and I happen to know mathematics.” To me there is a big distinction. One of us is in it for the student. One of us is in it for the love of the subject.
I asked how her perspective might relate to a “love of learning,” and she responded:

Well, that’s what I mean. The love of the student is the love of the learning. . . .

I like math a lot but I love my students. I know somebody in my class and I want to see them walking across that stage at graduation. I want to see them be successful. I want them to come back to me and tell me [I am] CEO of whatever.

“Reach their potential as a whole human being?” I inquired and she replied, “Yes. Yes. I think that that is part of what our job is in the classroom. Not only how to be a student but how to be a life-long learner, not just in our subject but also life in general.”

“They’re completely engaged is when I see the magic happen.” I asked if there was anything she would like to clarify. She replied, “Until you see it, it’s hard to describe. . . . It’s just magic. . . . How do you describe magic?” I rejoined, “Well, I was gonna ask that but apparently it would not be a good follow-up.” Repeatedly I asked, “You have to see and experience the magic?” Facetiously, I added, “It can’t be lectured to you?” She offset my attempt at humor with, “People don’t understand when I say, ‘What an amazing experience I had in class today!’ ‘What happened?’ and ‘Oh, I had a good day, too, I had three people that understood this.’” With a hint of sarcasm, she lamented, “That’s not what I meant.” She laughed, and continued with her mock reply:

“What I meant was – it was a “wow” day! It was one of those days that it makes you want to keep teaching because everybody was active and engaged.

Everybody “got it,” umm, whatever “it” happened to be. And even if they didn’t “get it,” you knew they’d have it by later that day or the next day.”

Embracing the process and the subsequent serendipitous occurrences to learn the content permeated her classroom experiences.
Awareness of skill transfer beyond classroom. Professor Danielle’s opening words embraced active and CL to get students to school and to graduation with skills in working together. “I believe students working together to understand the material is the best way, interaction, getting them involved in what they are doing. . .to get students to want to be in my classroom and come to school.” She continued, “To try to reach their end goal and figure where they are going in terms of graduation.” I asked her to elaborate on achieving the “end goal.” She personalized her point on skill transfer with narratives of students in a scholarship program and using CL in other classes.

She mentioned a cohort of students she has had for three semesters in an income-based scholarship program. “Working together, not just in my class but in other classes, the experience they’re having, realizing what their end goal is, they’re helping each other through trauma.” It was “about life,” the whole of life, not just the classroom and the curriculum. She told of one young man:

[He] just found out this semester he got his girl friend pregnant. . . .Once he was able to share with us and the rest of the students what was going on, we all rallied around him and helped him realize what he’s gotta be in order to support his son. He’s got to be a great Dad, well educated, and ready to support his family.

She, then, described her experience with three single mothers, “It was neat to see them really working in the math, in the Student Success [course]. Feeling like the doubting Thomas, I drilled, “Your use of CL skills or approach [is] a philosophy to math enabling them to take it beyond math to the larger holistic life experience?” She replied:

Working in the collaborative environment and having that experience for three semesters . . .It is bigger than the math. It’s about life. They don’t separate
math as they did when they started. . . .They think about it more as part of my mission and my goal. . . .I’m going to have pitfalls. . . .Because of the collaborative environment I’ve got my friends and support in this class with me.

As I continued to explore this transfer to other settings, she was unrelenting:

This is exam week. Three of them just came to my office. This is not my exam day and found me. . . to introduce their child to me. . . pick up a test. . . to prepare for the final. . . .When you don’t [add] that richness, you don’t have that personal connection. . . .With a collaborative classroom, they know you are helping them learn the subject and helping them get through life lessons.

Transfer of CL skills materialized in the lives of her students, past and present. “I am extremely proud that several students who had me are now going to be mathematicians and teach. They often say they used. . . some of the things [CL activities] I did in class with them.” I replied, “So, you’re reproducing.” Eagerly, she added, “Yeah. It’s very exciting.” Her pleasure bubbled up when students “tell me how” they’re using CL in other courses:

I have students say to me, “You know I love how you do this. I think that this would be really cool to do,” in say a humanities course, or biology. . . .It’s neat because they’ve organized outside of class sessions around topics of interest.

And she added, “So, whatever we’re doing, whatever magic happens in that classroom is being carried forward to the class they are going to.”

**Understanding of collaborative learning and terminology.** At the outset, Professor Danielle placed “working together,” “interaction,” “establishing connections,” and “working with the cohort” front and center to reach academic and career goals:
A lot of people use the terms CL and CpL to mean the same thing. . .I think it does for me, too. CL is collaborating as a team to get things but at the same time they are cooperating to get it done. For today’s community college, I feel it’s all about establishing a connection to students,. . .learn the material, and move on.

She credited her “lack of distinction” between the two, by saying, “I think it’s because of the area I am in. Because I teach mathematics, I don’t really see a difference.” The latter statement is discussed under Institutional Influences.

Professor Danielle’s struggle with the terms surfaced when I compared the above quote with a later statement. She had spoken of “collaborative-based activities,” paused, and said, “CpL-based is what I should use there.” I asked her to elaborate on what seemed to be a distinction and contradicting her earlier statement. She candidly spoke of her self-described challenge, revealing the effect of the study and the value of a schema:

It’s funny because when I think of CL and CpL, I just get confused. In my mind, I don’t have a schema developed. I think part of this interviewing process is helping me think it through. So, I really still have a hard time with the distinction.

In a follow up question during the second interview, she added:

I couldn’t remember which one it [this research study] was because in my mind they are so similar and I haven’t really designed that schema for a difference. . . . feel like in mathematics, the cooperative and collaborative, you can’t do one without the other, in order to get it done. So, I feel like it’s just not well enough developed in my mind. So, when I’m trying to think it through, I just don’t really see a distinction. So, I try to clarify and it’s just not working for me.

And what was becoming a signature ripple of laughter filled the room.
Role of theory to practice. Professor Danielle’s view of theory to her practice of CL began with how students learn, “by being engaged,” “by doing,” “by talking about it,” and they “learn by discussion.” Looking noticeably drained that Friday afternoon she struggled somewhat with the line of inquiry and acknowledged being tired:

I think of scaffolding when you talk about this [learning theory]. I think of all the ed researchers, all I have ever heard of. [They] talk about how engagement and learning by doing and discussion and all of the different things we talk about in learning theory is a major component of CL.

The second time we met I revisited the relationship of learning theory and theorists to her CL practice and her candidness was again evident:

I can tell you who they are, the people I have studied. Really though, my lived experience is my lived experience in the classroom. . . . It’s nice to have these frameworks for learning but that’s not exactly what happens.

Wanting to understand more, I regrouped with a series of chronological items to recapture with certainty some established aspects of her lived experience. These included: (a) her use of CL for 18 years, (b) beginning with a summer institute training providing a schema, (c) sent to bring it back to her colleagues and the classroom, and (d) caused a “light bulb to go off” that “never went out.” To each of these she responded wholeheartedly in the affirmative. I summarized this serial tracking with, “So you’re not so driven by what you’ve learned from theories and theorists as surviving in your practical reality.” She responded, “Being the practitioner is what has taught me that this is what I need to continue using.” Professor Danielle made clear “having those frameworks are important” but they did not “drive” her practice today with this caveat:
I’m thinkin’ of Gardiner (*Multiple Intelligences*), and, uhh, too, ‘cause every student has different strengths. And I feel like that also drives you because, you know, I’m tired of students saying, “Well, I don’t have a math brain.” I’m thinking, “Okay, I’m so sorry to hear that.”

With a less than sympathetic sigh of laughter and a tone of intensity, she made this point, “We here at the college say that any student can learn, given the right conditions. And what are those conditions? Well, I could go through how colleges were designed and everything like that.” Then, she related an experience of her institution’s president. A German professor agreeing with his premise said she couldn’t do what he recommended in her classes because too many things are too hard to learn in German. The president, paused, “Well, how fortunate your students weren’t born in Germany.” She concluded: In my opinion, you’ve got to think about what you say and how ridiculous [it might be]. Sometimes your puttin’ road blocks up for your students. And when I hear things from different educational theorists, I don’t know, it’s something in me that wants to disprove what I’m hearing or prove what I’m hearing. It just depends on where I am in the spectrum of learning theory at the time.

Moments later with a different question she unexpectedly included, “Sometimes you’ve gotta get that student a little bit uncomfortable as some of the learning theories say.”

She named theorists, Vygotsky, Piaget, and Bandura, saying, “It’s so weird, I’ve got all of these names up here, you’re asking me. It’s the end of a long Friday.” She added “the recent ones, like the folks, Johnson and Johnson, with the cooperative learning group, their research is well known.” The latter was the group with whom she had a conference call when I arrived.
Institutional effects on usage. Professor Danielle’s understanding reached beyond the field site. Her lived experience included: (a) the southeastern United States, (b) the field site, (c) her colleague encounters, and (d) her discipline.

When asked the extensiveness of classroom usage, Professor Danielle was quick to say, “I don’t always do CL. It really depends on the day. Sometimes there is so much curriculum to cover you have to do the straight lecture.” With experience beyond the field site, she was able to comment on the national landscape. “My knowledge is that it is a growing movement. More and more community college faculty are engaging in it.” Not able to quantify the increase, her view reflected “watching the research at other institutions” and “going out and talking to other community colleges.” She added, “Nationally I think there is a large focus on it right now. . . .I would say we know we need to do this but I wouldn’t say all of us are.”

Her involvement revealed the dialogue and research at community colleges due to high numbers of unprepared students and faculty responses to innovation (e.g. CL, CpL):

Because I do some work in the industry as a consultant, I have had an opportunity to visit other schools. I’ve learned there are a lot of traditionalists in teaching but not as many as I thought. . . .People are looking at the issues and trying to figure out ways to get more students through college. CpL and CL tend to come up a lot, as something the college should do as a whole and train teachers how to do it. She singled out research grant work at a small public institution in the Southeast:

All the adjuncts, all the full-timers, they all have to go through this training. . . in any discipline. Every single person that teaches at that institution needs to follow this model. Then, they do research to see how it is impacting the students.
From her engagement with other community colleges invested in CL or CpL, she spoke of being “fascinated” by how the “age group of professors” depicted the usage:

The age group of professors that embrace CL and CpL are kind of in the middle range. They aren’t new nor are they the super-seasoned professionals. . . .I think the super-newbies are just doing it the way they learned it. . . .The folks who have been around. . . this is the way my class always goes. It’s my system, my plan.

She described “the innovators” as the middle group who are “realizing just the effect it has on their environment in the classroom.” The “traditionalists” were “that center core of faculty that I think need to be swayed. They haven’t yet learned this [traditional methods] is not working.” Table 4 further compares and summarizes Professor Danielle’s observations.

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<th>Table 3</th>
<th>Faculty Influence on Classroom Usage</th>
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<td>Age Groups</td>
<td>Instructional Skills</td>
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<td>Super Newbies</td>
<td>Teach as taught; lack skills to comfortably relinquish control</td>
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<tr>
<td>Innovators – Middle Career</td>
<td>Experimenting with CL and CpL</td>
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<td>Super-Seasoned Professionals, Traditionalists</td>
<td>My system; My plan</td>
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*Note.* These observations are the result of Professor Danielle’s extended professional engagement with community colleges and exposure to current research on them.
Professor Danielle not only described the national crisis in developmental education and traditional methods not working, she placed emphasis on the changing community college population necessitating innovation like small group learning:

We have so many people coming back to school because they’ve lost the fields they’re in. So, we need to figure out a way to get them to work collaboratively because they’re not gonna do it. It’s not gonna happen unless we figure out some way to get our educators to understand CL and CpL. They’re not gonna get to their end goal if they aren’t having these life experiences to help them.

Reported in the literature (Turner et al., 2007), she continued the narrative about the adult learners in her college classroom:

People that have been in the work force are coming back to school [and] often talk about how, “I was part of a team and the whole team was cut. And, you know, we had each other to work [with] on this,” that type of reaction.

**Field site.** Professor Danielle described her institution, “The college I happen to work for is a League of Innovation college. We’re a Vanguard school and very well known for our ability to help our students get through college and make it to graduation.” I asked about the influence of the field site where she is employed on her practice of CL:

I think when I have the Dean evaluate me, I am gonna just bring something up from like six, seven, eight years ago where I had a Dean walk into my classroom and I was doing CL with them. They said to me, “I’ll come back when you are teaching.” You know kind of like that. I’ve had that conversation with others on campus, too. And it’s so true! It’s just a true statement!
Then, she spoke of those who evaluate faculty:

Unfortunately, folks that were in the area of assessing our professors might not necessarily recognize instruction when it’s right in front of their face! CL is so cool! Yeah, I’m teaching. Not only am I teaching, they’re teaching each other. That is part of what needs to be evaluated.

She followed reflecting, “How is it that, that magic, can happen in the classroom?” and answered her own question, “Sit down. Watch. You’ll see.” Returning to the visiting Dean, she added, “And it was kind of funny. I said, ‘I am teaching. When are you going to lecture? Oh, is that what you meant?’” She transitioned to the present:

What’s going on now at the college I work for, we’ve done a little bit of a shift. In particular, one of the courses, the lowest level math course that we teach here. We do a lot of talking about how to do study skills, organization, build in activities that are CL, CpL-based is what I would use there. How to use the lab format we have associated with our course and do projects with our students.

Turning toward her own professional experience, she added:

How open it is for me to be able to give a test that is a group test. I’ve been given, especially on one campus I worked on prior to this, a lot of academic freedom to do and explore, to see what worked well for my students. . . .My college has given me that chance to try things I might not have tried. I try and fail and realize I need to make some changes.

And then that full smile and soft ripple of laughter bounced around her office.

Colleagues. When I asked about her influence of colleagues’ use of CL, she first told me about present students, former students becoming teachers, and SL leaders, all
presented earlier. I clarified she was not only influencing people to her discipline but had
influenced them because of her CL approach, she came back, “Yes!” Then, continued:

It’s fascinating too that you are asking this because it didn’t occur to me until you
asked it [influence on colleagues], and until you also said that [the innovation of
CL grabbed their attention]. But colleagues will come to me and say, “Sooo, how
do you make sure everybody is doing the work?” And umm I didn’t really take
that into account until just then because it’s true they’ll come up and ask me that
question. And I’ll think, “Well, you just do, x, y, and z.”

On her classroom usage of CL, her “worst experiences” occurred, not with
students but colleagues. While these did not occur in higher education, I believe they
merit inclusion. They involved the tenure process and a summer training institute:

My worst I can recall happened when teaching high school. I was one of those
new teachers who was trying stuff. . . .We were going through a tenure process. I
was doing CL in my class and being evaluated by one of those older instructors. I
remember him saying, “There is no way you are going to finish this content. All
you do is play with your students.” . . .I cannot recommend you for tenure.”
She recalled “thinking,” “Let’s put my students and yours in a room. Let’s give them a
test and see who does better but he was the person evaluating me. I remember he crushed
me that day. I mean it was really, really sad.” The depth of sadness was still present.
She, also, told about being sent to a CL training after her first year of teaching:

I was sent to a project called Opening the Gates to Algebra and it was all
CL in high schools. . . .I had been trained and my job was to come back and train
colleagues where I was working. A person and several said, “Oh, we don’t have
time for that crap!” So, it isn’t with the students I have had a negative experience. It’s with faculty who were supposed to be people that helped me grow and be a better teacher. I thought they were just stunting my growth and making me very sad about trying something I was so excited about. So, it was really sad.

She added this illustration of her high school experience with colleagues:

They were like, “Why would you try to tell them the room was a coordinate system and give them ordered pairs when they walked in? How does that help them at all?” I’m thinking, “It’s the coordinate system! They are going to figure out a seating chart based on the coordinate system. I don’t have to lecture! I will tell Quadrant 1 to stand up and they will know who they are. Quadrant 2... It’s active! It’s open! It’s collaborative! We’re all playin’! It’s a game! I remember how sad that made me. I felt like my colleagues... were so close-minded. I couldn’t wait to go get my Masters degree and get out of there. It’s a shame.

Professor Danielle’s intense feelings for this experience some fifteen years ago caused me to explore her lived experience further. I inquired, “My guess is that was not the first and last time you encountered that.” She laughed and responded, “No. But now I am ready for it! “Good. How are you ready for it?” I asked. And she replied:

Well, now, I’m more mature. I don’t just take what they say and go with it, which is unfortunately the way several of us learned. If somebody told me something who was my superior in some way... I thought I had to take it and do whatever they told me. Now, I say, “So, what would you do in order to teach this in a way to help students understand?... They say, “Oh, I lecture it.” “So, how do you know your students are learning it?” “Oh, well, I give them a test.” “But how do
you know they are learning it that day, right then and there, on the spot? Do you
do anything else to make sure they are getting it before they leave?”

She concluded, “So, I fight back now.” And illustrated how and what she meant:

I ask questions back. . . . “How do you know they are actually getting the concept
of square roots? Do they know it’s used for (whatever reason it’s used for)? Or
do they just know the square root of 16 is 4? Well, that seems pretty rote to me!

**Discipline.** As stated earlier, Professor Danielle reasoned she saw no difference
between CL and CpL because of her discipline, math. Later, I followed up and asked,

“Why might math be different from English?”

In English, I feel you can have a discussion around content and that could be a
collaborative conversation. It’s just around what’s being read, what’s happening.
The other assignment would be cooperative where they have to work in a group to
get something done. So, one’s like as a whole, collaboratively studying a poem
together. The other one is cooperatively we’re putting a presentation together on
what we’ve read. A smaller group is what I’m seeing a distinction. With math,
the quadratic formula is the quadratic formula -- is the quadratic formula.

In her lack of distinction between CL and CpL, cognizant or not, she outlined two
different attributes of CL and CpL, respectively, found in the literature: (a) whole group
versus small group interaction and (b) more on-going abstract conversation versus more
concrete task completion. More noteworthy, she illustrated foundational knowledge in
her definition of the quadratic formula of her discipline. Yet she incorporated practices
associated with nonfoundational knowledge and not in sync with the literature.
Learning conditions. Professor Danielle was forthcoming personally as a professional colleague, reported earlier, and as a professional educator, providing less than pleasant experiences in CL and rich classroom practices often shaped by the former.

Negative experiences. “Problem” was a word Professor Danielle did not seem to use unless referencing mathematics problems. However, a response bubbled up about group work, in general, its assets and liabilities for the student and the instructor:

A problem for me is coming up with enough things that everybody is going to be engaged all the time. It’s a lot of prep work. Everything. Sometimes I have to just “can it” because it’s bad! I’m like, “This is not working.” So, I just have to scratch it and go on to something else. . . .I think [for students] there’s more benefits than problems to work in groups but it’s hard for some of them because they can’t necessarily be here as much as you think they should be.

Additional challenges or negative experiences in CL for Professor Danielle represented a wide range. Including her modifications, she talked about four scenarios: (a) stronger students’ absence, (b) students not understanding the material, (c) students with impairments, and (d) class rules or small group dissension.

Her preferred role of facilitator was limited when capable students were absent: If some of your stronger students are missing, you realize you might not be able to do as much as you thought you would because you want to be the guide on the side a lot and it’s hard when you are lacking some of your strongest resources.

She specified if “the group leader” was absent “you’re gonna have to design on the fly.” Requiring more preparation, she added, “You can’t be afraid to change your mind. . . .I make up so many rules, I feel like a child again. . . .Oh, this is my rule for today?”
Professor Danielle also talked about when students are not grasping a concept:

Sometimes I have to modify and say clearly we are not getting the assignment. Probably you need some help. I might send one student up who understands the concept and we do a large group discussion. Or I might go to straight lecture.

I asked for clarification on who “we” included:

When it seems like I put an assignment out there and they don’t seem to be going with it. I think maybe I poorly designed this assignment. Let’s re-calculate it. It doesn’t have to be the strongest student not there. It could be that in my mind it was much clearer than it is, coming out of my mouth or on paper.

Professor Danielle addressed how disabilities factored into challenging learning experiences and her modifications. “I have a couple of students that are hearing or visually impaired and it really is difficult sometimes to do CL for those students.” She explained an interpreter accompanies the hearing impaired “every time I lecture” to do “the sign language.” She acknowledged, “It’s often distracting to other students.” However, “I often joke with them. I think it is funny [when] they want to know, ‘What is the sign for that?’ They look up and watch the interpreter . . . That is tricky.”

With a light-hearted positive approach in spite of the “tricky” challenges, Professor Danielle continued with the implications when students are visually impaired:

The visually impaired always have cool gadgets that come into the classroom. Often what happens is you have a note taker and the note taker usually needs to be in the same group with the person that is visually impaired. . . . That’s one other thing to take into consideration when doing collaborative and active learning.
Finally, she mentioned a “group explosion,” laughed, and suggested, “you might want to lay off of it [CL] for a little while.” Making sure I was not misinterpreting her melodramatic expression, she responded:

Oh, so bad or such a bad taste in the students’ mouth that they just need to do something a bit more traditional. And I actually had two or three classes where I had to completely say, “Okay, I’m going to be that high school teacher who would lock the door if you were late.

She listed behavior creating the in-class “explosion” (e.g. drugs in class, inappropriate language), “those classroom management things.” With a wistful intensity she reflected:

There are days you might not like your class. . . .You might like the individuals but as a group their personality sucks. . . .It’s not to punish them. It’s just because I have no other framework. If they don’t want it, it’s not going to work.

I repeated, “If they don’t want it, it’s not going to happen.” I asked her to tell me more, “It could be anything. . . .If they don’t want CL, if they don’t want group projects, don’t want to follow the syllabus, if they don’t want “it,” it’s not going to happen.” I asked what she did to address “not wanting” and received this reply:

We have the conversation. Back on Day One where I talk about setting the tone, the climate, the temperature. We talk about this is why we’re here. This is how the classroom is going to be. We’re going to be engaged. I’m not a big fan of lecturing. I like to do a lot of group work. Every now and then I’ll have to lecture, probably 15 minute time slots. We have the whole conversation of what that’s going to look like. That’s what I mean by “it” and addressing “it” early on.

This is further explained under Build Community.
Describing, in part, the first day, sending the message, and setting the stage, I asked if this conversation happened on more than one occasion:

Every now and then, I have to say last week I had a student that said, “Why do I have to learn this?” . . . So, it kind of surprised me. Here we are in the last week of classes and I’m getting, “Why do I have to learn this?” It’s very frustrating to me. When the tone has been set for the entire semester and you have one student that can put a bad taste into the rest of their mouths. It puts some doubt back into their mind about why they have to learn this. I mean there’s nothing good that can come from having that conversation, again.

I recapped a few of Professor Danielle’s key thoughts. She affirmed them. I thanked her. She continued, “I tend to lose my temper, though, when I have to have that conversation the last week of classes.” An empathetic chuckle was shared and I said, “Okay! Thank you for making that known. There’s been so much “magic” in this room.” We chuckled. Unrequested, she told the story of the Day One conversation in the last week of school:

It was a bad day. The student, she’s come back to school from a career break. . . . I don’t know something must have happened at home. She’s probably 40 plus years old. She came to class and just started saying, “I don’t know why I have to learn this. Why is this important? When am I gonna use this in my real life?”

Professor Danielle described the students as tolerating her ranting for awhile. Then, one spoke up, “I just want to graduate and get my degree. I know the only way I can get there is by learning this material.” We both laughed and she continued, “So, they kind of re-visit it, too. But at the same time, I feel like they attack the other students because they know it’s frustrating me and they don’t want to see me frustrated. It’s a little bazaar.”
I interjected, “They become protective of you,” and she finished the story: They do. I felt kind of bad about the situation because in her mind it was so valid, her point. So, I had to say to her, “Well, I hear you. I am teaching a class I enjoy teaching. You guys are great students. At the same time I don’t feel like we need to relive this conversation, right now.” All the other students pretty much ganged up on her and I thought that’s so not what I meant to have happen. I asked her to tell me more about “that’s so not what I meant to have happen,” her empathy in the midst of her frustration:

I didn’t want them to tear her down. Something bad had already, obviously, happened. When you come to class, you come with all the baggage you have. She made a statement. I addressed it. I thought it was over. She made another statement and the class. . . .lost their cool, “You need to learn this because we think it’s important. There’s no way we can do this if you keep this up!

