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Riding the winds of their interest: Exploring the teachable moment in college classrooms

Nancy Fosdick Mills

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Riding the Winds of Their Interest:
Exploring the Teachable Moment in College Classrooms

Nancy Fosdick Mills

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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Dedication

This dissertation is dedicated to three people who, each in their own way, kept me moving forward, even when I didn’t want to move any more. I love you all. To Revonda, my friend, because I would still be waiting to take statistics, and because we were in this together. To Spencer, because you remind me every day what is really important, and because you navigated the bureaucracy so I could get this done on time. And most of all to Michael because you always believed I could and would finish this, even when I did not. Your confidence in me kept me going. Thank you.
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Barb McLay edited more than one draft, an act above and beyond the call of friendship. Nancy White was instrumental in helping me identify participants for the dissertation research. My relatives and my friends put up with me alternately cheering and whining for many years now.

I cannot leave out the friends I made in classes at USF. You have shared ideas, energy, helpful hints, caveats and inspiration. Interactions with you made the teachable moments work.

Finally, I must thank all of my pilot and study participants. Without the generous sharing of your time and your expertise, I would not have had a dissertation to write. I hope others will learn as much as I have from you.
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The phrase “teachable moment” has a taken-for-granted connotation of readiness to learn, but has been rarely defined and researched in the literature of higher education.

This study described faculty members’ experiences of teachable moments in their undergraduate classrooms. This included the conditions in which they emerge, and the decision-making processes used by faculty members to determine if and how to pursue such moments. If professors have opportunities to clarify their understandings of such moments, the ability to capitalize on otherwise unplanned teaching opportunities may be enhanced.

Seventeen experienced social science and humanities faculty members teaching undergraduate classes at a large research university participated in two semi-structured active interviews (Gubrium and Holstein, 2003). The interviews addressed their understandings of, experiences with, and decisions about teachable moments in the classroom. These interviews yielded descriptions of teachable moments as creating a heightened sense of engagement and interaction about a topic of shared interest. Teachable moments fall along a continuum of predictability, with some moments being intentionally designed by the professor and others emerging spontaneously during a class
as a result of current events or student comments. When confronted with surprise
moments professors consider a complex set of interacting elements to decide whether to
pursue or postpone the exploration of the moment. They ask themselves several
questions. Is there time? How does this fit with goals for the class, course or program?
Are the students and I ready to examine this? What impact will this have on classroom
dynamics? Does this warrant in-class exploration, or should it be pursued outside of
class? The set of considerations can be examined as manifestations of Schon’s (1987)
theory of reflection-in-action which describes how professionals make decisions in
surprise situations when previously effective responses do not work, and more
specifically of Steier and Ostrenko’s (2000) adaptation of Schon’s model,. reflection-in-
interaction. Implications for theories and practices of teaching of college teaching as well
as for opportunities for faculty development were described.
CHAPTER ONE
INTRODUCTION AND OVERVIEW

The phrase “teachable moment” is often used and rarely defined in the professional literature of higher education. Even though it appears throughout the literature, and has a taken-for-granted connotation of readiness to learn, there is not much systematic analysis of what the phrase means. What is a teachable moment? When does one occur? What do professors do when one occurs? The term seemingly crops up everywhere—in casual conversation, in educational discussions, and in current events.

About two years ago my advisor caught my attention when he asked me what I thought about teachable moments as a subject of research. Around that time I was reading Donald Schon’s (1987) work on reflection-in-action and reflexivity in teaching. The two concepts seemed to connect and the awareness of both began to influence my own teaching, readiness for classroom spontaneity and responsiveness to student perceptions.

This initial questioning led to a small pilot study of teachable moments involving interviews with experienced faculty members. I received approval for the pilot from IRB and, after conducting some preliminary interviews during 2005, I began to draft a working description of such moments. A teachable moment seemed, from the initial pilot study, to be a moment in a class when a student makes a connection between the content of a particular class or course and something outside the routine plans of the class. The moment is often unplanned or unanticipated by the professor who must make
an on-the-spot decision whether to pursue the moment or not. The professor may try to
generate connections, and create the contexts for teachable moments but the “moment”
happens in the student and its exact form and content are outside the control of the
professor. This spontaneity is what makes such moments both interesting and
problematic for the classroom professor who is balancing demands for curricular breadth,
deepth, and relevance with concerns about classroom management. The findings from the
pilot interviews led me to believe that there is something of value to be learned from
expert professors’ responses to moments of student surprise and connection in the
classroom.

A further exploration of the literature on reflective teaching and Schon’s (1983,
1987) theory of reflection-in-action highlights some of the habits of mind and decision
processes that are involved in teaching during moments of surprise. While a great deal
has been written about reflective practice, little specifically addresses the undergraduate
college classroom.

This dissertation is a formal outgrowth of the initial pilot study and subsequent
reading. The research used active interviewing (Gubrium and Holstein, 2003; Holstein
and Gubrium, 1995) of experienced college faculty teaching undergraduate classes to
arrive at a fuller description of teachable moments and professors’ responses to them.
Furthermore, I consider the usefulness of using theories of reflection, specifically
reflection-in-action to illuminate our understanding of such interactions.

Problem

The term "teachable moment" is used extensively in literature about teaching, but
the meaning of the phrase varies from author to author. Many authors use the term to refer to a significant event that can be incorporated into one’s teaching to make course content more relevant (Hamilton, 2005; King & Lindsay, 2004; Zlotkowski, 2003). Presidential elections, the controversy over Don Imus’ Rutgers women’s basketball comments, and the immigration debate are current examples of these sorts of “teachable moments.” While the phrase occurs frequently, there is little systematic exploration of what it means in the context of a college classroom.

Writings in many cases exhort teachers and professors to stay abreast of current events and make explicit connections between their disciplines and the larger environment, implying that the “teachable moment” exists in the environment and can be tapped into by the professor (Caswell, 1991; Hamilton, 2005; Zlotkowski, 2003). At best, these moments provide professors with the opportunity to demonstrate curricular relevance to current events. There is no assurance, however, that the connection will be made or understood by a given student. Other authors (Hansen, 2003; Rockman, 1993; Stewart, 1993) suggest that making lively classes with engaging examples or experiential learning can create teachable moments. Both sets of writings suggest that teachers can create such moments, but do not address the element of surprise.

There is some research concerning the study of the more spontaneous type of teachable moment generated within students themselves. Much of the actual “teachable moment” literature involves early childhood and elementary school settings (Hansen, 1998; Hyun & Marshall, 2003; Rockman, 1993) or clinical educational settings (Byuck & Lang, 2002; Fabiano, 2003; Schultz, 2002; Wagner & Ash, 1998). The early childhood
literature focuses on the recognition of developmental stages encouraging teachers to look for signs that children have entered a new developmental stage, signaling readiness for new learning. Early childhood teachers learn to watch for these developmental signals of “readiness” before teaching new skills to young children. Ideally, college professors could similarly look for the readiness signals college students may demonstrate before introducing new concepts or perspectives. However, these developmental “teachable moments” may not apply to much of the teaching that takes place in the more traditional college or university classroom. This is due in part to the fact that university faculty are rarely well versed in college student developmental theory, and in part to the subtlety of the transitions between stages that makes them less frequently revealed during a college class meeting. Furthermore, college class sizes may be larger, or be so lecture-based that the degree of possible interaction is considerably less than early childhood educational settings.

Other authors describe teachable moments