Her voice was high pitched by the end. Then the laughter rippled around her office.

**Positive practices.** Often recalled, strengthened, and affirmed by the challenges just shared, the four foundational instructional strategies were: (a) build community, (b) foster community, (c) develop structure, and (d) evaluate process and product.

**Build Community.** Professor Danielle put forth three essentials to developing community: (a) the first day of class, (b) the “discipline level” of her students, (c) and the instructor’s responsibility for creating the environment. She stated all three:

I think everyone needs to know each other. . . .particularly because of the course level I teach. . . .They are afraid of what they have heard about going to college. . . .They walk into a class and don’t know anybody. Our job is setting the
climate, temperature, and pacing. Everything is down to what the instructor needs to do. I think the first day is crucial for sending that message.

On “sending that message” the first day to build community, I asked for more:

It is a critical teaching moment. If a student doesn’t come the first day, based on my analysis of my student data, I can tell you they more than likely will not pass my course. It is maybe one in a hundred that passes.

Provided later, the intensity of this statement refreshed my real visit to her developmental math class on the first day and was revisited in her explanation on how she forms groups.

Another reason she gave for beginning community building on the first day is because of the “discipline level” of her students:

They need to know we’re all there for the same reasons. In developmental mathematics, which is really a lot of what I like to teach, they think they have failed because they are in this course they should have known from high school. . . .You’ve got to get them to realize you are all on the same boat together.

I asked Professor Danielle to elaborate on the instructor’s responsibility to “set the climate, temperature, and the pacing.” Her explanation became more forceful:

If nobody’s comfortable and there’s a lot of distrust in the classroom, you haven’t laid the groundwork for any type of collaborative learning or anything. Nothing is gonna happen in that room. . . .There are going to be some just sitting listening to you on your pulpit, sharing about how much you love your subject.

Then, her intensity reached a crescendo, “When I say it’s a big thing the instructor has to do, I really do believe that. To my core, if I don’t set that stage, create the environment conducive to learning, it’s not gonna happen.” Climate meant setting the stage. Part of
“setting the stage” exposed her holistic approach of being “able to laugh together,” “be serious together,” and “understand the real human emotions involved in education.” Temperature was keeping the learning environment “warm and rich,” not “superfluous” and “relevant to what’s going on in their lives, in the world, or in the course.” She defined pacing as not progressing “as slow as the slowest person” or “as fast as the fastest person” but establishing “some discomfort,” so all can learn.

*Foster communication.* “Talk the same language” surfaced several times exposing: (a) an academic, (b) an ethical, and (c) a psychological facet to her practice.

Thinking academically, Professor Danielle said:

Getting students to talk the same language. . .to have a similar reference and discussions in terms of the content. . .using vocabulary that’s operational. If they don’t know the vocab, they won’t be able to do anything. . .If I say polynomial, we have to be on the same page as to what a polynomial is.

Her comments, then, revealed an ethical interpretation:

I feel like when I say we need to speak the same language, we’ve gotta have rules for etiquette. . .Without chastising them, we need to be able to say, “Okay, so this is a classroom environment. Let’s talk about how that’s different (than whatever).” You’ve gotta have that conversation without anybody feeling like you’re singling them out and hurting their feelings. . .It’s part of teaching them the unwritten curriculum. It’s how to be a student. It’s how to be a person.

A psychological dimension to communication surfaced. In forming groups, she said, “They won’t pick that person again.” On peer teaching, she replied, “As they teach others, they learn better.” This caused me to ask how she “engaged” this kind of
understanding about people and learning. She used rubrics “usually” to keep individual accountability in place. However, the psychological aspect really emerged with the self-assessment line up, “counseling” the groups, use of the library, and email.

The logistics of the self-assessment lineup is addressed under “develop structure” and part of the critical first day. The relationship of this kinesthetic and graphic self-assessment activity to foster communication went beyond community building to reveal students’ math anxiety to each other. Professor Danielle wanted students “to be able to speak their mind about it [math anxiety, dislike of math], be honest, and open” because she saw the lineup as creating vulnerability to further develop open communication. Not only on how they felt about math, but as an active learning step to improve academic math skills. In this activity, they must talk to each other, step in front of or behind each other, and even push or pull until they completed the group lineup. Remarks included, “I really have no clue what I’m doing. No, I agree I have no clue what we’re doing.”

However, Professor Danielle continued to tell how the activity moved forward:
I also ask them, “Alright, so, the ‘nines’ explain to us why you think you’re at a nine.” . . . So, I skip down to the bottom of the lineup and I say, “Could you tell me what your number is and why?” It’s funny. When they’re lining themselves up, you’ll watch the person that has the highest amount of anxiety push the others out of the way to get to the end of the line. “I am worse than you are.” “I know I’m the worst math student in here.” . . . Some of those students end up being fantastic! They’re so convinced they don’t get it. It’s an interesting exercise. I asked, “So that psychological component is really critical to their academic success?” She said, “Yeah, we’ve gotta expose it early on. If we don’t, then we can’t deal with it.”
Professor Danielle continued to explain, “A part of my job as the guide on the side is to be the voice of reason from time to time. When I say ‘counsel the group,’ I mean I’m sitting down and having a conversation with them.” A contrast emerged. Sometimes she initiated, “So who’s doing what? How’s it goin’?” She found students “very protective of one another” and “very good about finding all the positives.” The response changed when she repositioned her question to, “Is there anything that needs to be changed or adjusted?” Still protective, the students’ conversation would proceed, “Well, we just only need to be here on time.” She would ask, “Is somebody not here on time?” The students would then respond, “Well, every now and then, each one of us has made a mistake.” She reasoned “talking about somebody in front of your teacher or boss” is “gonna have an impact on how they perform in a group.”

In “sitting down” with each group a consensus building dynamic came in to play: I’ll say, “What type of questions do you have for me? Now, imagine I’m the expert. What type of things do you want me to help you with?” Other times, when I’m doing the group test, I will only answer a question, if the entire group has that question. I say, “I will answer one question as the head consultant here?” Until all agree this is the one question you want to ask, “I’ll see you later!” I asked, “Do they quickly come to consensus or sometimes lose out?” She replied, “Sometimes they lose out. I would say 75 % of the time they come to a group question.”
She explained her use of addressing the whole class face-to-face and via email: Sometimes I address the entire class because I notice it in more than one group. Sometimes I send out an email to the entire class. I feel like I want them to hear specifically what I’ve said. If I’ve put it in words, it makes a little bit more sense.
She also elaborated on her use of the library. “They tell me where they’re gonna’ be and I come and I sit down with them. So, they’re not in the classroom.” I queried, “Is it more about the new setting?” “It is,” she decisively replied. I quizzed, “It frees them up to think fresh? Get to the group’s real issue?” She answered, “Yes, right.”

*Develop structure.* Professor Danielle detailed the structure of group formation along with “setting the stage” in explaining the first day of class to build community. How groups were formed displayed much or all of why the first day is “crucial” to CL for the whole semester. She liked “to let students choose their own groups to work in.” Able to witness this I enjoyed the déjà vu recap along with a fuller grasp of the underlying rationale. This section describes: (a) three successive learning activities for group formation critical to setting the stage for the semester, (b) the rationale for academic selection of group leaders, and (c) group leader instructions for selecting group members.

Speed dating activity was the first activity. Preeminent in her thinking the first day was, “They walk into a class and they don’t know anybody.” Therefore, the students engage in the Speed Dating activity. Using standard classroom furniture, the narrow oblong tables are quickly placed end to end with students sitting opposite each other until all are seated. Each student has his or her “note card” with his or her first and last name and sometimes a photo Professor Danielle has pulled from WebCt. Students displayed their name and a time limit was given for each across-the-table interview. Then, one side moved to a new chair until every student had interviewed every student. If they chose, they took notes. This allowed the students to find out what they wanted to know (e.g. favorites, academic major, math anxiety) and write it down, if they chose.
Self-assessment lineup was the next purpose-packed learning task. The genius of this activity for group forming is what followed, the get-acquainted interviews. The students were instructed to create a visual, self-directed, self-assessing group “line up” based on their “personal comfort level with mathematics, personal feelings about it.” The focus is math anxiety, not academic ability. On a 10-point scale, math anxiety ranged from 10 (least anxiety, most enjoyment) to 1 (most anxiety, least enjoyment). She also referenced this assessment attribute as the level of “their love affair with mathematics.”

When struggling with the decision, she told students:

Do you think you are a 10? Like you are fantastic. . .You enjoy working it [math] out. You have a good time doing it. Or are you like a 1? Hate it. [You] can’t do it. [You] wouldn’t want to do it. Don’t want to be caught dead doing it!”

The intentional math learning objective in social interaction and dialogue was explained under Foster Communication.

The speed dating activity and self-assessment lineup were precursors to what Professor Danielle called the Draft Pick. Often using state mandated diagnostic tests, Professor Danielle would make academic selections for the small group leaders. Sometimes she chose the “top four performers” or she picked “folks that thought they were the weakest.” Professor Danielle had a rationale for picking highest or lowest students as group leaders. In addition, she pointed out other learning benefits for the group leaders and explained the instructions she gave them.

Her rationale for using students with “really good test grades” to be group leaders better assured, “a high student who gets the material is engaged with some students that may not get the math.” In choosing group members, she pointed out, “They may learn
after the first time they pick their group that that person is not somebody they will pick again. Or they might learn I can really teach that person and they learn it better themselves.” She added without hesitation:

It’s interesting because some of them aspire to be SL leaders and have a job at the college. So, they’ll often say to me, “So, can you tell me about so-and-so? I’ve been helpin’ her a little bit, how’s she doin’?” So, they’ve taken on ownership of these other students in the classroom to help them learn better.

In choosing the academically weakest students to be group leaders, she revealed:

Some of them are poor in doing mathematics but they are fantastic leading. I know that because they are in charge of organizations and clubs. I’ve seen them in dance. I’ve seen them in musical theatre. I’ve seen them do other things. So, I know that they can lead. So, if I put them in charge of their own destiny, that does help them understand, what you put into it is what you get out of it.

Laughter spilled out and she continued:

It’s funny because in that very visual activity of people saying how strong they were with math, they also realize they have to like that person and be able to work with them. So, it’s kind of fun because it helps them learn how to put a team together, (pause) a successful team.

By the end of the speed dating activity and the self-assessment lineup, the four group leaders had now been provided the opportunity to be equipped with enough information and interaction to make their selection. With an assignment on the board for the rest of the class, Professor Danielle took the four selected small group leaders, who tested similarly (e.g. academically high, academically weak), into the hallway for extra
instructions. With the names of all the students in the class on a separate “note card,” they pass the set of student name cards around until the groups are determined. The group leaders return and sequentially call together their group, creating another level of new learning communities. The entire class, including instructor, have already begun the community building and communication process. At this point, “all I [Professor Danielle] did was set up my groups,” which primarily consisted of five students. Professor Danielle said the groups “switch up often.” This comment I failed to probe.

The first day or soon after, the following occurred: (a) establish rules for large and small group functioning to learn together in community, (b) individual groups assign roles, and (c) how her supplementary practices support small group learning. See Appendix L for a sample of her “instructional procedures.”

Beyond the standard syllabus, Professor Danielle liked to use CL “to establish rules for the class” and “talk about what the appropriate rules should be for classroom behavior.” For the “unwritten rules of college,” she emphasized her preference and priority that students write and live by them. Cell phones ringing and late to class were some of her favorites to collaboratively decide. These student decisions culminated in the liable person(s) bringing food for everyone or entertaining the class. “We paid for your entertainment obviously with your phone ringing. You get to pay us back.”

Professor Danielle was emphatic about, “establishing group rules when they work together.” She believed, “If you try to establish group rules for others, it doesn’t work as well as the groups establishing the rules for themselves.” She added, “They’ve got to take the time to break that out. . . .They’re going to have to follow through. For me to tell you how to manage somebody you’re managing, doesn’t work well.”
The level to which Professor Danielle implemented her position was evidenced when she said, “If everybody but one person is not following the rules, the rest of the group can elect to say, ‘See ya’ later. Sayonara.’ Then, of course, I will have to find a new group for that person. It’s very exciting.” We laughed and she conceded this created more work for her. She added this caveat:

“So, you are going to kick so-and-so out of the group if he doesn’t call you within five minutes? Uh, huh, I don’t even recall that being my rule, but okay.” You know, you kind of can’t believe some of the rules they come up with.

Professor Danielle further explained her position:

What community is the best learning community for them to be in? And they are the ones. They are the only ones that can tell you what that is. You can say what you think it is. But, ohhh thank God, we are all different.

She laughed and added, “And isn’t it nice to be able to let them have that control.”

With small groups established, the leaders facilitated “whatever the task is at hand . . .whatever group project or CL activity I want them to do.” Learning tasks ranged from “worksheets” to “the global warming project” to “doing test corrections as a group.” An integral part of group functioning in Professor Danielle’s classes was group-grading discussed under Evaluate Process and Product.

Each person in the small group had a role determined and defined by the group (e.g. recorder - takes notes). Professor Danielle explained how practical and innovative groups were, “I had one person who was the mother of the group . . . .She said, ‘I am fine with calling everybody up and saying, Where are you? . . . .They could all be my kids.’” We laughed and agreed that with four generations in the workplace this collaborative
encounter was providing skill transfer. With an instructional seriousness, Professor Danielle added, “Whatever the project is that they’re working on they just start getting into it and figuring out who’s better at what part.”

Other components structured to support Professor Danielle’s small group practices included the use of lecture with 20 questions, outside resources, and access to help after class. As stated earlier, Professor Danielle did not use CL as she defined it, exclusively. Not her preference, she used lecture, “But I never lecture longer than 15 minutes.” She categorized “the 15 minute lecture” as “definitely part of pacing”:

I can’t sit through a TV show without having a conversation with my friend, calling somebody on the phone, or getting my phone and text messaging. . . .It’s gotta have the human contact element to it. Maybe 10-15 minutes and then you all work these out. . . .It’s gotta be broken down into parts otherwise they feel like they’re just sittin’ there listenin’ to the radio and they drown that out half the time.

Professor Danielle was not only frank but balanced in her view of lecturing, “I mean that is always my last resort but I might have to go to that.” Then, she added, “not always my last resort.” “When they need a little bit of background,” she had to lecture:

If they don’t know what a monomial, binomial, or trinomial is. Sometimes you just have to lecture to get vocabulary across. So that everyone is speaking the same language. You can’t really do cooperative learning or collaborative if the students don’t even understand what you are asking them to do.

So much not her preferred modus operandi, she might offer an apology, “I’ll say, ‘We’re going to have to lecture today. I’m sorry it’s going to be this way,’” followed by:
Here are 20 questions. By the end of the lesson [lecture] you should be able to do and it’s your *to-go* problems. You can work with anybody. Here are 20 things I know you are going to need to know how to do as soon as we are done with today’s lesson. If you don’t know them, then, your job is to go get some extra help outside of class. Meet with somebody in class who did know that.

If time allowed, Professor Danielle gave them the 20 questions to “work together in your groups and you try.” A common practice for Professor Danielle would be to, “walk around and sit in each group and listen to the conversation. You are just the guide on the side. You are walking the journey, too.”

Professor Danielle structured group assignments expecting completion to occur outside of class time. “I mean like they are already working together, may as well assign it outside of class. That gets them together outside of class. That establishes connection and direction through the college.” She reassured me “that worked” for her and further stated, “I have them work in class to start it but there is no way they’re going to finish it.” She explained “getting five people on the same page” necessitated time outside of class. Revealing it can be a “real scramble,” she turned complaints into teaching moments:

Somebody says, “This student didn’t meet with us.” “You won’t pick them next time will you?” “Well, they’re so much fun.” “But are they serious about college?” “They will be after I’m done with them.” “Okay, you can try it again.”

In accessing help after class, Professor Danielle stressed, “It is a lot of relying on the others in the class to help them or going to our support centers on campus.”

On problems and benefits of work “outside of class,” assets outweighed liabilities:
The problems are if they have family, they have a hard time getting away from their children, if they’ve got a spouse or a job. Benefits, I think they get a lot out of it. . . .Making connection, feeling you’re not in this by yourself when you do have a family and you do have to go home. You often feel you’re the only one suffering through this. But with the group, you don’t really have that problem.

**Evaluate process and/or product.** Professor Danielle employed group tests and grading for group assignments and projects:

I have actually even given a test as a group and it is really fascinating to watch them work together. Part of how that works so well. . . .is you say to them, “Ahh, you have no idea whose paper I am going to grade. You have no idea which of the five tests I will pull to grade. You are working together to complete this task. I pondered aloud, “So, you better do your best on all five. . . .Otherwise, you are on a real gamble.” “Yeahh, that’s right!” was her riposte. As stated earlier, she had encountered colleagues’ questions on how she made sure the work was done by each student. “Well, you just do, x, y, and z.” Outlined here are: (a) the basics of her “x, y and z” protocol, (b) four classroom illustrations, and (c) student reflection on group process for assessment.

When we talked about her nontraditional evaluation practices, she was prepared and ready to respond to “devil’s advocate” inquiries with her basic protocol:

There are all sorts of assessments. I have the students’ rubric where they grade each other. I also have the student’s work. A test is also going to be part of the assessment. They all turn their work in as individuals. Then, I pick one to grade. The main pieces were the student rubric to grade each other, all work turned in as individuals, and her facilitator role is further detailed under Group Functioning.
On nontraditional student assessment, I asked her to “spell them out” a little more. She delineated four aspects: peer assessment, group tests, organization, and study skills:

Oh, well, it’s peer assessment. Students will assess each other when they are working in groups. Group tests, which is a weird thing for a mathematician to say they would ever do (laughter). . . .I think also organization base is something else I look at. How organized are they when they come to class? That’s a whole different assessment. I think some study skills is a part of what I assess in terms of CL. I have a rubric for everything that I am doing. “Do you have this? Is this happening?” [Then] they grade each other and I grade them based upon the rubric.

On group tests, she emphatically repeated, “They don’t know when I’m gonna do it.”

Professor Danielle shared four illustrations: (a) the Home Improvement project, (b) group tests, (c) the five-version take-home test, and (d) the cheat-shirt for finals.

She first talked about the Home Improvement project. As reported earlier, a primary purpose was to make sure students are teaching students. All five in the group write up their individual eight-page report. The eighth page is a personal reflection for which they receive an individual grade. What they do not know is which one of the five eight-page reports Professor Danielle will grade to be the project evaluation for all. With my skepticism in plain view, she emphasized, “There’s no way they could have done these projects as one person.” She stated they must “fill in the rubric correctly.” When I hinted at the possibility of “covering” for each other, she took on a controlled calm tone and gripping eye contact, “They aren’t comfortable with that.” I said, “Cool!” She burst forth in laughter. Her demeanor shifted again, “They are not happy with that. They get very upset.” I asked if her rubric brings that out and she replied, “Yes. Yes.”
On the group tests, take-home tests, each student must do their own but they never know when or if she would collect just one for a group grade. She explained:

When I grade the tests as individuals it takes me a whole lot longer. If I grade them as a group, I can get five tests...graded in 20 minutes. Something that may have taken them weeks...I can shorten to 20 minutes...to get feedback for them.

She described a test she “found even more interesting.” “I assigned five different versions of the same test to three different classes. That’s 80 something students. Obviously several people had the same version of the test but they had to find each other and they were in different classes.” Her students “took up an entire room downstairs working these problems,” an area for developmental students. She further clarified:

Now, mind you, number one isn’t the same [on each test]. It’s the same type of problem but it’s not the same problem on all the tests. So, they kind of helped each other. It was really a learning experience for me I will definitely do again.

Interviewing her during finals week on group testing, I asked how this might play into finals. Unknown to me, her students were preparing their cheat-shirts as we spoke:

It’s interesting you ask because I have a group of students downstairs working on their cheat-shirt...They have fabric pens and can write anything they want...Any notes they want to put on there, formulas, anything. They’re kind of working in groups, right now, figuring out how to organize their cheat-shirt.

Asserting, “They take the finals as individuals,” with a full smile, she ended, “So, they’re studying and don’t even know it. It’s fantastic!

Given her unconventional assessments, I asked if she included student reflections. She replied, “I have not. I don’t even think they know they are doing it.” She added:
I think they know it is something different than what they have traditionally received. . . Yet, I don’t think they realize that any time I do lecture that about every 15 minutes I do something to get them engaged and active again.

**Summary.** For Professor Danielle her role as educator was, “It’s bigger than the math. It’s about life.” In every aspect, her view of classroom practices was holistic.

Whether forming group roles, group rules, or establishing assessments, the focus was “make sure they teach each other.” Creating a “family atmosphere,” a cohort, was about working together “to help each other.” Mathematics brought them together but “we’ve got these other parts of our lives that collide and we learn from one another because everybody is so different.” She considered herself one of the learners. Placing her education background over her major in mathematics caused her to “do what I knew was right for the students. . .actively engage them in a CL process.” She illustrated this with a contrast between herself, who taught mathematics “because I love the student,” and a colleague who taught “for the love of the subject.” She continued, “I think that is part of our job. . . Not only how to be a student but how to be a lifelong learner, not just in our subject but also life in general.” Active learning was central to when students are “completely engaged I see the magic happen.” On skill transfer, she talked in terms of students taking CL skills to other classes, to roles of peer tutoring, to professional careers as educators, and work together “not just through the class, but also through life.”

Her understanding of CL focused on “interaction,” “establishing connections,” and “working with the cohort of students.” The two terms, CL and CpL, meant the same to her and “to a lot of people.” She credited her discipline for the lack of distinction. She candidly stated she confused the two terms and does not have a “schema” to separate
them. Knowledgeable of theories and theorists, she mentioned Gardiner’s “multiple intelligences,” particularly, yet she did not view learning theory as impacting her practice of CL. She conceded being conflicted at times, not knowing whether she wanted to prove or disprove educational theorists. “Really though, my lived experience is my lived experience. . . .It’s nice to have these frameworks but that’s not exactly what happens.”

Professor Danielle spoke of her school as a Vanguard school, “well known for our ability to help our students get through college and make it to graduation.” She talked about “a little bit of a shift” to build in CL and CpL activities and “how open it is for me to be able to give. . .a group test.” She spoke of her school as giving her the “chance to try things I might not have tried. I try and fail and realize I need to make some changes.”

On the influence of colleagues or her influence on them, Professor Danielle’s experiences were compelling, more negative, and exposed their long-standing and present-day effect. Prominently stated, her influence on present and former students, some who are now mathematics teachers, was a source of pride. In listening to her statements being clarified, it had not “occurred” to her she had not only influenced students to mathematics but because of her CL approach. Important to note were two impactful encounters as a high school teacher. Now “more mature” the painful experiences had strengthened her commitment and propelled her readiness to respond more effectively. The experiences shared involved resistance to CpL or CL.

On her discipline’s influence, she saw no difference between CL and CpL and attributed this to her discipline. With English as the example, she distinguished between “collaboratively studying a poem together” and “cooperatively” putting “a presentation together.” She added a distinguishing and contrasting feature of mathematics, “the
quadratic formula is the quadratic formula is the quadratic formula.” Given the profound term confusion in the literature, I should have asked for more clarity on: (a) her illustration from the discipline of English and (b) her exact intent with the latter statement about mathematics. Perhaps the foundational nature or her objective description of math would have offered more clarity to her view of CL and CpL. In contrast to the literature, this did not seem to restrict her use of the specified concept of CL, the basis of this study.

In classroom practices, the high priority was the instructor’s responsibility in establishing “community” by “setting the climate, temperature, and pacing” and “sending that message” on the “crucial” first day. According to her student data, if students miss the first day, “it is maybe one in a hundred that passes.” In fostering communication, the import of “talking the same language” was expressed at an academic, ethical, and psychological level. All aspects of the small group experience fostered substantive communication (e.g. group formation, group grading, group agreement). Group forming was the essential first step to developing structure and speed dating, the self-assessment lineup, and the draft-pick shaped the “critical” first day. Group selection, the core outcome of the first day was student-directed, like group roles and rules. In group functioning students could unanimously remove a student who was not following the rules to which they all agreed. Small group learning tasks included worksheets, projects, and test corrections. Lectures were 15 minute segments to explain new material or possibly revisit difficult concepts. Professor Danielle exhibited in the interviews the most innovative assessment protocols. These included the unannounced selection of one individual paper or project randomly chosen from a small group and evaluated for the whole group’s grade, the five-version take-home test, and the required finals cheat-shirt.
Description of snapshot. Involved beyond the field site in CL and CpL for the community college, Professor Danielle’s holistic approach was best expressed in, “It’s bigger than math.” She viewed the first day as critical to success and purposefully designed a series of three integrated activities to “set the stage” for building community to foster communication for academic purposes. Seeing no difference between CL and CpL, her innovative structures for activities and assessment clearly applied the specified concept of CL in a discipline not viewed in the literature as conducive to such.

Figure 7. Professor Danielle – A Snapshot of Classroom Practices
The Fourth Case: Professor Gina – Organizational Thinker.

**Researcher’s open letter.**

*Researcher’s introduction to practitioner.* Pleasant, prepared, and calm with a touch of tentative anticipation, depicts my first impression of Professor Gina, a speech instructor who appeared on top of her *game.* Quickly apparent, her implementation of CL was as much in caliber about clarity and precision as was her almost flawless pronunciation and fluency in the English language veiling her Hispanic background. Also presented with exactitude was a strong emphasis on the “we process” and “in the beginning.” Clear expectations, organization, and boundaries were hall marks of her lived experience in CL. “Structure” popped up twenty five times in two and one-half hours of recorded interviews.

*Faculty participant’s academic and classroom credentials.* Professor Gina’s credentials include B.A. in Psychology and B.S. in Communications, TV, and Film. The thesis for her Master’s degree in Communications was titled “Mediation Tactics and the Influence of Argumentativeness and Verbal Aggressiveness.” A background in corporate training, she completed a certification in online instruction, *Digital Professor,* and is a workshop facilitator for online instruction and online small group work. Although online teaching was not a criterion for selection in this study, it was apparent throughout the interviews by her classroom schedule and her professional documents that her professional experience as an educator is weighted by a predominance of online instructional involvement. As an associate professor, she taught four online and two face-to-face courses with CL applications at the field site.
In keeping with the criteria of this research study, Professor Gina stated she employed all four instructional classroom practices defined in this study as indicative of CL. Described in Chapter Two, the four classroom practices were the learning environment, objectives, assignments, and assessments. Professor Gina signed a statement that her classroom practices included all four.

**Faculty participant’s introduction to collaborative learning.** Professor Gina’s first personal experience in CL was her professional real time focus and engagement with her students, her faculty role, and her colleagues as educators. She began the narrative of her CL practice immersed in a strong certainty about form and function.

These introductions and distinguishing credentials related to Professor Gina’s lived experience as a community college practitioner in CL are intended to enrich the context for this within-case analysis presenting Professor Gina’s interview data.

**Faculty participant’s professional persona.**

**Commitment to students teaching students.** With a tone of exhaustion, she told of explaining a concept “up and down twenty different ways I could think of.” Then, a student revealed to her because of what “so and so” said in class, “I really got it. It made sense to me.” The hint of fatigue changed to natural delight, “In that sense the CL, they’re teaching each other. And it’s not until that light bulb moment or until they say something to you that you go, ‘Oh, okay, I’m glad! I’m glad that’s working for you.’ But, you know, those are the moments you strive for.” Perhaps feeling a little too comfortable, I replied, “As one educator to another, how does that make you feel?” With both of us laughing, I continued, “When you weren’t the star in their life?” Without hesitancy, she retorted:
Well, maybe you weren’t the star! But yet...you were the one who gave it parameters. You were the petri dish for it. So, uhh, the institution was the petri dish and you were the one who gave it food. So, that’s what we’re all after.”

With my spirit answered, her strong conviction expressed persuasively the level of commitment and satisfaction in students teaching students.

“That’s exactly what I wanted you [the student] to do!” Students’ resistance to group work discussed under Institutional Effects, accentuated the deep delight in this exclamation and the effort of her dedication to students teaching students. Her glee culminated in mentioning this posted student “reflection” about an online small group project, the student’s written assessment of the six-week assignment employing CL:

Our Wiki group did a phenomenal job on this project and it couldn’t have been done without the collaboration of each member. The “aha” moment during this project is when each person said they would do something, they did it. I learned as the team leader I needed to trust everyone on our team to do their part. There were moments I was questioning whether we would be able to deliver as a group, but the whole team assured me that they would be done by the deadline and they were. I’m most pleased with the level of accountability we collectively shared as a team. We completed our selected tasks and assisted each other when help was needed. Even though we never met all at once, we communicated effectively to where we produced a cohesive product by the deadline. (Appendix M)

Professor Gina reflected, “When you see those words and you know that they’ve come from your students you almost want to cry.”
In bringing “all these levels together to make them work,” she also mentioned the challenge of diversity (e.g. nationalities, language, age, gender). From her perspective, it is here that structure became critical to the challenge. When structure was achieved, “often times, students will look at what they have worked on together and can’t believe they made it happen.” Regarding group diversity, Professor Gina heard from her students, “I didn’t think it was going to work.” Then, “They look at what they’ve actually done and they’re just amazed!”

Hardly taking a breath her next words were, “But to get there, how do you get there? How do you build this ideal project? What are the phases they need to go through?” Again, I am struck by the weight or import of structure. Amidst the words “steps,” “phases,” and “structures,” prominent in her opening comments about how to execute CL, this phrase wiggled in, “so that students can serve the needs of each other without too much clashing of styles” or other diversity “challenges.” When I inquired further about students “serving the needs of each other,” she told me about the “structured format peer evaluation form,” discussed further under “develop structure.” Students teaching students was a valued objective and a source of ardent satisfaction, conviction, and commitment.

**Values learning process.** Professor Gina referenced speech as an individual process but also a group process with the speaker being intentionally engaged with the audience as players or participants. She spoke frequently about “the process of working together.” In addition, she referenced student feedback on speech presentations “as trying to make the learning process” constructive or positive for personal improvement. In online discussions with students assessing the Wiki project, she told about
conversations with them about “how they felt through the process” and later “the feelings of confidence” gained from the “group process.”

**Awareness of skill transfer beyond classroom.** Professor Gina shifted the working together “they’ve done here at this institution” to giving them the “confidence that they can go out into such a diverse world and make it happen again.” Seeking verification that she was talking about skill development in working together “beyond the classroom,” I asked how important this would be for her students. She responded, “I think extremely vital. That’s our global economy. And to be able to have that skill, to possess that skill, will make them far more successful than most other skills they’ll take away from the community college.” When probing these weighted words, “extremely vital,” her signature laugh burst forth and she responded:

> Once they leave this experience, they hopefully will continue down an educational road which will contain collaborative types of experiences. Whether they will be learning experiences, work experiences, personal relationship experiences...All of those same types of skills will be revisited in their future beyond the community college and into their professional career. I know of no career where you get to sit in a box by yourself. There’s always some type of outside experience where you’ve got to collaborate with others. In your own personal relationships, anyone who’s ever been married will know that. It is the ultimate of collaboration, working together!

Professor Gina laughed and ended with, “So, those steps and skills that they are learning and developing and strengthening here. They will take with them.
Responding to an inquiry on theory to practice, she provided another substantive reasoning for the value of CL skills beyond the classroom:

Well, I think the belief that the student is going to enter into a world where you’re not an island by yourself. In any job I can think of, any career track, there’s always going to be a collaborative nature to it. . . . If we can find ways to learn this material in a collaborative nature, then hopefully, that will make students much more successful. And in another type of field or area that you might study, hopefully you can have those skills from this CL that could extend beyond and make you successful in another arena.

**Understanding of collaborative learning and terminology.** Professor Gina’s understanding of CL contrasted and aligned with the literature. Highlights were: (a) interchangeable terms, (b) unavoidable, not intentional, diversity in her instructional approach, and (c) strong concern for clear expectations and structures.

Professor Gina provided an unexpected perspective on the meaning of CL when she described the “ultimate of collaboration,” the marriage relationship. In alignment with the conventional, what was frequently reported in the literature as interchangeable, she prefaced her definition of both with these words:

I don’t see a big difference. I used I think the two terms interchangeably because I think there’s probably a very fine line, if any, in differential between the two. . . .

If there is a difference I don’t know that I’d be able to put a semantic to it. The difference “would be very fine,” she concluded, whispering the word “fine.”

Therefore, Professor Gina’s definition of CL and CpL included both:
It’s bringing diverse people together to share experiences, share work. . . .I guess it doesn’t have to be a diverse group of people but. . . .that’s usually what I am afforded. . . .And put together some type of learning or knowledge exchange. In the process you would hope there’s shared community, insightful exchange of knowledge, and collaboration, people contributing to each other’s insights. She described the “outcome” as “collective” in which “everyone can see their work took them to new levels. Their contributions took them to a new level of understanding.”

Furthermore, Professor Gina expressed diversity as an uncertain or unnecessary characteristic of CL but part of her “afforded,” unavoidable, or given experience. Prevalent in the literature and integral to defining these terms, diversity or heterogeneous groups are ascribed as an attribute of collaborative learning more often than for cooperative learning, if at all (Bruffee, 1999; Silverman & Casazza, 2000). Her above definition of CL was the only time she used the word “community,” unless she referenced the community college.

**Role of theory to practice.** Professor Gina did not recall or articulate a response germane to the topic of how learning theory influenced her classroom practices. See Appendix M for additional comments journalized from my imbedded transcription notes.

**Institutional effects on usage.** Professor Gina’s comments on the community college spoke exclusively to the field site where she was employed. On classroom usage, in general, her own employment of CL, the role of individual learning, and the longstanding student resistance to group work is addressed. The influence of the field site, her colleagues’, and her discipline along with other disciplines on classroom usage follows.
Professor Gina thought CL in the traditional classroom can be used “on a daily basis. But does it get used every day? Probably it does not.” She put forth “You can plan for group activities and ways to bring together different groups. I probably do have daily small collaborative activities.” She spoke of individual learning, “Sometimes we get together and it’s more of an individual formative learning, sitting down and thinking by yourself.” On a percentage basis, Professor Gina estimated, “at least 50 to 70 percent of the time we try to or I try to incorporate it [CL] into the daily workings.” On colleagues’ usage, she surmised, “I would say probably similar, amongst the people I communicate with,” colleagues in the speech department. She was “unsure” beyond that. She repeated her view of speech as more naturally and easily integrating CL than some other fields. She added, “Maybe that’s why you don’t see it as much. Obviously, in the field of communications the whole idea is about communicating. So, most of our activities can be collaborative because the field itself is collaborative in nature.”

Professor Gina spoke of community college students’ low expectations for “group learning.” She singled out her online students whom she believed “forty percent or more are solitary learners.” She continued, “The idea that they’ll be forced to work with a group to learn. They just are at arms at it sometimes.” After a “forced” experience with “Google Docs,” however, they can see “how useful,” this might be “in a collaborative nature.” She said the majority would admit “they couldn’t believe they were successful” but “they’re still usually not a big fan of group work.” Even though the “light bulb goes on for all of them,” they are not “overnight lovers of group collaboration. Oh, no. Not by any means.” This lack of student desire or appreciation for group work was common in the literature.
Field site. Professor Gina spoke of: (a) the institution-wide student focus, (b) faculty freedoms (e.g. CL support, textbooks, technology), and (c) faculty development.

Early on in an unrelated inquiry when I injected a facetious add-on quoted earlier, I took note that she backed up to credit the institution’s role in focusing on the student with a seeming lack of awareness, “You (instructor) were the petri dish for it. So, uhh, errr the institution was the petri dish and you were the one who gave it food. So, in that sense, that’s what we’re all after.” This seemed to say how Professor Gina viewed her institution’s integral role and her vital and integrated role, the engagement as a team, “what we’re all after,” to focus on students.

Professor Gina also described the institution’s influence in terms of freedoms afforded faculty: “I’d have to say that this institution is supportive. . . . We’re given freedoms to create the type of classroom environment that would make it a positive, CL experience. I don’t have a dean who restricts me in any way.” She singled out textbooks as another freedom that supports the former:

One of the nice freedoms I feel gives lots of choices. . . . We as instructors can use any textbook or no textbook to ground our course work in. For some of us who have certain ways of developing course work, developing CL, to feel you’re tied to a textbook can be restricting. To feel your students paid a hundred dollars and aren’t getting their hundred dollars worth. . . can be frustrating. . . . One of the large freedoms the department allows.

Professor Gina listed “technology” as another freedom. “We [speech instructors] are afforded the use of the classrooms that do have the most technology. We can utilize all sorts of internet options, the whole platforms we use, the WebCT, BlackBoard type
platforms.” Having clarified for “speech instructors,” yet not certain what determined the preferred room assignments, I was asked, “Are you saying you get priority over other disciplines because your discipline lends itself more naturally to collaboration?” “Yes,” she stated. I probed, “We’re talking directly about collaboration.” She answered, “Yes.” She continued, “I think we’re afforded some of the nicer classrooms because of that.” Clarifying “that,” I asked, “Because of the connection of speech to CL?” She replied, “The field, right.” She continued, “To the skill base we’re trying to develop. It’s a performance-type course. Like science has their specific labs; we are afforded rooms that allow us to utilize the technology that will help enhance the development of those skills in communications.”

The conversation took on a dimension beyond freedom. I drilled on, “So, you are saying to me, there is a strong connection between how CL can take place because of technology?” She replied, “I think there are some things better supported because of it. Not that you can’t do it because I’ve been in classrooms where we didn’t have the technology. . . But it’s easier. It’s more convenient. It’s more efficient. . . . It’s easier with the technology at your fingertips.” She elaborated, “I am talking about being able to video tape someone’s speech and then turn it around for a group assessment.” I recapped, “The technology is key to a stronger CL experience to gain the content and the learning objectives of the curriculum or the discipline.” Professor Gina summed up this institutional influence and support:

For certain aspects of speech, I am. I won’t say that broad across the board for everything because obviously I think some of the classroom activities I showed you are things that aren’t technology based. But specifically for the skill
strengthening of speech and being able to be afforded to easily video tape and then turn around and show that. Yes, you need some of that technology.

As to what hindered CL, in her discipline of communications, she talked about preferring a room arrangement and purchase of classroom furniture (e.g. round tables, couches) “more collaborative-friendly, in the sense, that it’s maybe a group setting or an area where a group of four to five students could sit down comfortably and be creative and put their thoughts together.” She believed:

When students are a little more relaxed they tend to be a little more collaborative and a little more creative. Often times, I’ve just gotten to the point where we’ve pushed the desks aside and we sit on the floor. . . .If I have to say anything about them [the institution] hindering. . . .It’s the fact that they’re very rigid about the desks must be put back in place. So, if I spend the five minutes with my students moving everything to make it more collaborative-friendly, group-friendly then I do have to spend five minutes having the students put everything back exactly where it is because the institution does have a policy about that.

Faculty development surfaced when I asked about “light bulb” moments she thought would transform her classroom. She responded, “I think we have quite a few opportunities for that, for all the instructors and the faculties across the institution.” Her personal example was when an “instructional professional” from a nationally recognized university came:

She is the brilliant master when it comes to group structure, and group work. I walked away from her two hour workshop going, ‘Oh my goodness! Let me get to work. I know exactly what I want to do for one particular activity.’”
She followed up with, “I think there’s those opportunities for everyone. It’s just a matter of seeking them out, fitting them in your schedule.” Later, she reiterated, “One thing this institution does is a fairly strong job in the professional development as far as offering workshops to enhance [faculty] by inviting speakers like I mentioned to our institution to offer those growth experiences and learning opportunities.”

In addition, Professor Gina talked about “multiple programs” designed for faculty development including faculty learning through social interaction. She gave examples for adjunct faculty, web-based teaching, and interdisciplinary collaboration. Not “just exactly sure how the hierarchy works” in faculty development, she had completed work in all three areas. Her comments on web-based faculty training and interdisciplinary events appealed to me because collaborative learning practices and issues were prevalent in her web-based instruction and her interdisciplinary encounters.

Integral to her faculty training as an “online professor” was “a very specified structured” certification, a 20-hour program composed of 10 two-hour workshops. She emphasized the opportunity to interface with other faculty. She also talked about an interdisciplinary faculty development program that allowed for collaboration and revealed the impact of collaborative learning on other instructors’ disciplines (e.g. Science, Mathematics). These insights are presented under, “discipline.”

**Colleagues.** Professor Gina believed CL was a “challenge” for “the classroom instructor to make it happen” but viewed her colleagues as “striving to meet that challenge.” Professor Gina described the influence of colleagues through the collaborative aspects of faculty training in online instruction:
It really lends itself to CL with other faculty because through the course of these different workshops you engage in different projects together. You engage in discussions with the other faculty. You get an opportunity to find out through their perspectives and their input things they’re doing in their classes.

Continuing her line of comment on faculty interactions, I asked if collaborative engagement with colleagues extended beyond the faculty development event, face-to-face or online. She answered, “Yes.” I probed, “In formal or informal settings?” She responded, “Both but more so with my own colleagues in the speech area than, perhaps, across fields.” I asked how that has impacted her. She answered, “It’s definitely made me feel more confident in the sense I see other people are doing either, yes, the same things, or no, they’re not doing it, because it hasn’t worked for them either.”

She chuckled and added:

So, in a sense it gives you that confidence to keep going forward with what you are doing or find out what didn’t work. “Okay, didn’t work for you, didn’t work for me!” Throw our hands up and move on. . .figure out what will work better.

**Discipline.** Viewing her discipline as naturally bent toward employing CL, her inseparable understanding of the individual with others and the speaker with the audience flowed from her view of CL in her discipline. In another line of inquiry, this theme of a natural fit remained:

In this particular field because the idea a student is learning to organize their thoughts to present a speech and improving their skills to make that presentation. While it’s an individual process, the whole time. . .it’s not just individual, it’s audience-centered, too. The very nature of what we’re teaching is collaborative.
She spoke of an interdisciplinary summer faculty development event within the institution that “invites instructors from all sorts of fields to work together.” Professor Gina heard other instructors ask, “How in my field do I make this work as far as the CL activity?” She stressed some fields like her own, “lend itself to the activity easier” and singled out fields “where activity isn’t so much the main focus.” Disciplines with less “activity” may find it more difficult:

Maybe it’s a lab more than an activity. So, working towards making the lab a collaborative experience might be more difficult for someone in the sciences where as in the communications, activity and talking is just second nature. So, that’s perhaps what I mean by the challenge. I think at this institution most of the instructors I know strive to meet that challenge.

Although the literature reported the research lab a “natural” opportunity for CL, Professor Gina spoke to meeting the diverse challenges of varied disciplines. Again, she said “most of the instructors” she knew sought “to meet the challenge.”

Pursuing her main thought, I asked if she could “allow me to peek in at what that challenge looked and sounded like?” After an uncertain pause, she responded:

I’ve heard from, perhaps, the science fields, a biology field. Is the fact that it’s a little more challenging to make those CL experiences for their students when they have a lab to do and the lab has ownership of just the one person. So, you know, in that sense they probably have a little more challenge.

Wondering if the literature had reported this particular encounter, I was quickly reminded of ownership issues and lines of power between student and faculty prevalent in the literature.
Learning conditions. In her practice of CL, she saw “the outcomes as assets” but “the challenges can be difficult.”

Negative experiences. Depicting negative learning experiences, Professor Gina related a medical and a legal issue but focused on her “fears” from an instructional perspective. The medical situation was a “highly communication apprehensive” student who became physically sick. Professor Gina’s protocol in these situations was an extended conversation with the student to further identify and assess core issues. A special class was taught at the field site for students with extreme fears of public speaking who would not be successful in a traditional setting. The legal issue surfaced during the forming of groups and described her “worst experience.” A female student notified Professor Gina a student in the class was “not suppose to be near me because I’ve had legal dealings with him” and “make sure I never get put in a group with him.” Not knowing what to do, the male student “fortunately” dropped the class. She added, “Collaboration is great until you meet the person you have a restraining order against and sits two rows behind you.”

With these encounters aside, I asked, if there were other types of considerations. Professor Gina answered, “One of my fears is not having the right parameters, not having the right structure, not being ready with enough insight to really put it to good use.” I requested some specifics and she continued:

I’ve got this great idea for a group project and I’ve maybe asked around to my colleagues, “Have you ever done X, Y, Z?” And no one can really say, “Oh yes. I’ve definitely done that.” So, you feel like you’re creating the wheel. So, you may go in search of some other input but maybe you just don’t find exactly what
you need. So, you decide, “Okay, I think I’ve got enough parts and pieces. I’ve got descriptions of what I want my students to focus on. I’ve got what I think is a good learning outcome. I’ve got the tools necessary.” So, you’re trying something for the first time and it blows up in your face.

Professor Gina laughed and added, “So, that’s perhaps one of the things. You’re always a little anxious when you try things out for the first time.” Appreciative of the honesty, I asked, “What does ‘blow up in your face’ look like?” She responded. “It looks like confused faces of students. There not quite sure what they’re supposed to be getting out of it. It looks like conversations among students that have no particular direction.” More laughter and she concluded, “It’s just kind of a chaotic scene where you thought you had good focus and there wasn’t any.

Wanting to draw out her modifications in these “blows up in your face” moments, I asked if she had accrued identifiable actions she did not want to repeat and she replied: A lot of times it boils down to there weren’t enough specifics with it. Maybe, I gave them too much time, maybe I didn’t give them enough. I put more people in the group than needed to be. . . .It usually boils down to little specifics. . . .Mix of group, not enough information, not enough grounding material to get them going.

**Positive practices.** Challenging experiences and modifications became a part of four constructive themes or patterns: (a) build community, (b) foster communication, (c) develop structure, and (d) evaluate process and product. Affecting all four, Professor Gina’s first words spoke to her investment in traditional and online classes:

I teach in the traditional environment. . .and I’ve been teaching online for three and a half years. While I have to come at that [CL] from two different angles. . .
There are strategies you use in both formats that I think will lead to successful learning outcomes for the collaborative style.

**Build community.** The word “community” was mentioned only once beyond references to the community college. It was validated, however, as a substantive component of her CL practice. In contrast, phrases such as, “when you’re collaborating ideas you have those mixtures [of students],” “you’re not an island by yourself,” “you as a speaker are thinking about the people you are speaking to,” “it’s not just an individual process, it’s a group process,” “try to foster that supportive type of classroom culture where it’s a nurturing, growing type of experience,” and others were splashed throughout our conversations. A “classroom culture” of community was further substantiated in the word “together” used forty two times, as in “students come together,” “opportunities to learn together,” “worked on together,” along with “put,” “pull,” and “bring together.”

**Foster communication.** Advocating an early start on communicating to connect, the following surfaced: (a) the instructor’s role, (b) types of communication, (c) conflict in learning, and (d) her self-assessment. Based on the intensity of her voice and eye contact with me (field notes), her regard for the instructor cultivating “community” through communication by modeling it early on captured my attention:

From the very first discussion you need to make sure every student who posts . . . gets a response from you. Most instructors will say, “Oh, that’s so time consuming. How can you go in and respond to everyone?” Well, that is the first step to the “we!” And if they feel like I’m posting to thin air or I’m just posting to other students and there’s no “we” to it, then, that’s going to hurt the rest of the “we” process. So, it has to be established from the very beginning.
With emphasis on no favorite students in the face-to-face as well as the web-based classes, she forcefully advocated her role to model communication with students to support “working together.” She asserted, “It really starts with the communication process and to me, especially, in our online classes if they don’t communicate from the get-go, then, the whole CL process has just stopped.”

Prominent in her narrative was Professor Gina’s reporting of students’ low expectations for group work. In the context of students in online courses to avoid face-to-face encounter, let alone confrontation, were strong statements of students “scared of communicating” or “don’t want to confront.” She further characterized the student fear with “people are going to let me down.” The cadence of her voice slowed to leverage her opinion, “I think that’s huge for people.” This reality popped up in her comments on communication and was linked to “working together,” illustrated with a reference to the online project and students’ “ahaa” moments (see Appendix M). “When each person said they would do something and they did it!” I was compelled to ask what “the process of working together” would include. Without hesitation and at a marching tempo, she clicked off these thoughts, “It’s when students communicate clearly. It’s when students don’t let each other down. It’s when students have expectations of each other and the expectations are met.” She outlined the types of communication that needed to occur.

In using the word communication, she was not talking about getting up and giving a speech. With a clipped cadence, she definitively replied, “I’m talking about you need to email me. You need to tweet me. Call me. Somehow tell me where we’re going to go with this project.” Clearly this litany of directives was to address logistics between group members. I asked what steps followed “tweeting, emailing, and phoning.” “We’re
talking about the structures, building structures, to develop and create what it is the task
might involve.” Professor Gina referenced the Wiki project to make her point, “So, also
taking on roles, defining the roles, as far as what my tasks will be and your tasks will be.”

Developing interpersonal communication skills to engage in the substantive
conversation at the core of CL, the following emerged: (a) implications of term
interchange, (b) red or white flag application, (c) peer evaluations, and (d) instructor’s
self-assessment.

“Two interchangeable terms” described Professor Gina’s view of CL and CpL, as
stated earlier. In view of the literature reporting CL as indicative of “arguing to learn,” I
had not forgotten an early statement about “students who can serve the needs of each
other without having too much clashing of styles.” With this thought, I echoed her last
litany - creating structures, defining roles, and being creative. Then, I asked, “How do
we define communication when students in a small group don’t agree on roles, structures,
content, or the creativity?” Gina’s laugh told me we were possibly about to peek into
Gamson’s (1994) “enemy territory”:

This is where it becomes difficult. You as instructor, do you put in a red flag and
say, “Wave the red flag when you’re group is having difficulty?” Do you act as
mediator? Do you let one of the group members have a mediator role?

Not wanting to assume anything, I inquired, “But that’s a piece of this communication
(e.g. difficulty, disagreement), am I correct?” “Right. Correct. Correct,” she assured me.

Professor Gina referenced red or white flags in our first conversation. I had asked
if course design and assignments “allowed for disagreement, challenging one another,
justifying choices and decisions.” She responded, “Usually in the communication
between myself and the student there seems to be enough open discussion to smooth out
the waters.” However, she had “thought about” using a “white flag” so the students
“through the weeks of collaboration,” if “something” occurred they were “just not happy
with,” could “throw in the white flag.” She laughed and conceded:

But sure, part of collaboration is the frustrations and not being able to talk to the
person who you’re supposed to be able to talk to whether the group leader or the
person you’re working with. Some type of function would help alleviate that.

I asked her to elaborate on her use of “alleviate.” She responded, “Alleviate, I feel like I
can’t communicate it [the difficulty] with this person. And without the communication,
how are we supposed to collaborate?” She laughed and continued, “So, umm, I need
someone to discuss my frustrations with.” At the time of the interview, she reinforced,
“Often it is me. . .being the intermediary. That’s my online class.” I asked how that
contrasted with her traditional classes and a distinguishing feature in the group structures
of her two learning venues surfaced:

In my face-to-face class, it’s different in the sense we don’t work in the same
groups all the time. . . .I really have a focus where I try to create diverse groups
but a mixture of groups. Whereas within the online environment when you create
a Wiki project. . .it’s really a six-week project and through those six weeks they
have to hang on and be a collaborative group.

Speaking to what the literature referenced as “arguing to learn” or “intellectual
negotiation,” the length of time, with other conditions similar, would be applicable in the
traditional or online classroom environment. However, the difference in time frame that
the groups functioned, especially in her traditional classroom, did not provide the length
of engagement needed for a group to progress to “intellectual negotiation.” When the
instructor is the “intermediary,” the literature viewed this as more indicative of CpL. The
online projects required expanded time frames for groups “to hang on and be
collaborative,” providing the time to enter “enemy territory.”

Peer evaluations, the follow up to each student’s three required speech
presentations in her face-to-face classes, fostered written communication. She explained
the “constructive feedback with very designated. . .specific components.” Chuckling, she
added, “Not just giving them free reign to offer any constructive criticism.” Her
inclusion of “constructive criticism” caused me to inquire, “Does that feed into the
second criteria of developing more in-depth interpersonal communication skills?” She
answered, “Right.” Professor Gina followed up, “Without having that clashing of styles,
or you hope without having that clashing of styles, because there is structure to what it is
they’re supposed to be offering the other students.”

This was the second time I heard “clashing styles.” The title of her Master’s
thesis was “Mediation Tactics and the Influence of Argumentativeness and Verbal
Aggressiveness.” I found her desire to avoid “clashing of styles” intriguing. I asked,
“Do you give them a context for those clashing styles? Do you give them a personality
or other assessment?” She replied, “I do mention at the beginning not to be derogatory,
not to put people down, to try to make the learning process, the feedback that you give
them, a constructive type of feedback.” Not certain of her intent, I was realizing written
peer evaluations was or had the potential for an incremental step to develop more
substantive communication skills, as well as improve public speaking skills.
Professor Gina’s self-assessment emerged through this dialogue on substantive conversation. According to Professor Gina, collaborative engagement was as true of relationships as personal as marriage to those as potentially impersonal as academic classrooms and professional career encounters and both needed to know how to engage in direct, forthright conversations leading to possible controversy and confrontation. In other words, the levels of communication must move beyond pleasantries, tweeting, emailing, or phoning to set up the structure and get to the facts, data, ideas, opinions, beliefs, values, even possibly feelings, depending on the relational encounter.

Given her academic background (e.g. Master’s degree thesis), I was surprised to not hear more initiative, emphasis, and application of substantive interpersonal communication. While talking once about building those structures to allow for more substantive conversation, however, she easily and transparently responded, “I think I do need to allow them more freedom to work it out themselves because a lot of times... where there were some rough spots I was the person who came to the rescue.”

**Develop structure.** Students must email, tweet, phone or somehow communicate to determine the logistics for the project. Then, students “develop” structures, define roles and tasks, and in the online course begin to “create” their Wiki project. Professor Gina’s concern was “How do you build this ideal project?” A few sentences later, she raised the bar, “And you have to really build the perfect assignment in order to meet all those criteria.” In this context of seeking flawless thinking and planning, I asked what the “hardest” or “most dreaded” aspect is as a classroom practitioner. I heard structuring wrapped in what I perceived a high level of honesty and transparency:
I think the most difficult is the setting up of the expectations. How do I want them to get there? What’s the structure I can provide for them? How do I communicate to them where I want them to go with this? So, the whole building of the assignment can be the roughest road for me, at least.

Professor Gina revealed a leading indicator of the rough road, “When students on the ‘first day’ are letting you know, ‘I don’t understand this.’” Then, “somewhere along those phases of the building, you didn’t clarify your expectations, the structure wasn’t clear. The format wasn’t exactly what you were after. So, from the beginning that really needs to be as clear as possible.” She tells of receiving “36 different flow charts and 36 different timelines.” Laughing out loud she said:

I thought with my instructions there would be more consistency in the outcome and there wasn’t. It goes back to clarifying your expectations. Yeah. It goes back to making sure that what you hope the outcome will be is really communicated well.

In this context, she later agreed, “right, right” defining terms was important. Online or in a traditional classroom, I heard whatever you want from the students in their assignments make sure you do yourself.

In summarizing this element, the primary strategies, expectations, structures, and formats, overarching the online and face-to-face learning environments for small group forming and function, emerged with some distinctions. Based on her interview data, the primary course design difference seemed to be a somewhat intentional awareness to exploit or lean into the inherent uniqueness of the two different venues. This addressed the reciprocal influence of proximity and group duration distinguishing small groups in
the two venues. While assessments (e.g. learning styles, personality traits, apprehension levels) are completed and valuable to both environments, Professor Gina explained:

I find that this seems to be more crucial in the online environment. Because in a total distance learning format there’s not much of an opportunity for students to come together to work in the day-in and day-out [encounter] like you would in a traditional [setting]. So, when we do have the one or two projects that we do in a CL, it’s important to have all that information before you’re going in. Whereas, the traditional, there’s so many opportunities to come together, you can mix it up a little bit more, throughout the sixteen weeks.

So, the deviation in group proximity for the two learning venues intentionally resulted in different learning opportunities and outcomes. The distance learning setting logistically necessitated a longer small group project or assignment time length gaining the benefit for the development of more substantive conversation, working through differences and reaching agreement. She described the logistical contrast in the traditional classroom:

At the most, I’ll keep the same group for one week which is two class meetings. So, if they feel like there are difficulties getting through that particular collaborative task then most of them seem to be handling it in such a way that they hold on for those two days to make it through.

In the traditional setting, the emphasis is on making sure everyone developed exposure to more diversity in individuals and “making it through,” bypassing the more in depth collaborative aspects. In the online the form provided for learning to “work it out,” the students work through the points of disagreement more thoroughly in contrast to just “making it through.” An added value for online is the ability to build in an asynchronous
format and tweak things as a collaborative small group. Her honest reflection that she as the instructor needed to give online students “more freedom to work it out themselves” reflected a necessary first step for developing and achieving more interpersonal communication depth among students.

In summary, Professor Gina’s strong adherence to clear expectations and structures provided distinct assets to both learning environments, virtual and traditional. The more formidable, less forgiving demands of the online environment provided the more development of communications skills (e.g. justifying, challenging) and the asynchronous format allowed for students to “contribute when it was okay for them.” Whereas the face-to-face setting provided a broader experience in student diversity (e.g. ethnicity, age, ability, personality), the flexibility, and more full engagement from direct, regular, social learning encounters yet less substantive communication skill building.

**Evaluate process and/or product.** Professor Gina’s evaluation protocols materialized in relationship to small and large group CL assessment in the online setting and face-to-face classroom. She used various forms (e.g. reflection papers, peer reviews, muddiest point) in both venues. In her voice, the following are highlighted: (a) the online classes and the “three steps,” (b) the face-to-face classes with small and large group components, and (c) individual learning and personal assessment.

Professor Gina described her three-step assessment process using the Wiki project to illustrate. She pictured the overall process from the student’s perspective when she said, “‘This is what I’m planning on owning.’ And then, ‘This is what I actually own.’ And then, ‘Here’s what actually came out in the total outcome of it all.’” She prefaced her remarks by explaining that Google Docs allowed for asynchronous engagement and
she “could watch as they contribute and build” throughout the five to six-week project using what she viewed as CL.

Step one was taking ownership. She described the “ownership,” as having “to do with taking on a task in the beginning.” This referenced the third criteria of the study’s purposeful criterion sampling.

Step two was a mid-way assessment. The students submitted “an assessment” to Professor Gina “about how the work in progress has been taking place.” With a clear emphasis on process, she described the progression:

Before the actual Wiki is complete, they submit their individual work. So, I can see what their contributions as an individual has been, beyond the completed document. And then, I can have both individual assessment, as well as group assessment. I can see how they’ve worked together. We follow it up with the posting. We publish their Wiki. . . .All four groups get to see the different Wikis. We talk about the outcomes and how they felt through the process.

Professor Gina’s evaluation protocol for this online class project included a component for assessment of individual as well as group work, “I think it’s important that they have individual ownership as well as ownership in the group. But monitoring that throughout is important, too, and that’s why we do the assessment at the half-way.”

Step three was the group postings. Professor Gina had these comments:

Some talk about their own self-process, apprehensions, and understanding, related to their anxieties. Others talk about the whole group learning process. I think by keeping it somewhat vague I get a variety of answers. Maybe it’s good because it speaks to those students who have very high levels of anxiety. For them this is
such an enlightening process to see that it’s okay. There are a lot out there like
them. For others, their anxiety is with, “I’ve got to work with other people.”

Peer evaluations were an integral part of the three required presentations in her
face-to-face classes. She characterized student evaluations as being “different than me as
the instructor, watching and saying, ‘These are the areas I think you need to work on.’”
She described “this learning through other students’ input” as becoming “a whole
collaborative class learning experience but yet there’s structure so they can’t just go
anyplace ‘out there’ and start giving feedback ‘off the cuff.’ There’s still form to it.”

The import of individual learning was evidenced in the reflection papers, “times
when more formative learning needs to take place. Sitting down and thinking of it by
yourself.” She conceded, “It is a little more difficult to do in the face-to-face classes to
get them to sit down and have that quiet reflection time.” She worked at getting this done
“especially at the end of class, in the form of a classroom type or individual assessment.”
She continued, “You do try to build types of opportunities for them to take the material
and then assess it, think about it, and synthesize it, in a manner that shows they
understand the material.” In her traditional classes, “the muddiest point, one-minute
papers etcetera, are usually individual opportunities.”

**Summary.** Equally invested in the online and traditional classroom for the use of
CL, Professor Gina believed both venues shared CL principles and strategies depicted by
a repetitious inclusion of “steps, “phases,” “structures,” and “clear expectations.” Hence,
organizational thinker typified her approach to CL.

Amidst building CL structures, students teaching students was distinguished by,
“serving the needs of each other without too much clashing of styles.” She connected
“the process of working together,” “the group process,” which she evaluated, to going into “a diverse world and making it happen again.” On how important working together would be beyond the classroom, her words were, “extremely vital” and “you’ve got to collaborate with others.” She added her role, “If we can find ways to learn this material in a collaborative nature, then hopefully, that will make students much more successful.” On the professional implications, “I know of no career where you get to sit in a box.” Her perspective in the personal realm was set apart when she said, “Anyone who’s ever been married will know that. It is the ultimate of collaboration, working together!”

Professor Gina viewed the terms, CL and CpL, as interchangeable with the “differential” being “a very fine line, if any.” Her inclusive understanding was expressed as “a diverse group of individuals coming together through shared tasks.” These “shared” actions were further explained as “some type of learning or knowledge exchange,” “people contributing to each other’s insights,” and “shared community.” The “collective type of outcome” would demonstrate that small group “work took them to a new level. . . .of understanding.” Diversity was an “afforded” component, not necessary, and not preferred, as noted in her words “without too much clashing of styles.” This is noteworthy in view of her graduate thesis titled, “Mediation Tactics and the Influence of Argumentativeness and Verbal Aggressiveness.” On the role of theory to her practice, she was not able to recall or articulate a response. See Appendix D for more comment.

Institutionally, she spoke of a campus-wide student focus, faculty “freedoms,” and faculty development. On the whole campus having a student focus, she spoke of her intended learning objective, peer teaching with her role less prominent. She, also, backed up to credit the field site’s role. “You [the instructor] were the petri dish for it. So, uhh,
errr, the institution was the petri dish and you were the one who gave it food. So, in that sense, that’s what we’re all after.” Faculty freedoms began with a dean who does not “ restrict me in any way” (e.g. discretion on textbook usage). She also noted being “afforded some of the nicer classroom that do have the most technology (e.g. WebCT, BlackBoard).” She clarified “It [speech] is a performance type course. . . .We are afforded the rooms that allow us to utilize the technology that will help enhance the development of those skills in communication.” She specified, “I am talking about being able to video tape someone’s speech and then turn it around for a group assessment.” She would like less institutional rigidity in room arrangement, “more collaborative friendly,” and “more bandwidth.” On faculty development, “This institution does a fairly strong job in the professional development.” She gave examples from adjunct faculty training, web-based teaching, and interdisciplinary collaboration.

On CL classroom usage, Professor Gina’s primary colleague influence occurred within her department. Completing the 20-hour certification for online instructional training, she singled out the collaborative aspects of faculty training for online instruction as “lending itself to CL with other faculty because. . .you engage in different projects together,” finding out what “they’re doing in their classes.” She also elaborated on the interdisciplinary faculty development program that allowed for collaboration between instructors and revealed the impact of CL on other instructors’ disciplines.

She viewed “the very nature of what we’re teaching [speech]” as “collaborative,” frequently referencing the relationship of the “speaker with the audience.” From her interdisciplinary faculty engagement, she spoke of disciplines with less activity, “maybe it’s a lab more than an activity,” as possibly finding CL more difficult to employ.
Contrasting with the literature, this made more sense when she explained she heard from the sciences CL experiences are “more challenging” when “the lab has the ownership of just the one person.” The literature reported that CL was more prevalent in lab research (Bruffee, 2003) and also ownership issues and the distinguishing component of power lines or authority (Bruffee, 1999; Romer & Whipple, 1991).

Professor Gina’s constructive framework was: (a) build community, (b) foster communication, (c) develop structure, and (d) evaluate process and product. Her primary challenge or “fear” was centered in “not having the right parameters, not having the right structure, not being ready to with enough insight to really put it to good use.” Her worst case scenario was a “blow up in your face” experience which “boils down to little specifics.” Specifics included size, mix of group, and lack of “grounding material.”

With “working together” being an “extremely vital” transfer skill, the word “together” occurred 42 times in association with learn, work, bring, put, and pull. She strongly emphasized the instructor modeling communication, “From the very first discussion you need to make sure every student who posts gets a response.” In view of her background in “argumentativeness,” she acknowledged needing “to allow them more freedom to work it out for themselves” and not “come to the rescue.” The longer time length of her online CL assignments provided for more substantive conversation. The traditional setting with more combinations of shorter duration offered broader experiences in diversity (e.g. age, ethnicity, ability) and direct social encounters. Her three-step assessment of the Wiki project balanced individual and group responsibility. The asynchronous nature provided for individual reflection paper assignments. In her face-to-face classes, this was met in “one-minute” or “muddiest point” papers.
Description of snapshot. Invested in both the traditional classroom and virtual setting, Professor Gina emphasized the role of structures and expectations for building community and fostering communication. She strongly emphasized her personal involvement in modeling active direct communication. The Wiki project in her online courses provided the length of time to develop substantive conversation. Her three-step online process was a robust tool for integrating individual and group assessment.

Characteristics of CL Practice:
(a) Build Community, (b) Foster Communication, (c) Develop Structure, and (d) Evaluation Protocols

a. FP models community, Serve each others' needs, Mix of ideas, No student an island,
b. Online CL task – More time for arguing to learn, FP – Seeks to be less an intermediary, Let students work it out more
c. Clear structures – Critical, The hard part,
d. Peer review, Three-step online process

Figure 8. Professor Gina – A Snapshot of Classroom Practices
Conclusion

Piantanida and Garman (1999) reminded me invite the reader to, “Come and see.” Miles and Huberman (1994) warned, “Words are fatter than numbers,” with “multiple meanings,” and “meaningless unless you look backward and forward to other words” (p. 56). Patton (2002) contrasted how a qualitative report in which “the teachers words had face validity and credibility” changed a school board meeting from an “attack on the measures” in a quantitative study to “What do you think we should do” (p. 20)?

Located on multiple campuses, I sought to usher the reader into the field site office of each faculty participant to hear the heart and mind of the classroom practitioner, as I was privileged to do. I began by including relevant demographic information in a comparative form of all four FPs. Introducing the reader to each FP through my first meeting, I, then, wanted to present who they were as educators in their own voice by preserving their professional thought and a taste or glimpse of their personality, vernacular, even syntax. Now knowing better than I did what a “dynamic iterative process” (Rubin & Rubin, 2005) must occur between the researcher and the interviewee, I tried to maintain a cursory awareness of how that relationship occurred to hopefully extend the reader’s interpretation and possibly expose the researcher’s bias for the reader’s assessment. Besides the researcher’s open letter, the emerging patterns coalesced into five themes supported by sufficient documentation.

In Chapter Five, I present: (a) the cross-case analysis, (b) the responses to the exploratory questions, (c) the major findings, (d) models for the study, (e) implications of the study, (f) recommendations for future research, and (g) recommendations for future researchers, (h) lessons learned, and (g) concluding thoughts.
Chapter Five

Analysis, Conclusions, and Recommendations,

Introduction

This study described and explained the perspectives on CL of purposefully
selected community college faculty representing multiple disciplines. The exploratory
questions guiding the study were:

1. What elements constituted selected community college faculty perspectives
   about CL in the college classroom?

2. What variables influenced these elements?

Since the 1980s, Bruffee (1999) and others experienced and reported a growing
interest in CL at the college level as outlined in Chapter Two. A more recent voice has
been workforce demands for the residual and enduring skills (e.g. work in diverse teams,
negotiate, manage conflict) reported in research findings such as, Are They Ready to
Work? Employers’ Perspectives on the Basic Knowledge and Applied Skills of New
Entrants to the 21st Century U.S. Workforce (The Conference Board, Inc., Partnership for
21st Century Skills, The Corporate Voices for Working Families, & Society for Human
Resource Management, 2006). The conundrum was what is not yet known or accepted
about CL when the academic interest and work force demand is rising yet the reported
college classroom application, real or perceived, has not increased (Cabrera et al., 2002;
Gamson, 1994; Kezar, 2006). The literature reported a dearth of research on a
nonfoundational socio-constructivist concept of CL that fosters the called for workforce skills. Such minimal research has been dependent on extensive quantitative CpL research primarily engaging a foundational approach to knowledge (i.e. basic, indisputable facts) and focused on student achievement. This dependence has skewed a nonfoundational (i.e. arguable, ambiguous) understanding of CL, its unique attributes and limitations, if any. Furthermore, what can be learned from a qualitative investigation of faculty perspectives has not afforded. Therefore, Chapter Five describes this study’s primary contribution to a deepened understanding of a specified concept of CL, an explanation for the reported “sparse” classroom usage. From the perspectives of four female community college instructors, additions to the existing literature also include best practices, recommendations for future research, and suggestions for preparing future researchers.

This chapter proceeds by defining three terms central to a discussion of the emerging themes from the exploratory questions. Subsequently, I address: (a) responses to the exploratory questions, (b) models of the study, (c) major findings, (d) implications of the study, (e) recommendations for future research (f) suggestions for preparation of future researchers, (g) lessons learned by the researcher, and (h) my concluding thoughts.

**Definition of Terms**

For the ensuing dialogue with the reader about the findings, I will clarify three key words imbedded in the exploratory questions: (a) perspectives, (b) elements, and (c) variables. The elements constituted their perspectives and the variables were what influenced these elements. Within the responses to these questions, the CL perspectives emanated from the selected FPs and I will define the terms for the five perspectives.
Perspective was defined in Merriam-Webster’s Collegiate Dictionary (1999) as “the interrelation in which a subject or its parts are mentally viewed” or a “point of view” (p. 868). For this study a perspective was a viewpoint common to all the FPs on how the participants interpreted, experienced, utilized, or practiced CL. Elements were attributes, qualities, or distinct features of the perspective or viewpoint common to all the FPs. For example, in the “Professional Perspective” all the FPs reported: (a) a commitment to students teaching students, (b) values learning process, and (c) awareness of CL skill transfer beyond the classroom. I defined variables as the nuances and shadings differentiating each FP’s experience of the elements within the perspective. In Responses to the Exploratory Questions, the differences and similarities are discussed.

For the reader to better understand the intent of the perspectives in capturing the major themes and patterns emerging, further description is warranted. According to Merriam-Webster’s Collegiate Dictionary (1999), professional was defined as “a line of conduct” (p. 930). The professional perspective, therefore, represented a line or pattern of thinking and conduct that materialized from the FPs’ lived experiences as classroom practitioners, relevant to the study’s problem statement. In addition, semantics means “the study of meanings” (p. 1062). Given the profound term confusion reported and emerging in the study, the semantics perspective encompassed the expressed or articulated meaning(s) of CL in agreement with or in contrast to the FPs’ practices of the specified concept of CL. The definition for theory “relating to or having the character of a belief, policy, or procedure proposed or followed as the basis of action” (p. 1223) fit well the intent of capturing the role of theory to practice. For the fourth perspective, institutional influences on CL classroom usage was limited to the emerging impacts of
the field site institution as a whole, the FPs’ colleagues, and their disciplines. This institutional context was expanded with one FP because of her professional experiences. Environment was defined as “circumstances, objects, or conditions” or “the aggregate of social and cultural conditions that influence the life of an individual or community” (p. 388) and context as “the interrelated conditions in which something exists or occurs” (p. 250). Lastly, the environmental perspective was the aggregate for the emerging and interrelated elements of the specified concept of CL practices or conditions.

**Responses to the Exploratory Questions**

In response to the exploratory questions, the interview data revealed five perspectives common to the four case studies: (a) a Professional Perspective, (b) a Semantics Perspective, (c) a Theoretical Perspective, (d) an Institutional Perspective, and (e) an Environmental Perspective. In the ensuing cross-case analysis, I will discuss each perspective with the respective elements and variables influencing the stated element. All elements and variables resulted from expressed or documented statements.

**Professional perspective.** This perspective captured an outlook or mindset evidenced from the use of CL. As educators, a professional line of thinking and conduct, surfaced in the FPs and coalesced with relevance to a specified instructional criteria (i.e. distributed authority) and an element of the problem statement (i.e. CL skill transfer). The elements comprising this perspective were: (a) commitment to students teaching students, (b) values learning process, and (c) awareness of skill transfer need.

Commitment to “students teaching students” or peer teaching was described as, “the dynamic of what happens when people work together,” “letting the groups reach these consensus ideas within each others’ thoughts,” “feels like walking into a family,”
and “students serve the needs of each other.” The variables expressed were: (a) untapped learning potential in diversity, (b) student ownership, (c) course structure and assessment, and (d) student resistance to CL mitigated. Professor Anne described an unconventional “mix” of academic ability, cognitive skills, and learning styles as a “light bulb” moment for her in “what happens” when students teach students. Professor Carol also spoke of the transformative nature of students “picking each others’ brains,” “taking ownership of something they never thought was in their realm,” “reaching consensus ideas,” and “shared power” with the instructor. Professor Danielle referenced group rules and roles to “make sure they teach each other” and group grading designed so “they have to help each other.” Professor Gina explained a concept “up and down twenty different ways I could think of” yet registered sheer delight when a student peer explained the idea and the inquiring student followed with, “I really got it.” Capturing my attention was the strong presence of distributed authority and the variances in the motivation, focus or strategy. For Professor Anne it was diverse combinations, for Professor Carol distributing power, for Professor Danielle the role of structure and assessment, and for Professor Gina how it changed student attitudes toward CL and/or working together.

For the element, value of the learning process, the variables of the element were: (a) teach how to think over what to learn, (b) balance linear plan with unexpected dynamics, and (c) let go of covering the curriculum. Professors Anne, Carol, and Danielle all specified the life skill of the learning process (e.g. learning how to learn) as taking precedent over their curriculum. Professor Anne said, “My ideal way of teaching is to use the subject I love to teach people to think, not to teach my subject.” Professor Carol explained, “It wasn’t creating the test question that was my most important
objective. It was the process of learning these skills and teaching them to one another.” Professor Danielle said, “It’s bigger than math.” Professor Gina did not explicitly articulate process over subject matter but she did express CL as an inherent natural part of speech and wanting to know “how they felt through the process.” All four FPs identified “clear structures,” “linear essentials,” or “group rules and roles,” as allowing for “unpredictability, the unprogrammed part,” what “happens,” or “look at what they’ve worked on together and can’t believe they made it happen.” Professors Anne and Carol spoke of “letting go” of content. Professor Carol admitted the process was slow. All linked skill transfer to peer teaching and evidenced all the variables but emphasis varied.

Overall a high level of transfer skill awareness existed among the FPs. Three offered deeply felt responses and two expressed expanded transfer beyond careers. Professor Anne, the most moderate, reenacted this scenario with students. “Hey, ya gotta learn how to work with other people. Ya wanna job?” Professor Carol conceded “some,” implying faculty, do not think CL is appropriate for the classroom yet her personal view was “students will be required to do [CL skills] in their careers.” Professor Danielle expanded application of the element by expressing “pride” in students who transferred CL skills from her classes to other learning venues (e.g. other courses, peer tutoring, teaching careers). An example of her frequent holistic-type comments in relationship to CL was, “[Students] don’t separate math [from life] as when they started.” Professor Gina described the CL skill transfer the most intensely, “extremely vital,” and added “I know of no career where you get to sit in a box.” She also expanded the transfer dimension “of those skills from this CL” to “another type of field or area that you might study” and to marriage, “the ultimate of collaboration in working together!”
In summary, an alignment or interdependence was apparent in these elements. The first evidences the instructional criteria of the specified concept of CL - shared responsibility or distributed authority between the instructor and the student. The last, intensely expressed, speaks to research in the workplace and academic reasoning like, “college graduates work splendidly at computers, in a library carrel, at a lab bench. What they cannot do is interact with other human beings on substantive issues. Typically a college. . .education does not help them learn to do that” (Bruffee, 1999, p. xii). Kezar (2006) and others also speak to this. The value of process, naturally integral to both, is identified in CL classroom application and expressed by the FPs for CL skill transfer.

**Semantics perspective.** This viewpoint illuminated the four FPs understanding of CL. The elements were: (a) term confusion and interchange, (b) how CL was articulated, and (c) helpfulness of participation in study.

For the element, term confusion or interchange, the data validated the term interchange and confusion between CL and CpL reported in the literature. The FPs were also aware of what was reported in the literature as paralleling their professional experience. The variables were: (a) able to distinguish, (b) not able to distinguish, (c) interchanged terms, and (d) classroom emphasis on clear terms. Professors Anne and Carol clearly distinguished between the terms. Professors Danielle and Gina expressed not seeing a difference in the terms, “mean the same thing to a lot of people and I think it [CL and CpL] does for me, too,” and “a very fine line, if any,” respectively. They could not articulate a difference. All four FPs interchanged the terms.

In view of this term disparity, the narratives of three FPs spoke strongly to the import of clarity in terms, including the two FPs who saw little difference. For example,
Professor Carol talked about the “language of languages” (e.g. parts of speech) and explained “all of these words represent and identify the language the students use” and the terms “create knowledge, enhance skill, broaden the communication experience.”

Professor Danielle spoke about having to “talk the same language.” She elaborated, “Sometimes you just have to lecture to get vocabulary across. So that everyone is speaking the same language. You can’t really do CpL or CL if the students don’t even understand what you are asking them to do.” Professor Gina, the most outspoken on clear structures recalled what she learned when she did not define her terms and received 36 versions of two assignments. However, a lack of awareness to transfer definitional clarity from classroom student engagement to other professional endeavors was evident.

The next element was how CL was articulated. The variables were: (a) clear and fluent in distinguishing CL and (b) not clear and fluent in distinguishing CL. Meanings of CL and commensurate classroom practices included diversity, collective outcomes, creating consensus, nonfoundational knowledge, small and large group sharing, empowerment, learner responsibility, less structure, and more open-ended learning tasks.

For Professor Anne building a single or double tetrahedron chain was “everybody working on a piece” and “bringing it together” as illustrating CpL. In her “stupid rock cycle” card game, students had to do more than “memorize” kinds of rocks and rock cycles. CL small groups built concept maps of the repeated cycles and when the cycles “got stuck” they had to “figure it out,” even “fight it out,” to form “relationships that are true.” She described this “dynamic of working together” as “transformative” changing the “tenor of the whole class.” In probing the role of theory, her understanding of CL poured forth even more along with her learning objectives and practices.
Influenced by her AR project, Professor Carol defined CL and CpL in alignment with the foremost authorities, Bruffee (1999) and Millis & Cottell (1998), respectively. She had never heard of either. Her graphic of concentric circles and her explanation of CL and CpL as on a continuum supported her understanding and practices. In contrast, her term interchange was highly documented in her Vita and AR project. Professor Danielle saw no difference between CL and CpL and expressed the most uncertainty, explaining she did not have a “schema.” Presented in Chapter Four and included under Institutional Perspective, she credited her discipline. Equally engaged in the traditional and online classroom, Professor Gina used CL in both settings, saw only a “very fine line” of difference between CL and CpL, and could not “put a semantic to it.” Her inclusive view was expressed in a singular definition of “shared” knowledge, tasks, community, and “collective” outcomes. Highly invested in structure, she placed emphasis on the “shared strategies” of both settings that “leads to successful outcomes,” even when executed differently.

The element, helpfulness of participation in study, is especially noteworthy given the centrality of dialogue to the research topic. Professors Carol and Danielle each explicitly referenced her separate interview conversation with me about term interchange and meaning as helpful to her respective understanding yet one had clearly distinguished a difference in meaning of the terms and the latter had not. In our conversation on her graphic illustrations of CL and CpL along with reviewing the expanded version of the study’s instructional criteria, Professor Carol interspersed these comments, “And it just came to me now. . . .So, I like my circle idea, more now.” Professor Danielle in her acknowledgment of being “confused,” added, “I think part of this interviewing process is
helping me think it through.” In essence, the cycle illustrated in Figure 12 became the lived experience in real time. In referencing the reciprocal energy of distributed authority, Professor Anne’s interview data evidenced the helpfulness of the dialogue when she said, “I have something more to say with this. ‘Cause it just hit me.” Professor Gina did not make such an explicit reference during the interviews.

In view of the highly defined concept of CL under investigation, the high level of term interchange and variance in an articulated understanding of CL added to the relevant and unanticipated value of this perspective emerging in the analysis. In other words, the four defined instructional criteria of the specified CL concept were identified and the strong practice of the concept collected in a context where the articulated understanding was limited and the term interchange profound. This is discussed under Major Finding.

**Theoretical perspective.** The element was employment of theory to practice.

The variables were: (a) able to articulate employment of theory to practice, (b) unable to articulate employment of theory to practice, and (c) conflicted in employment of theory. Two FPs articulated clearly the role of theory to their practice. For reasons not uncommon in the literature, two FPs did not.

Professor Anne began with a tongue-in-cheek, “What’s my learning theory?” This quickly evolved to “theory drives me,” wanting “students to construct their own knowledge” with a strong socio-constructivist approach seeking peer engagement. Professor Carol spoke of how theory relates to her practice. “I think one is the other” and “could or should affect your objectives.” She offered a common sense and humorous illustration, “I can learn to stop for a red light so I don’t get a ticket without a group” 😊 (personal communication, May 4, 2010). She also wrote in her email, “We think about
collaboration as a theory then it would affect how we plan to reach objectives in the classroom. It became for me a theory, a collaboration model.” At minimum and beyond CL and CpL, clarity in use of terms is again a matter for discussion.

Two participants struggled with their response. Professor Danielle stated “those frameworks are important” but did not “drive” her practice of CL. Knowledgeable of learning theory and theorists, she seemed conflicted and candidly replied it depended on where she was in her thinking whether she “wants to disprove what I’m hearing or prove what I’m hearing.” She added, “My lived experience is my lived experience. . . .It’s nice to have those frameworks for learning but that’s not exactly what happens.”

In contrast, Professor Gina was not able to recall or articulate the theories that supported her classroom practices. This could be attributed to my poor inquiry approach failing to capture them (see Appendix D). Cognizant or not, what is clear is that she employed cognitive, constructivist, and socio-constructivist learning theories which her articulated classroom practices document. She also evidenced the same theoretical employment in her remarks about facilitating peer instruction for online teaching using CL applications, as presented in Chapter Four and discussed further, later in this chapter.

In summary, the range of employment of theory to practice was wide. All the FPs’ interview data and instructional artifacts documented the use of cognitive, constructivist, and socio-constructivist theories as well as other theories. In addition, the four practical values of learning theory outlined in Chapter Two under Role of Theory emerged in part or whole at some level. Cognizant or not, the FPs each used these values to make sense of the pieces of her experience, improve student learning, choose better instructional tasks, and/or determine what would work, where, and how, respectively.
**Institutional perspective.** This outlook focused on three institutional impacts on classroom usage of CL. These elements that constituted the institutional perspective were: (a) the field site, (b) the FPs’ colleagues, and (c) the FPs’ discipline.

The variables for the element, the field site, as an influence on CL classroom usage were: (a) learning-centered identity, (b) support of CL initiatives and (c) nonsupport of CL initiatives. In interview data, institutional documents (Blankenship et al., 1997, Kelley & Kaufman, 2007), and faculty competencies for tenure (see Appendix K), the field site was identified as a learning-centered institution. The extensive faculty development training and tenure process was valued and the link to CL was expressed. This included support to try new ideas and share with colleagues.

In view of the CL literature advocating faculty and administration working together (Kezar, 2006) for improved CL practices and the field site documents cited above, Professor Anne’s comments on faculty and administration interaction included, “Oh, yeah, absolutely, most of the time.” She cited a “performance indicator” under “Professional Commitment,” (see Appendix K) to “collaborate with colleagues and dean/director. . .across courses and programs.” Defining ethic “a value we hold for our faculty,” Professor Anne believed her “institution’s ethic is very supportive of CL” with “permission to try things out.” Supported and expected but not “over emphasized,” she appreciated this approach because as a scientist she likes to discover for herself and “hopefully” her colleagues will discover the “transformative” potential of CL.

Professors Carol and Danielle explicitly linked CL to the field site as a learning-centered college. Amongst the “lots of different classes offered on a whole range,” Professor Carol included “CL models” and continued, “Ours is a learning-centered
college and those two go hand-in-hand.” She explained learning-centered as when “the learning and the student learner is the focus.” Professor Danielle spoke of the field site, “The college I happen to work for is a League of Innovation College. We’re a Vanguard School and we’re very well known for our ability to help our students get through college and make it to graduation.” Vanguard School and the League of Innovation is further identified in Chapter Three under Context of the Inquiry.

Responding to a playful comment on being the “star,” Professor Gina defended facilitating peer teaching and this comment on the institution’s role surfaced, “You [instructor] were the petri dish for it. So, uhh, errr the institution was the petri dish and you were the one who gave it food. So, that’s what we’re all after.” In contrast, Professor Gina did express frustration with institutional limitations on room arrangement and furniture to better accommodate collaborative engagement and the lack of funding for more “bandwidth” to do more with CL in the online environment. In total, a learning-centered institution “working together” and supporting CL was evident in all FPs.

With regard to colleagues, Emerson et al. (1994) wrote, “We have found the most significant factor in the evolution of a traditional lecture-oriented instructor to a facilitator of classroom collaboration is supportive mentoring from a colleague or community of supportive faculty” (p. 91). For the element, FPs’ colleagues, variables were: (a) supportive of CL and (b) unsupportive of CL. A wide mix of responses emerged.

As a new instructor, Professor Anne expressed the influential support of a colleague to “try CL again”. She also contributed four names for participation in this study and two became FPs. She was actively engaged in her institution in multiple ways. Professor Anne spoke of “pockets of people” who “get what it [CL] can mean” in
changing “the tenor of your whole class.” She believed “many more” employ “the list of good practices” with an occasional jigsaw activity “to break up the monotony.” Probing further, fear and a lack of belief in CL initially slowed her usage. Both intuitive and “scientific” (i.e. methodical), she is often conflicted in advocating CL with her colleagues because she cannot consistently provide reliable explanations for her CL practices.

Professor Carol admitted minimal knowledge of what her colleagues did in the classroom due to limited time. She would welcome more sharing. However, with “pretty limited” experience she was reluctant to “go around looking at what other people are doing with just the purpose of seeing, ‘Are they using it or not?’ ‘Is it working or not?’”

Professor Danielle, the most forthcoming on impactful disappointments, talked about a dean, faculty colleagues, and experiences early in her teaching career. She told of an administrator who came by when she was implementing CL and said, “I’ll come back when you are teaching.” In conversation with colleagues, she added, “It’s so true! It’s just a true statement!” She felt those who “assess our professors might not recognize instruction when it’s right in front of their face!” Her negative experiences as a high school teacher still fostered sadness. As a high school math teacher she was denied tenure because she employed CL. Early in her career she was sent to a summer institute on using CL in mathematics to return and train her colleagues. Several retorted, “Oh, we don’t have time for that crap!” Later, she turned a math classroom into a “coordinate system” with different sections being a “quadrant” (e.g. Quadrant 1, Quadrant 2). When colleagues derogatorily inquired, she rejoined, “It’s active! It’s open! It’s collaborative!” How does she respond to such inquiries today? “Now, I’m ready for it!” More can be read in her Chapter Four case description under Institutional Effects on Usage.
Professor Gina appreciated the dialogue with peers in trying new ideas, especially when CL “blows up in your face.” She spoke of “multiple programs” (e.g. web-based, interdisciplinary) for all levels of faculty (e.g. adjunct faculty) including learning through social interaction. She had facilitated training for faculty in online instruction including CL. She also explained an interdisciplinary program that integrated collaboration and all participants became more informed on the challenges of CL practices in other disciplines. For example, she reported hearing from science fields that CL in lab settings can be “more challenging” when “they [students] have a lab to do and the lab has ownership of just the one person [one student]. This illustration exposed a wide range of interpersonal encounters and psychological considerations discussed later.

Each FP viewed her discipline’s distinctiveness a good fit for the practice of CL. Professor Anne delighted in the kinesthetic and spatial nature of earth science that was inherently active and allowed for a diversity of talent to be exposed, valued, and used through CL. Her regret was that “the education system” did not support such diversity. Professors Anne, Carol, and Danielle were explicit in viewing learning how to learn of higher value than learning their discipline. This was evidenced in a more holistic approach to classroom practices including process over product. Professors Carol and Danielle saw their disciplines as practical subject matter, fundamental to living, needful of and accommodating CL. Professor Gina was the most explicit about speech “naturally lending itself” to collaborative interaction between speaker and audience along with encouraging the practice of interdependence in the classroom for transfer in life.

Professor Anne warned her students with the rock cycle game they had to “form true relationships” and that answers and outcomes can be “wrong” or “right.” Professor
Carol talked about CpL learning being more conducive for using when there are “right” and “wrong” answers and CL more aligned with “coconstructing knowledge.” Professor Danielle clearly articulated, “a polynomial is a polynomial.” In contrast with some of the literature, and therefore, eliciting my attention - foundational knowledge, the basics, and/or minimal disputable information did not restrict the use of this nonfoundational socio-constructivist concept of CL. This is discussed further later in this chapter.

Environmental perspective – Gottschall (2006) reported research on when and when not to use CL as limited. The FPs “when to” responses included “it advances what I want to have happen” and “benefits the students and their learning which would indicate it should be used all the time.” This was followed by wondering why she “wouldn’t do it more.” The FPs anticipated “when not to” responses or when it is harder to use mirrored the literature and included when there is limited time, poor attendance, irresponsible students, physically impaired students, difficult concepts, and when content must take priority. Professor Danielle spoke of “group explosions” and candidly stated, “If they [students] don’t want it, it’s not going to work.” In probing that statement, “it” referenced several possibilities among them CL. Professor Gina added “when it blows up in your face.”

Among the negative experiences, student dislike and distrust for group work was verbally acknowledged and accepted by the FPs. The overriding consideration or focus seemed to be structuring CL so these negatives could be reduced, eliminated, or used, even flipped, to experience the benefits of CL. The elements were fear and skill challenges.
The variables for the element of fear were psychological and instructional. Professor Anne recalled her early CL experiences, “I didn’t know I was afraid. . . .I didn’t know how much fear was an issue until I confronted it.” She also conceded she “didn’t believe in it [CL].” Professor Carol related the “old standby,” a student did not “follow through which sinks the whole group.” She spoke of the “bad feeling” and “loss of control.” Professor Danielle spoke about fear and said, “You can’t be afraid to change your mind.” Professor Gina’s fear was instructional, “not having the right parameters. . . .not being ready with enough insight to really put it to good use.”

The variables for the element of skill challenges were student-related and profession-related. Professor Anne’s was student-related, not “having any repertoire in which to deal with that [“unenthused” students, disinterest in CL] because I hadn’t started to develop any.” Professor Carol’s was what to do when “my well laid plan” goes “astray.” Professor Danielle revealed, “A problem for me is coming up with enough things that everybody is going to be engaged all the time. It’s a lot of prep work. Everything. Sometimes I have to just ‘can it’ because it’s bad!” Professor Gina’s was not being sure if the structures were right and how to get the most out of CL.

In summary, what I found informative is not the litany of bad experiences but the level of transparency and the decisions to make changes in themselves because of them. CL was often acknowledged as challenging but never dismissed. The literature frequently mentions self-assessment and reflection (Bruffee, 1999; Kelley & Kaufman, 2007; Kezar, 2006; Kolb & Kolb, 2005; Merriam & Caffarella, 1999) Professor Anne chose to confront her fear. Professor Carol chose to become more flexible, view problems as inevitable challenges, and with her students “pick it up,” “restructure,” and
“work around the gaps.” Professor Danielle admitted, “I try and fail and realize I need to make some changes.” From the interview questions on when and when not to use CL coupled with their “best” and “worst” experiences, the lessons learned from bad experiences shaped the four emerging elements in the FPs positive practices.

When thinking of positive practices, three dynamics - a learning-centered institution, extensive faculty development opportunities, and the faculty competencies (see Appendix K), the core guideline for the tenure process underpin the FPs practices. One overriding message was conveyed by all the FPs -- the student is at the center of what we say and do. Resting on this framework, four elements expressed as integral to their CL practices were: (a) build community, (b) foster communication, (c) develop structure, and (d) evaluate nontraditional processes and products.

This element proved to be foundational to CL. The variables for the element of build community were: (a) the facilitator’s role, (b) provide safety, (c) trust diverse abilities, and (d) empowerment. Nuances in reasoning, focus, or motivation shaped the intensity of the variables in each practitioner. These included helping students realize what each had to give the other, overcoming past negative learning experiences, and the discipline’s inherent uniqueness.

For Professor Anne, creating safety took on a progression from learning each others’ names to a broader transparency allowing for more fairness and accountability in student and instructor relationships until greater openness had them coconstructing knowledge. Focused on empowerment, Professor Carol’s facilitator technique for building community was telling them early on “they were selected as an expert in one area” without telling them what, to mitigate negativity from diagnostic labeling. In
building community, Professor Danielle’s holistic approach to learning peered through and she raised the bar on the instructor’s role linked to the critical first day. Professors Danielle and Gina placed a critical emphasis on the instructor’s role, especially in establishing the learning environment. Based on her data, Professor Danielle reported a student who misses the first day has a “one in a hundred” chance of passing the course. Frequently referencing the “we process,” Professor Gina saw her discipline as naturally lending itself to building community. Her examples included the speaker and audience relationship, “it’s not just an individual process, it’s a group process” and students critiquing each other. She used the word “together” 42 times.

The element, foster communication, illuminated a discussion in the literature on the lack of research on substantive conversation (e.g. justify, question, challenge). The two variables that emerged indicative of the second and third instructional criteria for the purposeful sampling, respectively, are: (a) arguing to learn and (b) group decision-making. All four FPs decidedly chose advisor, consultant, or guide on the side roles to facilitate small group discourse. Intentionally or inadvertently to varying extents, all used small group: (a) CL tasks, (b) accountability protocols (e.g. rubrics) to dispel student fear of small group work, and (c) peer evaluation and/or group grading to develop communication and these variables, particularly, argumentation and consensus building.

The role of language or communication emerged in three progressive patterns. Professors Anne and Gina spoke of a progression in communication and shared responsibility for learning. Professor Carol talked about “four languages” and Professor Danielle accentuated “talking the same language” which encompassed three components.
Professor Anne viewed communication as progressing from small talk to “really interacting” - disagreement, and working it out for the potential outcome of “constructing knowledge together.” This included a healthy skepticism that encouraged acting on warnings, “little sirens that go off.” She also described “insulated groups” becoming part of a larger group of consensus building. For Professor Gina, with a strong online engagement, this progression was characterized by employing technology (e.g. emailing, tweeting, or phoning) to build structures (e.g. logistics, boundaries) early on and better support those “red flag” moments and achieve a learning outcome where “students don’t let students down.” Professors Anne and Gina emphasized no student favoritism and authentic connection. Professor Anne chastised students who did not know each other’s name. For Professor Gina, “Every student who posts . . . gets a response from you [the instructor].” If the instructor does not respond consistently, Professor Gina held the “we process” is adversely affected. She transferred her strategies for CL from one setting to the other (e.g. traditional, virtual). More importantly, Professor Gina’s web-based CL projects afforded more time for substantive conversation to develop. With a background in “argumentativeness and verbal aggressiveness,” she conceded however, “I do need to allow them more freedom to work it out themselves.”

Professor Carol’s “four languages,” reading listening, speaking, and writing, closely correlated with Bruffee’s (1999) thinking, speaking, and writing cycle and Kolb and Kolb’s emphasis (2005) on “conversational learning.” Professor Carol raised the bar on communication or social interaction with reciprocal peer reviewing. The essay writers’ evaluated his or her two peer reviewers and the peer reviewers had to “agree” on their evaluation, eliciting consensus building.
Outlined by Professor Danielle as “talk the same language,” all four grounded this fostering of communication at some level in: (a) an academic language (e.g. content vocabulary), (b) ethical terms (e.g. politeness, honesty), and (c) psychological considerations (e.g. structuring of social interaction between and with students). All preferred not to lecture yet acknowledged its essential role to primarily convey new terms or content and review difficult concepts. While FPs pressed for more mature levels of academic interaction, an integrated concern was an ethic and etiquette characterized by appropriate classroom conversation, constructive and respectful peer evaluations, and peer-repudiation of dishonesty or irresponsibility in group work.

The psychological surfaced particularly with Professors Carol and Danielle. Along with Professor Carol’s use of the designated “expert,” a psychology surfaced in how she positioned the creation of test questions. “Under the guise of making questions, the grammar skills were learned. It was great to circulate amongst the groups and hear them talking about things.” Her strategy in developmental English to create test questions in small groups “mimicking those taught on the exit exam” leveled the playing field because no one knew how to create questions. Arguing to learn and consensus building also developed. The psychological component to structuring social interaction for academic objectives was evidenced in Professor Danielle’s use of carefully crafted questions to small groups, purposefully located meetings with small groups, and the strategic choice of email or face-to-face encounters to address whole class issues. Most astute was her use of the self-assessment lineup on the first day creating a transparency leading to more open and honest communication. In her view, this not only exposed anxiety about math but augmented the improvement of the academic mathematics skills.
In summary, there was little variation amongst the FPs and a high engagement in communication development. Through elevating the role of small talk to begin the process or progression to substantive interaction, the “four languages,” and “talk the same language,” the FPs employed meaningful practices indicative of the second and third instructional criteria - developing interpersonal skills (e.g. justify, listen, question) and increase student ownership of learning (e.g. coconstruction, consensus building).

The element, develop structure, was grounded in purposeful intent for group formation and group function. The variables included: (a) group forming, (b) group roles and rules, (d) student self-discovery, and (e) learning in diversity. The FPs’ differences were again minimal and driven by student needs to achieve a stated learning objective.

Professor Anne’s overriding desire was to achieve self-directed learners. Her strategy was “mixing” students together (e.g. BARSCH Inventory), “setting them up” (e.g. linear guidelines), and “letting them go” (e.g. incremental removal of scaffolding) to “figure it out” (e.g. listen, question, justify) and address those “misconceptions” (e.g. student researches beliefs for self). Professor Carol sought the same diversity with rapt attention to empowerment through dialogue in her remedial and more advanced courses. Her distinctive was the undesignated expert, not telling students their diagnostic scores or designating what each was an expert in by always obliging students to “figure it out.”

Professor Danielle implemented purposeful and demanding structures on herself. “Everything is down to what the instructor needs to do.” This was exemplified in the students’ “first day” group selection process, determining group roles and rules along with adhering to the responsibility of living by them. Authority to remove a group member required unanimity within the group. If the group’s unanimous decision was to
dismiss a group member, the responsibility was Professor Danielle’s to relocate that student. Group agreement was also required on questions asked her as a group.

Professor Gina emoted the most intensity and forceful expression when talking about the import of clear structures and informed expectations communicated at the outset. She saw this as her responsibility and not impinging on student growth. All viewed and took delight in the primary objective or outcome of structure being students teaching students. Consequently, structuring the class to be the guide on the side was the benchmark of effectiveness. “Punctuated” lectures (e.g. 15-minutes) necessary for sufficient background of new or difficult concepts was the only justification for lecturing.

The element, evaluate process and/or product, used nontraditional evaluation processes or products for individual or group assessment (e.g. journaling, reciprocal peer review, group grading). The variables were: (a) individual assessment, (b) documented accountability in group grading, (c) personal reflection papers, (d) peer review assessments, (e) group project grades, and (f) group tests.

Professor Anne talked about using formative and summative evaluations. She used “concept tests” with clicker technology for responses to multiple choice questions. The results directed the kinds of CL activities to be developed for the key objective, “challenge misconceptions.” She explained personal reflection papers, developed for her online students, would be transferred to her face-to-face classes. On executing a group grade she described her responsibility to “normalize” the concept in her mind, facilitate group responsibility, and use her sequential “step-wise” protocol to assess the group work. Professor Carol’s reciprocal peer assessments incorporated distributed responsibility, substantive conversation, consensus building, and group assessment.
Professor Danielle was innovative in evaluation. Full individual reports were required on group projects. Students were also informed on an unannounced basis that periodically she would choose to grade only one paper or project and the grade would count for all group members. Her intent was for peers to help peers. Group take-home tests worked on a similar principle. She conceded grading tests individually “takes me a whole lot longer.” She incorporated “cheat-shirts,” required for the final exam, and a “five-version take-home test,” explained in Chapter Four under Learning Conditions.

Professor Gina’s six-week online Wiki project provided a meaningful length of time to engage in substantive conversation and integrated outcomes. Her three-step assessment protocol evaluated individual as well as group work. Her objective was students progressing from what they initially took ownership of and planned to do, to this is what I have done or I am doing, and finally this is “outcome of it all.” See Appendix M for why she took delight in helping students overcome their dislike of group work.

In summary, practicing various forms, the four FPs all held individual assessment as essential to evaluation and all used primarily rubrics or some systematic written protocol to create accountability. Substantive conversation fostered by assessment surfaced in the dialogue on evaluation. For example, “You can fight it out with your neighbor. You can argue about it all you want but each group has to present me their answers to these questions. . .by this time [date assignment due].”

The Environmental Perspective illuminated the interdependence of individual and group learning and the interdependence of community and communication on structure and assessment. All the FPs incorporated a balance of individual and group learning experiences and individual and group grading. Indicating one benefits the other, a
healthy tension between individual and group learning and a commitment to both was exhibited by all FPs. Professor Carol summarized this well when she said, “Without the individual work, the collaborative work falls apart.”

Dillenbourg et al. (1996) reported the link of CL to individual learning. The environment is integral not independent of individual learning, not independent of cognition (i.e. “product of individual information processors”), and not simply the circumstances in which cognitive processes can develop collectively or separately. Dillenbourg et al. (1996) further reported that “under certain conditions” student interaction resulted in “superior performances on individual post-test than individual training” (p. 194).

Building community and communication were the two key components (Bruffee, 1999). Developing structure and assessment were the critical support elements. Nontraditional models of evaluation based on protocols for accountability (e.g. rubrics) to achieve learning objectives and dispel dislike for small group learning were used with purpose and direction. For example, Professor Danielle explained the rationale for her group assessment protocols was to “make students help each other.”

Clear and purposeful structure to develop community for more meaningful communication converged with the “unexpected,” “what happens,” “the magic,” or “blossoming” from the student interaction. When this environment had been planned and prepared for vibrant active learning was anticipated, welcomed, embraced and reported to often spontaneously erupt. Figure 9 below illustrates this.
Figure 9. The Linear and Dynamic Convergence

Models of the study

Three models are presented. Figure 10 illustrates the theoretical model that supported the research study from its inception. Figure 11 presents the interplay of the four elements of the classroom practices with the focus on the group interaction. Figure 12 illustrates the key component, increasing substantive communication, in a public context for the greater good, as it emerged in the lived experiences of the FPs. All three models were evident in the data collected.

Socio-constructivism nested in constructivism supports the specified concept of CL in this qualitative study. Svinicki (2004) explains the cognitive value of constructivism and socio-constructivism:

Constructivist classes are characterized by a lot more student activity and interactivity. Instructors pose questions, but it is the students who put forth the effort to come up with their own answers. From a cognitive perspective those
answers will be more meaningful because they draw on the learners’ experiences and world views. . .more likely to be deep processed answers. (p. 35-36)

Svinicki (2004) also contrasted the cognitive and constructivist views, “The most radical difference between a straight cognitive interpretation and a constructivist model revolves around who is doing the work” (p. 35). In the former, “the instructor shoulders most of the burden” for content organization and learning task structure. Constructivist and socio-constructivist models distribute responsibility (e.g. content, activities, assessment) to the students with emphasis on the learners’ effort to identify ideas and make key connections. FPs frequently told of saying to their small groups, “Well, figure it out.”

\[ Figure 10. \text{Theoretical Model of the Study} \]
Dillenbourg et al. (1996) referenced socio-constructivism as “this new approach” and reported “it enhanced the role of inter-actions with others rather than the actions themselves” (p. 3). They further explained this inter-action as a “spiral of causality,” the students interact based on present cognitive ability which leads to more “sophisticated social interaction” (p. 3). This diagram supports Bruffee’s (1984) thinking, speaking, and writing cycle in reacculturation. Reported by all FPs, the arrows show the interplay of cognitive skills in an iterative upward “spiral of causality” to build better communication leading to better community. Professor Anne said, “It’s the reasoning process made public. Something you talk about instead of just going on in your head.” Professor Carol’s “four languages” could expand these cognitive components.

*Figure 11. Cognitive Development in Community*
Doise (1990) and others further describe the enhanced individual learning value, “It is above all through interacting with others, coordinating his/her approaches with those of others, the individual masters new approaches” (p. 46). All the FPs spoke of the four described learning conditions or classroom practices depicting their interdependence with group interaction the central focal point. In Figure 12 the relationship of the emerging common themes or patterns in the FPs’ CL practices to the social or group interaction is illustrated.

*Figure 12. Operational Model of Classroom Practices*
The Major Finding

This study investigated the perceptions and lived experience of four female community college FPs. Interview data and documents or artifacts were collected substantiating all four defined instructional criteria of the specified concept of CL, a nonfoundational socio-constructivist model. The collection and analysis of this data on the phenomenon also identified profound term interchange of CL and CpL and subsequent confusion in meaning, reported in the literature as extensive. A comprehensive participant selection process was not conducted. Compliant with the established standards, the selection process was minimal.

The central finding able to help the college classroom is the strong identified practice of the defined CL concept with the articulated understanding limited and term interchange and confusion profound. Thus, a primary value of this study is identifying the lack of definitional clarity in the terms CL and CpL within academia which may offer one possible explanation for the reported sparse application in the college classroom.

Implications of the Study

Under this heading, I will discuss the more meaningful ramifications generated by this study in an area of research limited in existing literature and prolific with opportunity. As a consequence, not an intention, the issue of gender and online instruction will be included. A myriad of options for future study usually prevail in a realm where research has been minimal. I present suggestions for future research and for future researchers.
Responses to the gaps in the literature. Prominent in the literature on CL and reported in this study were gaps in research, education, and the workforce. On research, this study was defined by a nonfoundational socio-constructivist practice of CL. Data was collected on four criteria indicative of such, separate from CpL, and reported as minimal from four practitioners. Also limited, this study adds qualitative data from a faculty, not student, perspective of the phenomenon. In the realm of instructional strategies, what could be characterized as the single most defining characteristic of this sophisticated concept of CL is the attribute of distributed authority. Manifesting itself in students teaching students, the consistent high level of the FPs’ commitment to and delight in was substantiated and contributes to future discussion and exploration. Additional insights on this concept of CL are included throughout this section. Lastly, more than a high level awareness for the skills the specified concept of CL can develop emerged. This data strongly evidenced and advocated for the types of skills the specified concept of CL is equipped to develop for the workforce demand. In other words, a commitment to developing those skills in the student for after the classroom was evident.

Implications for term confusion. Given the major finding, additional contributions on the impact of semantics for the literature emanated from this study. In their narratives directed at inquiries unrelated to term confusion, three of the four FPs made strong cases for why this subject should be addressed at a professional peer level. Professor Carol spoke of the “language of language” (i.e. the role of technical terms), to “expand knowledge, enhance skills, and broaden the communication experience.” Professor Danielle detailed the import of “talking the same language,” beginning with the need to know mathematical terms and concepts to be able to work together. The value of
clarity in terms was further enhanced when Professor Gina, the foremost advocate for clear structures and expectations, told about failing to not give enough clarity with an assignment and received “36 different flow charts and 36 different timelines.” She had “thought” her instructions afforded “more consistency for the outcome.” It would seem educators seeking to work together would recognize and therefore also profit from the same clarity for desired professional goals. Furthermore, Professors Carol and Danielle explicitly stated participation was helpful to them in grappling with the term distinction. From three FPs student experiences, term confusion leaves the academy restricted.

The FPs noted an entry under “Learning-Centered Teaching Strategies” in the faculty competencies, “The faculty member will use cooperative/collaborative learning strategies” (Appendix K). According to the Sixth Edition of the American Psychological Association’s publisher’s manual, the virgule (i.e. slash mark) in this statement leaves the intended meaning unclear. In this context, this punctuation mark tends to imply a similarity in the terms CL and CpL. Relevant to the quote, Kelley and Kaufman’s (2007) article on “strategic planning” at the learning-centered field site had a subsection titled “How Can a College Ensure its Involvement in the Performance/Learning Revolution Goes Beyond Semantics?” The first main point was “Changes begin with precision in the selection and use of words” (Kelley & Kaufman, 2007, p. 52). On further investigation, a sentence in the opening paragraph reads, “The college must understand words as planning tools and must recognize the pitfalls of ignoring words and their meaning” (p. 52). Kelley and Kaufman (2007) cite a short poem by one of the authors:

Is all of this making too much of a big deal about words and definitions? It might seem so at first, but the answer is “no.” Precision and rigor are keys to defining,
achieving, and proving success. Words stand for realities, and we want to make sure we agree on what we are talking about. Because we make decisions that impact us as well as others, we must care deeply that we are headed in the right direction, and that we are very rigorous and precise in choosing our methods and criteria for evaluating our success. (Kaufman, 2006, p. 24)

Implications for theory to practice. Knowles (1989), a pioneer in adult education, revealed his early view of learning theory as a “jungle” and theorists as a “dull” and “egotistical lot.” In response to my inquiry about theory, a colleague once said to me, “It just makes my head hurt!” Evidenced in this study, educators, novice or accomplished, can identify at some level and time with such transparency. With learning theory fostering a wide range of response I would like to add some additional noteworthy points. These expanded points are based on comments by the FPs included in the Responses to the Exploratory Questions under the Theoretical Perspective.

Professor Anne, noted earlier and more fully presented in Chapter Four, provided a convincing, practical, easy-to-follow application of Silverman and Casazza’s (2000) Theory, Research, Principle, and Practices (TRPP) model for educators. For anyone in the jungle, tired of elitists, or with a headache on theory, the full scope and value of her journey in theory adds to the literature’s cry to discover the value of theory. Professor Carol wrote, “We think about collaboration as a theory; then it would affect how we plan to reach objectives in the classroom. It became for me a theory, a collaboration model.” Her use of theory, collaboration, and a model drew me to my textbooks and made me think I was again entering the jungle Knowles (1989) referenced. According to Silverman and Casazza (2000) and others, theory is foundationally intended to help reach
objectives and collaboration is more an instructional strategy to achieve the objectives grounded by theory. For a given purpose, there may be an explanation to establish collaboration as a theory. At minimum, term clarification is again under discussion. Well intended, the scholars seek to help the reader conquer the jungle of theoretical terms but I wonder if they simply contribute to it.

Unlike Professor Anne, theory did not “drive” Professor Danielle’s practices. In commenting on learning theory, Professor Danielle didn’t know if she wanted to “disprove what I’m hearing or prove what I’m hearing.” Silverman and Casazza (2000) respond to this common conflict of theory’s relevance and invite the “reader” to be “continuously asking questions raised by the various theories and then critically reflecting on how they can directly enhance the learning and development” (p. 14). In this way, the practitioner can “experience the value of integrating theory to practice.” As outlined in my literature review, Professor Gina practiced several learning theories and evidenced the benefits. I had to wonder if more active articulation is merited. If so, how do we generate it? The question falls in line with the term confusion and articulated understanding of CL and CpL in this study. And so the challenge continues.

**Implications for classroom usage.** As quoted earlier, Emerson et al. (1994) reported a strong “factor” in successful transitioning from a lecture model to a “facilitator of classroom collaboration” is “supportive mentoring from a colleague or community of supportive faculty” (p. 91). Discussed in my Review of the Literature, Bruffee (1999) makes a considered point for such faculty interaction in the use of CL. On social connectedness of faculty, Biglan’s (1973) work defined subject areas as: (a) “hard” (i.e. greater consensus on content and method) or “soft” (i.e. striving for such consensus) and
(b) “pure” or “applied” (i.e. degree of concern with practical application). This study found “teaching activities” in the hard areas more than the soft reported “greater collaboration with faculty members” (p. 207) and “scholars in applied areas like to work with significantly more people on teaching than do scholars in pure areas” (p. 209). Therefore, earth science and math, represent pure and hard task areas and are suggested to be more open to working together on classroom teaching than English and communications categorized as pure and soft subjects.

In regard to the FPs in this study, they were decidedly not desirous of lecturing and preferred the guide on the side role. How much they were mentored, I could not tell for sure. Some comments captured my attention and I bring them to yours.

Professor Anne mentioned being encouraged to “try CL again,” Professor Carol spoke of the institution’s “open door policy” encouraging sharing, and Professor Gina did likewise. Hesitancies were also acknowledged for different reasons. With an intuitive and empirical nature, Professor Anne, the scientist, who enjoyed the “magic” and “what happens” was cautious because she could not always give a reason for what she does or why it works. Professor Carol mentioned limited time but also reticent to inquire that it might be misunderstood or intrusive. Professor Danielle told of impactful negative experiences. Since all the FPs were females, perhaps they were more transparent. If so, their generosity contributes to the existing literature. The findings in this study coupled with the excerpts from the literature validate further exploration and discussion.

• The diverse disciplines illuminated the influence of discipline on the classroom usage of CL, especially the specified concept. Bruffee’s (1999) seminal work placed the determining factor on foundational and nonfoundational knowledge in the application of
CL. Silverman and Casazza (2000) and others support this position. Svinicki (2004) writes “The constructivists do not deny that there is an objective reality (although some might come close); rather, they say that each learner’s understanding of that reality is unique and derived from his or her world of experiences” (p. 36). I discuss this in more detail in the Review of the Literature. In this study, Professor Anne told about students having to “form true relationships,” Professor Carol proposed that Cpl might be more “conducive” when there are “right” and “wrong” answers. Professor Danielle said, “a polynomial is a polynomial.” Emerson et al. (1994) reported what summed up the value that emerged in this study, “Not only have we found CL to be a sound instructional methodology but high-content courses, like the sciences, in which a vast amount of basic knowledge must be mastered, can be arenas for CL.” (p. 90) A nonfoundational socio-constructivist concept of CL applied with curriculum employing foundational knowledge in multiple disciplines (e.g. mathematics, science, English), as in this study, adds to the literature, warrants further investigation, and could prove fruitful for expanding practice.

**Implications for future classroom practices.** A hallmark of this study was the innovation in classroom practices for a nonfoundational socio-constructivist concept of CL and not found in my research. This section, therefore, provides suggestions for classroom CL applications from the FPs’ lived experiences. The classroom practices in their entirety are located in Chapter Four under Learning Conditions.

Professor Anne often talked about her “stupid rock cycle game” which engaged a higher level of critical thinking because students had to do more than memorize kinds of rocks and rock cycles. The students had to “figure out” the inter-relatedness of the rocks and the processes (e.g. weathering, heat pressure, cooling) that impacted them. Building
concept maps with “relationships that are true,” the instructional structure was established for the students to embrace all four of the defined instructional criteria in the concept of CL under investigation. Her reasoning and plan for guiding students to become self-directed learners in addressing their “misconceptions” about the world around them can be found in Chapter Four under Role of Theory to Practice. Professor Carol’s reciprocal peer response paper with the writer assessing his or her two peer reviewers is presented in Figure 5. Insights into her implementation of students’ creating test questions to learn grammar is expanded under Foster Communication and Positive Practices.

Professor Danielle minced no words in explaining the critical first day in her developmental mathematics classroom. Three consecutive learning activities, speed dating, the self-assessment lineup, and the draft pick, were purposefully designed with academic objectives as well as student responsibility (e.g. choose own groups, make own group rules). This is detailed under Build Community. The purpose and execution of her group assessments, particularly for group projects, group tests, and the cheat-shirt can be found under Evaluate Process and/or Product. Professor Gina’s Wiki project provides insight into the potential of web-based CL. This project is referenced throughout her data. Her three-step assessment can be found under Evaluate Process and/or Product.

**Implications of gender.** In view of the unintended development of only female participants, I address potential gender implications. My primary references are Belenky, Clinchy, Goldberger, and Tarule’s (1986) *Women’s Ways of Knowing: The Development of Self, Voice, and Mind* and Clinchy’s (1990) article titled “Issues of Gender in Teaching and Learning.” For the discussed considerations, context for these study’s is presented.
Expanding the limited male model of William Perry’s (1970) work, Belenky’s et al. (1986) research identified five progressive stages of knowing: (a) silence (evidences not knowing), (b) received knowing (gathers and reproduces knowledge from authorities), (c) subjective knowledge (shifts from an external to an internal authority on truth based on what feels right), (d) procedural knowledge (ends isolation and engages in the procedure), and (e) constructed knowledge (creates new knowledge from objective and subjective learning strategies). In challenging the limitations of Perry’s (1970) male model, Belenky et al. (1986) identifies a similar progression of dualism to relativism using the terms “received knowledge” to “constructed knowledge.” This similar finding reinforces a change progression from authority-based knowing to individual contributions in knowledge construction. By fostering dependence on experts, texts, and correct answers, the argument is authority-based knowing augments the claim by some critics that traditional education limits critical thinking, therefore intellectual development.

Clinchy (1990), one of the four researchers in the original research (i.e. Belenky et al., 1986), offers additional insight on knowledge construction and critical thinking through the developmental stages of separate and connected knowing. For the “procedural knowing” stage, Clinchy (1990) notes “separate knowing” was seen as taking “the form of an adversarial proceeding - not hostile” (p. 61). This references the idea of argument for debate or to put forth a different point of view. In contrast, “connected knowers” sought to begin by thinking from the other person’s position rather than first seeking to counter it. In Clinchy’s (1990) further research on women students at Wellesley College, the author unabashedly acknowledges that as researchers they initially saw this as evidence of an “inability to engage in critical thinking. . .not a difference but a
deficiency” (p. 63). Therefore, Clinchy (1990) and a colleague concluded that whereas the separate knower “takes nothing at face value” the connected knower “takes everything at face value,” not seeking to “evaluate it” but “understand it” (p. 64). Love and Guthrie (1999) describe this as not a matter of one person “invading another’s mind” but of another “opening up mentally to receive another’s experience” (p. 25). The “connected knower” is more focused on meaning or “connected conversations,” than rightness (Clinchy, 1990). In my study, trust was important to the FPs, as developed in this fourth stage, and criticism grew but was seen as “supportive.”

In addition, the above developmental findings indicated a gender correlation but not gender-exclusivity. Clinchy (1990) found men more adept and at ease in argument than women, sharing the same ambivalence in “connected knowing” that women have in “separate knowing.” Men conceded exerting more effort to see another’s perspective. Moreover, some wrote the researchers that they are “connected knowers” and questioned why the Belenky et al. (1986) research is titled Women’s Ways of Knowing. I believe CL is gender-related yet not gender-exclusive. This review while not comprehensive does contribute to the discussion.

Implications for online instruction. Not a criteria for this study, two of the four FPs were engaged in using CL in the virtual environment. Professors Anne and Gina had made considerable contributions to this instructional strategy in the virtual setting. Professor Anne was proud of her accomplishments in creating systems to make earth science more robust in the online setting and CL was part of that. Both expressed in their own way that the potential for CL is only waiting to be discovered. Quite pleased with the accessibility and flexibility of Google Docs, Professor Gina’s frustration involved
having too little “bandwidth.” Beyond her classroom, Professor Gina’s investment in online learning was facilitating training courses for instructors wanting to learn or learn more about online instruction. Both FPs talked about the transfer of strategies from one setting to the other naturally imposing some differences. For example, Professor Anne talked about transferring learning activities from the online setting to the traditional (e.g. journaling). Professor Gina acknowledged that facilitating journaling in the traditional setting was harder to accomplish.

**Recommendations for future research.** Among unlimited opportunities and options, I would suggest for further investigation of the same CL concept: (a) the “sparse application,” (b) the learning-centered institution, (c) faculty to faculty collaborative engagement, (d) disciplines with dense foundational knowledge in undergraduate studies, (e) distributed classroom authority, (f) student and faculty resistance to CL, (g) the influence of gender and personality, and (h) the future of CL in the online environment.

On sparse application, I would recommend a more intentional expansion of the candidate recruitment process that would increase identification of classroom instructors practicing the specified concept of CL. The selection process in this study adhered to known guidelines but was not exhaustive. In research with a more comprehensive selection process, I would include a targeted investigation of student and faculty resistance. This would potentially extend insight on the reported sparse application.

I suggest a more focused study on the effect of the learning-centered institution to CL. The interview data and institutional documents (Blankenship et al., 1997; Kelley & Kaufman, 2007) validate this field site as a learning-centered college. The targeted question of what was the influence of a learning-centered institution should be asked on a
myriad of topics including those suggested by content in Implications of the Study and other areas addressed in this chapter.

The FPs spoke of the encouragement given by the institution to work together as faculty. FPs provided several illustrations. In view of Biglan’s (1973) research and others, I would recommend more investigation of faculty to faculty collaborative engagement.

The prominent level of the four instructional criteria particularly in mathematics, science, and English classrooms or other fields dense in foundational knowledge is worthy of further investigation. Emerson’s et al. (1994) article did present case studies on CL practices in college classrooms for developmental math, science, and literacy.

Although application was evidenced beyond developmental mathematics and English, I would recommend research with students from higher ability levels and curriculum with higher academic demand. I say this in view of Svinicki’s (2004) distinction between the cognitive and constructivist model quoted earlier and the response attributed to McKeachie et al. (1986) and others “to teach is to learn.” Additional reading and experiences causes me to believe further investigation of higher ability levels not only in peer teaching, as well as peer tutoring, students engaged more as equals should be explored.

In view of the highly distinguishing criteria, distributed authority, I would recommend more targeted investigation of authority or lines of power as referred to in the literature, my Review of the Literature, and mentioned more than once by Professor Carol. The level of shared governance and classroom responsibility I encountered in this study causes me to find this worthy of further pursuit.
A valid contribution could be made by exploring the personal demographics of CL practitioners (e.g. gender, personality, life experiences, learning styles) with particular emphasis on gender. This could reveal why some are able to embrace CL practices with more ease and shed additional light on the reported sparseness. In view of Vygotsky’s (1965) work and others, I would also suggest the inclusion of what the genders can offer each other in a collaborative setting.

In selecting FPs, a consequence and not the intent was that four of the seven original participants taught online and practiced CL in that venue. While quantitative studies are being undertaken, I would suggest additional qualitative investigation of faculty and the online experience of each with CL.

**Recommendations for Future Researchers**

Deeply grateful for my learning journey and recognizing that change will continue to impact this doctoral process, my essential recommendations are: (a) doctoral students complete a required introductory course on both quantitative and qualitative research to make a more informed decision of their research choice and (b) doctoral students take eight required hours in course work in the type of research they plan to use (e.g. quantitative, qualitative). From my experience, I would make the following additional recommendations. I would encourage students to make every effort to take the course work with a faculty member who can serve on their committee. I discovered there are many ways to carry out this process and it would be advantageous, especially as a novice researcher, to initially learn from someone who will oversee your work. If a graduate assistantship can be a possible, it should be considered. From my semester encounter, I experienced a very different type of educational context. I would
recommend a small group of peers to assist each other collaboratively and/or
coopertively through the process. I would also recommend selecting peers who are
doing the same type of research (e.g. qualitative, quantitative) and whose topics have
complementary attributes.

Lessons Learned by the Researcher

My lessons learned include a personal take-away from the journey itself and the
knowledge gained about collaborative learning.

Roberts (2004) summed up my overall benefit. She listed the six essentials of the
dissertation journey as commitment, perseverance, stamina, positive mental attitude,
courage, and a spirit of adventure. At the outset, I thought, “This is my gig!” Known for
stretching others, how naïve I was. This has been a humbling journey in experiencing
challenge, risk, fear, and growth. And I would not want to be me without this
engagement. In this context, I have most learned, not how much I now know, but how
much I do not now know and how much more I have to learn. For example, I smile to
myself thinking of sitting in my first doctoral course listening to differences between CpL
and CL discussed. A distinction worthy of conversation seemed absurd. My first thought
was, “Get a life!” And now I know I have a better one.

What I learned about CL is the role it can play in enabling people to trust diverse
abilities. The potential power of such engagement read and studied in work by Gardiner
(1999), Sternberg (2001), Vygotsky (1965) and others was profoundly encountered in the
lived experience of all the FPs interviewed. Hopefully, this has strengthened my resolve
to do likewise and more effectively encourage others. What I vicariously experienced
about CL came in listening to the FPs’ narratives naturally reveal left and right brain
thinking and incorporate it into their instructional plans and classroom strategies. More specifically, the strong validation of clear linear guidelines and expectations to provide for what could not be categorically expected, planned for, counted on, or assumed yet was anticipated. I called it expecting the unexpected. FPs called it “the magic,” “what happened,” “the blossoming” and more. It is a true value of CL. I believe it was a highly motivating value for the FPs overcoming what often makes CL unattractive.

I experienced through the interviews the power of asking questions, challenging, and probing taken to a whole new level. I think because the purpose of the learning engagement provided safety. With substantive conversation at the core of this study, I noted it often.

Lastly, I received an up-close and personal crash course in Barr and Tagg’s (1995) learning paradigm. I was privy beyond measure to the lived experience of many learning principles and practices that motivated and challenged me to practice and share. For example, their delight in being the guide on the side rather than the sage on the stage has raised the bar to do likewise. I am a debtor to each.

**Conclusion**

In my literature review, I provided an overview of CL practices in a socio-political context of its history through three centuries in the United States. I also stated this study would seek “to find out more about how social interaction or the lack thereof is structured in our cognitive applications of what knowledge is and where authority should rest” to maximize student learning. In view of the model and explanation for the theoretical framework, the model of what emerged in this study, and how this study contributed to the aforementioned commitment, I would like to conclude by presenting a
brief review of the historical context via the three metaphors in it. These encompass and portray my assessment of the socio-political factors I observed in this study.

The “context of social interaction” moved iteratively in history from a background piece to the foreground. British writers in the 18\textsuperscript{th} and 19\textsuperscript{th} centuries sought social interaction to nurture the individual’s reasoning power and creativity believing beauty and morality was being thwarted by industrialization and materialism (Gere, 1987). Additional compelling thought was developing the individual mind for the well-being of freedom, justice, and democracy (Gergen, 2001). In the early 20\textsuperscript{th} Century, Dewey advocated for the dynamic interplay of individuals, groups, and teachers shaping and being shaped in contrast to the sway of business for a more “social efficiency” approach (Holt, 1994). In the 1970’s and 1980’s, CL theories targeted individual cognitive functioning and again viewed the group as, “background for individual activity”; only more recently has the “context of social interaction” transitioned to “the more emergent, socially constructed properties of the interaction” (Dillenbourg et al., 1996, p. 189).

In closing, three metaphors illuminated the dynamics of this research initiative and journeyed with me since I encountered them in researching the literature review. Prevailing in bold outline these images of thought and action were: (a) the bank, (b) the factory, and (c) the community. Traditional education and the symbol of learning as a bank or depository was popularized by Freire (1998) in his desire to offset this hierarchical approach to learning by empowering the individual through group dialogue or interaction. It is commonly identified by the lecture. The view of school as a factory, advocated a belief that more scientific assessment and management techniques would
result in more productive learning. Structure and standardization in instruction and assessment surfaced. And lastly, the view of education as a community experience is identified with Dewey and the Progressive Education Movement, proponents of learning as a “social institution.” Substantially through this movement collaborative pedagogy was advocated. More can be read in Chapter Two under Early Twentieth Century.

While my access was brief and most likely with unspoken boundaries, I did not hear in this research a colliding or contrasting of the external effects of these three socio-political, historical, and contemporary ideologies of preference in the educational community. Rather I encountered a connecting of them. From my perspective, the bank, the factory, and the community, evidenced only at a cursory level, leaned into each other. It was not a balance of individual and group learning. It was interdependence. It was not a balance of linear expectation or instructional design and expecting the unexpected, the magic, to happen. It was interdependence. Even when lecture was unabashedly not preferred by any of the FPs, it was recognized as needed by all. In matters of learning and discipline one metaphor was not sufficient in itself but made more vibrant and alive with the others.

*Until you write it down, it’s just an impulse.*

Author Unknown
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Appendices
Appendix A

The Seven-Question Inquiry with Instructional Criteria

This research study requires a purposeful criterion sampling for selecting faculty participants. For each criterion, please delete the yes or no that does not describe you regarding your classroom practice, professional experience, employment and availability.

1. Facilitate collaborative learning in the classroom in the following ways:

• Do you seek to structure a learning environment characterized by the reciprocal engagement of students and instructor sharing responsibility for the learning processes and the learning outcomes?  Yes  No

• Do substantive, open-ended, learning tasks designed and organized by you attempt to explicitly help students develop their interpersonal skills, especially substantive conversation skills (e.g. listen, clarify, justify, challenge)?  Yes  No

• Do students working in small groups gain increased ownership or authority over their learning outcomes by participation in (a) agreement/disagreement (e.g. tolerate and work with differences), (b) intellectual negotiation (e.g. take own ideas seriously, fight for them, modify, revise them), and (c) collective decision-making to reach consensus?  Yes  No

• Is your evaluation of student performance typified by individually or collectively written essays, reports and/or oral presentations requiring the student’s or students’ knowledge to be represented by its integration into small group or whole
Appendix A: (Continued)

class discussions and/or personal changes in each student’s understanding of collaborative learning skills? Yes No

2. One year of experience (minimum) with the described phenomenon Yes No

3. One year (minimum) as full-time faculty at the field site Yes No

4. Willing and able to be interviewed on two separate dates in April-May, 2010 Yes No

(Signatures for all six faculty participants on file.)
Appendix B

Interview Questions

1. Tell me about your experience with collaborative learning.

2. What is your view about collaborative learning today for the community college classroom?

3. From your experience, how extensive is collaborative learning applications for content delivery in the community college classroom today?

4. Tell me about how you view the relationship of learning theory to practice?

5. Reflect on the whole of your encounter with collaborative learning and describe one to three individuals whom you have influenced by using the collaborative learning approach.

6. Talk about your pedagogical strategies.

7. Describe a typical course session employing collaborative learning.

8. Under what conditions might you modify what you are doing?

9. What has been your best experience with collaborative learning?

10. What has been your worst experience with collaborative learning?

11. From your experience, when should collaborative learning be used?

12. From your experience, when should collaborative learning not be used?

13. As the classroom practitioner applying collaborative learning, what changes, if any, have you observed in your students?
Appendix B: (Continued)

14. Describe the influence, if any, of this institution in which you teach on your practice of collaborative learning.

15. What impact do you see or anticipate collaborative learning having on web-based courses?

16. Is there anything else you wish to tell me at this time?

17. When you say ______________, tell me what you mean by that?
Appendix C

Sample - Second Interview Guide

PROFESSOR ANNE

(Q 1/p1-3) – Your experience with collaborative learning

I was very afraid initially of asking students to share a grade. –

Because…? You mention fear of losing control and being challenged. Add, elaborate/clarify.

a) Elaborate with more specificity on what that felt like, looked like, or effected your actions?

b) Apparently the fear went away – What was involved in that change process?)

c) How do you design/employ/execute a “shared grade?”

When you say . . .

I’d learned was that it was really important to start with your basics and build. (See if these show up.)

1) Asking people to work together
2) Some grade sharing & some assignments not grading at all
3) 5-Saturday/8 hr/day teaching assignment motivated finding ways for students to do, not listen
   Parallel revision of professor’s view of content – covering all the material to:
   a) Using subject I love to teach people to think, not teach my subject
   b) Realizing I was learning – because I was doing the work/putting together so much stuff so they could learn to teach themselves
   c) Shifting course design so the students were doing the work, therefore, the learning
   d) Preparing well so all the above could happen

Bottomline: Class so much more fun. Would not want to go back to lecturing over facilitating

   Use “punctuated lecture” – to clarify and explain when they aren’t getting it
   But focus on getting them to figure out what’s going on or going wrong, not telling them

Tell me what you mean.

(Q 2/p3-4) Your view of collaborative learning for today’s community college classroom.

So, I think the whole experience of students . . . in the sciences, understanding how sciences are being done involves hands-on, direct inquiry, classroom research type activities . . . . best done in collaboration when a team of students or pair of students tackle a problem . . . one collecting data, one recording, one using equipment, and working together to figure out what to do with this information they have collected . . . . lot of research says to keep somebody involved in science get them doing research . . . . often very collaboratively-driven. In my field I can’t envision doing what I do without it.

To be sure I am capturing your lived experience, you reference . . . a “concern” about students being attracted to the “sciences,” the “hard sciences through field trips and hands-on experiences, right?

1) Can you verify and clarify what you are saying here about collaborative learning or how it fits in?
2) Verify: Everyone in the group has a role with a job description. If so, how are these determined?

(Q 3/p4-7) Extensiveness of collaborative learning in community college classroom

1) Clarify – What is this?: I translated it as “aisle /isle P?” (top of p 5)

When you say...

1) “ethic” (mid-p 5)
2) “pockets of people comfortable & using collaborative learning” – What’s characteristic of them?
Appendix C: (Continued)

2) “jig saw” (m-p 5) i.e. Yeah, I think it (jig saw) can be (collaborative learning). I’ve used it...
   a) ...there is an understanding in cooperative learning broad. And I think...

3) ...the big differences
   a) do collaborative learning because they have had an experience or they get...
   b) do it because it is a good learning practice, sort of thing and kind of don’t get it
   c) Does that make sense? (Almost, like you to elaborate more.)
   d) The difference of a sense that it transforms a classroom as opposed to linear....
      (Please give me more. I think I know what you are saying but I need/want you
      to be so clear—it is clearly your lived experience—preferably not my interpretation.)

4) “it actually transforms a classroom ”

5) I think that it actually transforms a classroom... I mean it changes the of the whole class.
   a) consistency of starting on Day 1 and continuing to ... just as you build concepts...

6) there is just a certain attitude that goes with that (e.g. “expect this,” “kind of routine”)
   (What do U expect? What does routine look like? Is the following the attitude?)
   a) use your names with each other... a form of community building
   b) way of providing safety
   c) when you open it (What’s it?) up... expectations become clearer, fairness issues
      become over, it is not hidden. (Example given)
   d) driven by the culture rather than the grade book
   e) ...I truly become more of an advisor or consultant
   f) they initiate the questions & they challenge each other – (Examples given)

Am I the researcher, “getting what you? Is there any more you can tell me about these in the context of
question #3 from the 1st interview.

“I can just be in the room and, especially as you get into week 3 and after where you start having
people really interacting. Certainly not as if they are in a traditional classroom, I guess. I’m
having more trouble with verbalizing this.”

Can you verbalize better today, “...where you start having people really interacting...?”

(Q 4/p 7-10) Relationship of learning theory to practice

1) I really do believe it is important that students construct their own knowledge. (p 7)
   ...teaching online...moving back into the classroom. With some revisions...
   a) ...purchase equipment...start doing own data gathering
      1. compare different ways of dealing with data...do their own research
      2... whole thing of constructing knowledge from a very hands-on approach
   b) ...more time confronting common misconceptions or alternative conceptions
      1.all have some personal experiences...intuitive understanding from when kids
      2. studies show: (p 8)
         a. when you directly confront misconceptions you reinforce them
         b. most effective way to help people...provide experiences...
            challenging own belief and then they can kinda clean the slate.
            1. So, if that doesn’t work, why doesn’t it work?
            2. As long as they don’t go, “If it doesn’t work, I don’t care!”
         c. ...try to set up something where they can re-evaluate their
            alternative conception and come up with a conception...based on
            good inductive reasoning ...based on the info they’ve gathered
         d. ...part of them being discerning citizens...be a little more careful
            1. Do a better job of reasoning things out
            2. ...become better consumers of knowledge & info
(Do I hear you say here – transfer to other aspects of life?)

Your explanation of what it means when you say “students’ construct their own knowledge”
is quite complete. Is there anything you would like to add or emphasize?
Appendix D

Sample of Researcher’s Reflective Journal

June 17, 2010

(Journaled from notes imbedded in transcription.) I asked how she viewed the relationship of learning theory to the practice of collaborative learning. Not sure she understood my question, she asked, “The learning outcome that I’m hoping to achieve?” I wrongly responded, “Right.” I attempted to clarify my question with, “What theory, what belief, what philosophy underlies your valuing it to the point you incorporate it into how you teach your content?” Professor Gina’s response did not address the intended inquiry. In retrospect it was my opinion that by wrongly responding “right,” I positioned a misrepresentation of my follow up question intended to clarify. Consequently, I did not restate my inquiry in as precise a manner as I could have to be understood. Her response fit well the transfer skill value of collaborative learning. Cognizant or not, I think she employed a theory/theories that supported her understanding of collaborative or cooperative learning. On the day of this interview, she was not able to recall them, not able to think of “any” to articulate, or my poor inquiry approach failed to capture them.

July 2, 2010

On Data Collection and Analysis Process: Yeah - comprehensive (i.e. all incomplete words, phrases, pauses or stalling words/syllables) transcription done! The Digi-Scribe software and foot pedal – big contrast from transcribing the Jamaican adult learner interview! I can’t believe how much I have relived all the interviews. That is when my analysis process began. Imbedded transcription notes with a distinct parentheses and a color font are like journal thoughts – personal reflections on the actual encounter, the
Appendix D: (Continued)

interviewee, issues to pursue, notes germane to cross-case analysis, the research problem, the four criterion, Bruffee’s concept, musings (helped break the monotony) have reenergized my time commitment and helped keep my thinking process on task. The Trigger Thought chart recommended by R&R, glad I tried it but I think it will fall into the trial and error file. M&H (1994) recommended coding begin during the data collection process to drive ongoing data collection. I can see how that could have been good. The reflection and imbedded responses did influence the “drill down” for that 2nd guide.

August 14, 2010

On Data Collection and Analysis Process: I reviewed my purpose of study, problem, research questions, and purposeful criterion sampling. I’m following a plan basically put forth by R&R – key phrases/words, central points, what’s new, what supports what I already learned. I added a couple more questions of my own including the 4 criterion which selected the FPs. I completed a 1st level of coding – going line by line through each of the 16 original questions of the 1st interview and integrating additional responses appropriate to each question from the second interview. Not synthesizing or summarizing, I pulled out word for word phrases. I reviewed both interviews for one participant and considered appropriate info from docs and journal. I integrated the responses relevant to the question and coded the responses in the text-to-table format. I had a code checker. We discussed our separate labeling.
Appendix E

List of Institutional Documents

Professor Anne:
Curriculum Vita: July 27, 2010
XXX Core Competencies and Learning-Centered Teaching Reflective Critique;
Teaching Philosophy (Retrieved from faculty website, January 25, 2011)
Member Check: April 28, 2010

Professor Carol:
Curriculum Vita: May 5, 2010
Action Research Project – Owning the Prep II English Exit Exam: May 5, 2010
Collaborative and Cooperative Learning Graph: May 5, 2010
English – Worksheets and Rubrics for Creating Test Questions: May 5, 2010
Comp I and II - Essay Workshop and Response Paper Instructions, Check List,
Rubric, Reciprocal Peer Review Survey: May 5, 2010
Member Check: May 5, 2010

Professor Danielle:
Curriculum Vita: August 24, 2010
Instructional Procedures for Integrated Lesson on Global Warming Includes –
Collaborative Learning, Math Small Group Work on Word Problems,
Interdependent Project Discussion, Collaborative Group Rules, Group
Negotiation/Selection of Continent: August 24, 2010
Member Check: April 26, 2010

Professor Gina:
Curriculum Vita: May 12, 2010
Speech 3 (Career Persuasive Speech) – Rubric and Peer Evaluation Form: May 12, 2010
Group Formation Interview Form: May 12, 2010
Wiki-Group Project Instructions and Student Reflection Responses: May 12, 2010
Collaborative Group Presentation Activity (Visual Aids): May 12, 2010
Distracted Listening Activity (Substantive Conversation Skill): May 12, 2010
Member Check: May 12, 2010
Appendix F

Member Check Form for Interviewees

Date

Dear ________________________________

Thank you for an enjoyable and insightful interview. Please review the transcription electronically sent on April 21, for accuracy and completeness in reporting the digitally recorded responses. Please feel free to contact me at (727-644-5207) or via e-mail at (marilyn@lmrconsulting.com) should you have any questions. If I do not hear from you by June 21, I will assume that you agree with the draft of the transcription.

Thank you again for your willingness to participate in this study.

Marilyn C. Armstrong
Appendix G

IRB Consent Form

Consent to Take Part in this Research Study

It is up to you to decide whether you want to take part in this study. If you want to take part, please sign the form, if the following statements are true.

I freely give my consent to take part in this study. I understand that by signing this form I am agreeing to take part in research. I have received a copy of this form to take with me.

_____________________________________________ ____________
Signature of Person Taking Part in Study Date

_____________________________________________
Printed Name of Person Taking Part in Study

Statement of Person Obtaining Informed Consent

I have carefully explained to the person taking part in the study what he or she can expect.

I hereby certify that when this person signs this form, to the best of my knowledge, he or she understands:
• What the study is about.
• What procedures/interventions/investigational drugs or devices will be used.
• What the potential benefits might be.
• What the known risks might be.

I also certify that he or she does not have any problems that could make it hard to understand what it means to take part in this research. This person speaks the language that was used to explain this research.

This person reads well enough to understand this form or, if not, this person is able to hear and understand when the form is read to him or her.

This person does not have a medical/psychological problem that would compromise comprehension and therefore makes it hard to understand what is being explained and can, therefore, give informed consent.

This person is not under any type of anesthesia or analgesic that may cloud their judgment or make it hard to understand what is being explained and, therefore, can be considered competent to give informed consent.

_____________________________________________ ____________
Signature of Person Obtaining Informed Consent Date

_____________________________________________
Printed Name of Person Obtaining Informed Consent
Appendix H

Explanatory Letter to Potential Interviewees

Dear ______________________,

I am a doctoral candidate in the Department of Adult, Career, and Higher Education at the University of South Florida in Tampa, Florida. I am pursuing my dissertation research on collaborative learning as an instructional strategy in the college classroom. The purpose is to describe and explain collaborative learning from the perspective of selected community college faculty members representing multiple academic disciplines. As approved by [field site’s name] IRB, your consideration of this inquiry is requested because your name was approved by [field site director of faculty development] authorized to support and facilitate my recruitment of [field site’s name] faculty members who might potentially meet the criteria for faculty study participants as approved by [field site’s name] IRB.

During March, April, and/or May 2010, participation will require approximately two one-hour and twenty minute semi-structured, in-depth interviews conducted individually. An interval of approximately three to four weeks to allow for: (a) my personal transcription of the first set of digitally recorded faculty interviews and (b) complete member-checks (verify accuracy) with you and all study participants will be necessary. With your permission, the interviews will be audio-recorded. Confidentiality will be maintained in the recording by using a pseudonym. As the researcher, I will personally transcribe all audio recordings. An outside peer reviewer will read the written transcription(s). He or she will be able to identify you and all research participants only by the pseudonyms. You will be offered a copy of your two transcribed interviews and the full report upon its completion. Only I will have access to your audio recording. All confidential data will be in my possession and destroyed five years after the publication of the dissertation.

Based on the above calendar period, the interviews will be arranged at a time convenient for you and at a location on your campus. The member check will ask you to review your transcript for accuracy. In addition, relevant artifacts and documents (e.g. course handouts, syllabi) may be requested. Your name, the college’s name, and any other information gathered in this study will remain confidential and used only for educational purposes.

If able to further consider this request, please complete and return the attached seven-question yes or no inquiry before or by [date - seven active school days forward from date email was received]. This will enable me to identify if you fulfill the purposeful sampling criteria for the phenomenon under investigation. If needed, I am glad to further clarify the intent and answer any questions. Upon receiving your reply to the seven-question criteria inquiry, I will respond to you within 48 hours of your reply.

If not able to honor this request, please notify me before or by [date – seven active school days forward from date email received]. I appreciate your thoughtful consideration. If the conditions for both of us can be met, I look forward to the potential mutual benefits as educators.

Sincerely,

Marilyn C. Armstrong
Appendix I

Outside Peer Review Form – Code Checking

I, Ana Torres, have served as a code check reviewer for “Faculty Perceptions of Collaborative Learning” by Marilyn C. Armstrong. In this role, I worked with the researcher throughout the coding process to review the transcripts and validate or challenge the identifying, defining, and classifying of code labels and assist in related emerging issues.

Signed: ______ (Signature on File)_________

Date: ______ March 27, 2011__________
Appendix J

Outside Peer Review Form – Presentation of Data

I, Carol Burg, have served as a peer reviewer for “Community College Faculty Perceptions of Collaborative Learning” by Marilyn C. Armstrong. In this role, I worked with the researcher in capacities relevant to the analysis in developing the presentation of data and assisting in related emerging issues.

Signed: _____ (Signature on File) ________

Date: _____ March 25, 2011 ________
Appendix K

Essential Competencies of a [Field Site] Educator

(Tenure Class of 2011 & 2012)

**Learning-centered Teaching Strategies**

**Competency**

[Field site] educators will implement diverse teaching and learning strategies that accommodate the learning styles of students and that promote acquisition and applications of knowledge and understanding.

**Performance Indicators: Evidence of Learning**

The faculty member will:

- employ strategies that guide students to become more active learners (e.g., reference interview, counseling inquiry, engaging lectures, discussion, experiential learning, scenarios, role-play, case study, problem-based learning, inquiry-based learning, manipulatives, etc.)
- encourage students to challenge ideas and resources
- **use cooperative/collaborative learning strategies**
- integrate concrete, real-life situations into learning strategies (e.g. in counseling, library or classroom settings)
- invite student input on their educational experience (e.g., choice among assignment topics, learning activities, etc.)
- employ methods that develop student understanding of discipline’s thinking, practice and procedures (e.g., through guided learning opportunities the student will apply the use of the discipline’s “ways of knowing”)
- employ methods that develop student academic literacy in the discipline or field (e.g., reading, writing, numeracy, technology skills, etc.)
- employ methods that motivate student to learn

**Student Core Competencies: Think, Value, Communicate, Act**

**Competency**

[Field site] educators will facilitate student growth in thinking critically and creatively across different contexts and domains of human understanding; communicating effectively in different modes and across different settings; articulating and applying personal values and those of various disciplines and appreciating the values of others; and applying learning and understanding effectively and responsibly in their lives as students and educated adults.
Appendix K: (Continued)

**Performance Indicators: Evidence of Learning**

The faculty member will:

- employ methods that develop student understanding of discipline’s thinking, practice and procedures (for example, through guided learning opportunities the student will apply the use of the discipline’s “ways of knowing”)
- align course, library, or counseling outcomes and learning activities with core competencies
- design assignments and assessments that demonstrate student growth in the core competencies
- document student growth in core competencies
- collaborate with colleagues and deans to assure and demonstrate progression of student learning across courses and programs
- assess for General Education Outcomes as appropriate to discipline, program and/or Student Core Competencies (TVCA), as applicable

**LifeMap**

**Competency**

[Field site] educators will design learning opportunities that promote student life skills development while enhancing discipline learning. Through intentional inclusion of growth-promoting strategies, instructors, counselors and librarians will facilitate the students’ reflection, knowledge, and appreciation for self and others; gradual assumption of responsibility for making informed decisions; and formulation and execution of their educational, career, and life plans. As a result, students can transfer those life skills to continued learning and planning on their academic, personal, and professional endeavors.

**Performance Indicators: Evidence of Learning**

The faculty member will:

- help students to continue clarifying and developing purpose (attention to life, career, education goals)
- help students assume responsibility for making informed, academic decisions (e.g., degree requirements, transfer options, financial aid, etc.)
- help students develop academic behaviors for student success (e.g., time management, study, test and note taking strategies, etc.)
- help students identify where academic behaviors can be adapted as life skills (e.g., library search skills, decision-making, communication skills, scientific understanding, etc.)
- establish student & faculty contact that contributes to students’ academic, personal, and professional growth
- seek out struggling students and identify options through dialog (and appropriate referrals)
- employ electronic tools to aid student contact (e.g., Atlas, MyPortfolio, Blackboard, Ask-A-Librarian, etc.)
Appendix K: (Continued)

Assessment as a Tool for Learning

Competency

Educators will develop student growth through consistent, timely formative and summative measures, and promote students’ abilities to self-assess. Assessment practices will invite student feedback on teaching and learning process as well as on student achievement.

Performance Indicators: Evidence of Learning

The faculty member will:

- employ formative feedback loops to assess student learning
- employ formative feedback to inform students of their learning progress
- employ a variety of assessment measures and techniques (both formative and summative) to form a more complete picture of learning (e.g., classroom assessment techniques, authentic assessments, oral presentations, exams, student portfolios, journals, projects, etc.)
- give timely feedback on class activities, exams and papers
- align summative evaluations with course outcomes and learning activities (appropriate to level of thinking)
- design activities to help students refine their abilities to self-assess their learning
- employ formative feedback to assess the effectiveness of teaching, counseling, and librarianship practices
- evaluate effectiveness of assessment strategies and grading practices
- make assessment criteria public to students and colleagues

Inclusion and Diversity

Competency

[Field site] educators will design learning opportunities that acknowledge, draw upon and are enriched by student diversity. An atmosphere of inclusion and understanding will be promoted in all learning environments.

Performance Indicators: Evidence of Learning

The faculty member will:

- design and support learning experiences that address students’ unique strengths
- design and support learning experiences that address students’ unique needs
- develop reciprocity and cooperation among students (interdependence and teamwork) include content well-suited to [field site’s] diverse student population
- foster connections . . . in and out of the classroom, counseling, and library environments (learning communities)
- vary assessment measures and techniques to engage cognitive diversity
- create learning atmospheres that encourage all students to share viewpoints
- use diverse perspectives to engage and deepen critical thinking (diversity as learning resource)
- develop student self-awareness (e.g., learning styles, personality types, assumptions, thinking styles, etc.)
Appendix K: (Continued)

Scholarship of Teaching & Learning

Competency

[Field site] educators will continuously examine the effectiveness of their teaching, counseling, librarianship and assessment methodologies in terms of student learning. They also will keep abreast of the current scholarship in fields of teaching and learning.

Performance Indicators: Evidence of Learning

The faculty member will:

produce professional work (action research or traditional research) that meets the [Field site] Standards of Scholarship

build upon the work of others (consult experts, peers, self, students)

be open to constructive critique (by both peers and students)

make work public to college and broader audiences

demonstrate relationship of SofTL to improved teaching and learning processes

demonstrate current teaching and learning theory and practice

Professional Commitment

Competency

[Field site’s] educators will stay current and continually improve their knowledge and understanding of their discipline. They will participate in activities that promote [Field site’s] learning mission, including serving on campus and college-wide groups, attending professional conferences, and/or participating in other community organizations.

Performance Indicators: Evidence of Learning

The faculty member will:

- stay current in discipline/academic filed (e.g., professional organizations, conferences, journals, and other literature, etc.)
- contribute to discipline/academic field
- participate actively on division, campus and college meetings/committees/task forces
- engage with faculty governing bodies
- access faculty development programs and resources
- expand knowledge of college connections to wider communities (e.g., Focus on the Workplace; student development activities; trends in business and government, etc.)
- practice the peer observation of teaching
- collaborate with colleagues and dean/director to assure and demonstrate progression of student learning across courses and programs (e.g., Courses, General Education Outcomes, AS AA Honors, Certificate Programs, etc.)
Appendix L

Sample of Professor Danielle’s Instructional Procedures

Instructional Procedures
a. Focusing event (something to get the students’ attention)
   Clip from “inconvenient truth”

b. Teaching procedures (methods you will use)
   Collaborative Learning
   Library Research
   Lecture
   Team Activities
   Success Coach Presentations

c. Formative check (progress checks through the lesson)
   Student Feedback Forms
   Instructor Observations
   First Drafts / Outlines of Presentation/PowerPoint
   Math Worksheets
   Math Homework Review

d. Student participation (how you will get the students to participate)
   Math Small Group Work on Word Problems
   Independent Project Discussion
   Collaborative Group Rules
   Group Negotiation/Selection of Continent
Appendix L: (Continued)

e. Closure (how you will end the lesson)

Team Presentation

Student Feedback to Teams

Class Discussion Regarding Global Warming and Personal Impact/Solutions
Appendix M

Sample of Professor Gina’s Student Reflection on Wiki Project

Message

Subject: Reflections on Wiki Experience
Author: [Redacted]

Our Wiki group did a phenomenal job on this project and it couldn’t have been done without the collaboration of each member. The “aha” moment during this project is that when each person said they would do something, they did it. I learned that, as the team leader, I needed to trust everyone on our team to do their part. There were moments I was questioning whether we would be able to deliver as a group, but the whole team assured me that they would be done by the deadline and they were.

I’m most pleased at the level of accountability we collectively shared as a team. We completed our selected tasks and assisted each other when help was needed. Also, even though we never met all at once, we communicated effectively to where we produced a cohesive product by the deadline.

The advice I would give to upcoming groups in the next semester is be accountable and communicative with your group. Trust each other to complete their tasks and don’t be afraid to ask for help from your teammates as you all have the same common goal in mind and that’s a good grade.

A final message to my group is I appreciate all your efforts to complete the project, and thank you for your assurance that you would have your sections ready in time. I also want to say that I’m pleased with how each of you weren’t afraid to request help where needed and I’m very impressed that everyone stayed accountable to the group and this project. Job well done to all of you.

Messages in the thread

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And since then, I’ve thought about, perhaps, adding an element where if you did have a disagreement with the leader for whatever reason might be that I could add some type of component. But usually between the communication between myself and the student there seems to be enough, umm, open discussion to smooth out the waters. But I’ve thought perhaps adding an element where, I don’t know, you could call it, umm, “white flag” or whatever where through the weeks of the collaboration if you feel like there’s something that you’re just not happy with you could throw in the “white flag.” Umm, but right now, I don’t have a specific element of that (laughter). Umm, but sure, umm, part of collaboration is the frustrations and not being able to talk to the person who you’re supposed to be able to talk to whether they be the group leader or the person that you’re working with, and so, some type of function, umm, that would help alleviate that part of it. But right now... (Alleviate, tell me what you mean by that.) Alleviate the, “I feel like I can’t communicate it with this person. And without the communication how are we supposed to collaborate?” (laughter) (Okay.) So, umm, I need someone to discuss my frustrations with. And often, it is... (Oh so, they turn to you... because they don’t...) Often it is me. (...know how to turn to each other.) Right. And so,... (So, you’re saying you don’t quite have an element yet that allows them to work together, to work out the frustration directly.) Right. Exactly. (Okay. Now is...) Without me being the intermediary. (Gotcha. Is there... That’s...that’s your online class.) That’s my online class. (In your face-to-face... is there more opportunity for that?) In my face-to-face class, it’s different in the sense we don’t work in the same groups all the time. I don’t have the same structured groups throughout the sixteen weeks. I really have a focus where I try to create diverse groups but a mixture of groups. Whereas within the online environment, when you create a Wiki project like the one I gave you an example. It’s really a six-week project, and so through those six weeks they have to hang on and be a collaborative group. (So, they sooner or later have to work through some challenges.) Sooner or later sometimes (soft laughter). (But they do it through you.) Right. And...and...and like I said, I’ve had very few experiences where I’ve had major problems. I had one particular instance where a gentleman was in the hospital and he was the group leader. And so, they felt lost for a couple of days while he was in the hospital. So, things like that where life throws you curve balls. It’s...it’s a little difficult to handle. But in

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my traditional class, I think because there’s... I don’t keep same groups for long
term, I, at the most, I’ll keep the same group for one week which is two class
meetings. So, if they feel like there are difficulties getting through that
particular collaborative task than most of them seem to be handling it in such a
way that they hold on for those two days to make it through. Umm, I haven’t
had as much. (So, okay. So, I think the criteria asked, you know, do you...do you
allow for them to have that... (sigh) friction if you would.) Right. (for the benefit
of gaining more substantive communication skills. Rather than, “You’re
wonderful. I’m wonderful. Isn’t this great! We get to be wonderful together!”)
(laughter) (But, ohh, you know, you really think, “What?”) (laughter) Do I allow
them? (Because you answered affirmatively, so, help me understand what
you... what that meant to you?) As far as the online groups and the longer term,
I... I think I do need to allow them more freedom to work it out themselves
because a lot of times, I am... up to now when I’ve had the one or two
experiences where there were some rough spots I... I was the person who came
to the rescue. So, umm, some type of, uhh, “white flag” or like what I said
something that they could throw in that shows that there’s some frustration on
their part. But again, that goes back to the beginning where from the very
beginning of any type of collaborative learning you need to set up the strong
structures and perimeters to let people know, “Okay, this is here for this
particular need.” (I like... what those points you brought out in the very
beginning. We’ll explore them more...) Okay (laughter). (... in the next
interview because those were excellent. Umm, so then, how do they...how
will...how do they take on that number three criteria of, umm, of the
ownership.) Well, I think the ownership, especially with the online has to do
with in the beginning taking on a task. But then, as we get closer to completion,
they’re part of turning in, “Here’s what I did. Here’s my contribution.” And so,
there’s ownership on the individual level, as well as ownership, “Here’s the
bigger picture with everyone’s contributions together as a group.” And so, I
think it’s important that they have individual ownership as well as ownership in
the group. But, monitoring that throughout is important, too, and that’s why
we do the assessment at the half-way, “This is what I’m planning on owning.”
And then, “This is what I actually own.” And then, “Here’s what actually came
out in the total outcome of it all.”
### Appendix O

Sample of Codebook Pages

<table>
<thead>
<tr>
<th>Code Label</th>
<th>Definition/discription</th>
</tr>
</thead>
<tbody>
<tr>
<td>RSFPPrfnIDmgrphe</td>
<td>Professional info about each individual faculty participant</td>
</tr>
<tr>
<td>RSInfluenceOnFP</td>
<td>The expressed or implied impact of participation in research study on FPs’ practice of CL.</td>
</tr>
<tr>
<td>RSrshr/FrInteract</td>
<td>What emerges from researcher &amp; FP partnership in dialogue on the lived experience.</td>
</tr>
<tr>
<td>RSFPKnwsKBWork</td>
<td>FPs who had heard of/knew of Kenneth Bruffee whose seminal work in collaborative learning was the focus of the literature review for this research study.</td>
</tr>
<tr>
<td>Rschr'sHunch - Acad &amp; Wrkplc Reports&gt; HE suited &gt; skill trnsfr</td>
<td>Based on rschr’s informed hunch, academic reports, &amp; workplace requests for CL skills, emerging data validates research hunch - HE well suited to integrate CL skills for transfer beyond clssrm PRBLM&gt; disparity between evidence of impact &amp; clssrm implementation.</td>
</tr>
<tr>
<td>RSPr&lt;interst&gt;applctn growing interest &amp; minimal application</td>
<td>With growing CL interest minimal evidence can be documented in HE. Yet based on researcher’s hunch informed by academic reports &amp; workplace requests for CL skills, data validates HE is well suited to integrate CL skills for transfer beyond classrm</td>
</tr>
<tr>
<td>RSWhyDataSparse</td>
<td>CL evidences a growing interest, sparse data exists to document classroom practice</td>
</tr>
<tr>
<td>RSPr - CL/CpL Terms</td>
<td></td>
</tr>
<tr>
<td>RSPrCL/CpCnfsn</td>
<td>Indicators of the profound ambiguity of CL &amp; CpL terms that skews &amp; leaves uncertain a clear &amp; full understanding of CL’s unique attributes, potential, &amp; extent of its practice. (possibly contributing to an explanation of what is identified as a sparse practice)</td>
</tr>
<tr>
<td>RSPrCLDefined</td>
<td>FPs descriptive words/phrases from FP’s lived experience used to explain or speak of CL.</td>
</tr>
<tr>
<td>RSPrCpLDefined</td>
<td>FPs descriptive words or phrases from lived experience used to explain or speak of CpL.</td>
</tr>
<tr>
<td>RSPrCLCpLContinum</td>
<td>Practice of CL expressed on a continuum from CpL/more structured &amp; teacher-directed to CL/less structured &amp; teacher-directed.</td>
</tr>
<tr>
<td>CLskiTrnsfrStdntSktTrnsfr</td>
<td>Student skill transfer</td>
</tr>
<tr>
<td>RSThrySclCnstrctvsn</td>
<td>Nested in Constructivism – make meaning out of experience collectively</td>
</tr>
<tr>
<td>RSThryAdltLrng</td>
<td>Nested in Constructivism – Self-directed, transformative, &amp; andragogical learning strongly characteristic of/highly identified with adult learners but not only in adults.</td>
</tr>
<tr>
<td>RSThryAdltLrngHE</td>
<td>Growing pop of adult learners in HE benefits from CL skill transfer beyond classroom.</td>
</tr>
</tbody>
</table>

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In growing pop of adult learners in HE, CL skills are inherent or intentional for CPE & LLL.

Theorists or scholars FPs note as supporting or informing their CL instructional practices.

FPs’ comments/explanations on understanding/epistemology of their lived experience w/theoretical frameworks supporting CL for insight on their use of CL or lack thereof.

Intensity level & specific evidence of learning theory’s positive or negative impact, influence, or relationship to the CL practice in the classroom.

Fences in distinctiveness of singular phenomenon—CL & its context – a learning-centered institution w/stated institutional collaborv culture. (discovery sgndcnc/Patton467)

Identified & credited as the change catalyst for transitioning to a learning-centered college at field site, FP’s evidence collaborative learning at multiple levels & settings.

A learning-centered institution, this field site shifts focus from teacher to the student and the quantity of instruction to the quality of learning processes & outcomes.

FP shares classroom governance/authority & learning responsibility evidenced in the reciprocity of learning environment, structures, objectives, activities, & assessments.

A mutual confidence placed in each other to give and receive in an academic setting through a CL environment and skill development to transfer beyond the classroom.

An earned mutual reliance by the instructor & the student that supports an environment for potentially increased quality & effectiveness for both roles in the learning process.

Student(s) & instructor’s experience - mutually inclusive & academically exhilarating resulting from shared active engagement in & responsibility for the process & product.

Instrcr & stdnts share responsibility for learning envrmnt, tasks, & outcomes. The ideal teachable moment is student driven & nested in the essence and evidence of a collaborative learning environment. (Students learning from one another–this is the result of distributed authority.)

FPs classrm practices to create/foster/maintain stdnt(s)’ faith/belief in learning (Mutual responsibility/interdependence of instrcr & stdnt for learning tasks & outcomes)

FP-guide on the side to draw out & support self-discovery; encourage self-directed learning.

FPs classrm authority is centralized & directional flowing from the instructor to the stdnts.

Open-ended learning tasks to develop substantive interpersonal communication skills (e.g. listen, clarify, justify, challenge).
### Criteria #3 – Gain ownership & Authority over Learning Outcomes

c) RSLACnsnsusBldg
PSNonDvlpmntStdnt

> Sml grp work to gain increased ownership/authority of learning outcomes thru agreement/disagreement or intellectual negotiatn (modify/fight for) & reach consensus.

(Students not in remedial courses often planning to continue on in higher education)

### Criteria #4 – Evaluation

d) RSEvalNonTrad
RSEvalIntegration
PSEvalNonTrad

> Individual or collective papers or presentations to assess learning from sm grp or whole class discussions or reflection papers on personal change/experience from CL skills

(Assess for performance & accountability through individual & collective sm grp work)

(Assess for performance & accountability through individual & collective sm grp work)

RSEvalOrganztnSkl
PSEvalOrganztnSkl

> Critique and assess student skills at creating order for content, processes, deadlines etc.

RSFPEvaluation

> Use of formal/informal, formative/summative elements to evaluate students serves to also measure how well the instructor has accomplished his/her CL responsibilities.

RSEvalTrad

> Assessment or grading of individual work; traditional - grades NOT based on group work

RSEvalNonTrad

> Assessment or grading of group work; grades based on group work
About the Author

Marilyn C. Armstrong received her Bachelor of General Studies from Indiana University School of Continuing Studies. She earned a Master of Arts in Adult Education from the University of South Florida. Selected for the Dean’s Summer Institute for Excellence in Research, USF Graduate School, she co-researched and co-authored The Nontraditional Graduate Student: A Growing Audience, *The Journal for Continuing Higher Education* published in 2009. She co-presented a live session for an international online conference titled *Collaborative Learning Online and In Class*. In 2010, she co-authored Instructional Development in Adult Education for an Online Master’s Degree Program in Career and Workforce Education, *Perspectives: The New York Journal for Adult Learning*. She served as Assistant Dean for the adult learning program and as an Associate Adjunct Professor at Florida Christian College. Through her company LIFE Management Resources, Inc., she has provided keynote presentations, organizational training, and consultation in the public and private sector, the health industry, non-profit organizations, and public and private education.

Her professional encounters, workplace requests for interpersonal skills; academic exposure to collaborative learning, constructivist and socio-constructivist thinking; and a personal lifetime colored by social interaction instilled the thrust for this dissertation. During this journey, she intentionally sought personal, academic, and professional opportunities to engage in collaborative effort to finish as a practitioner with a fresh level of expertise in collaborative engagement.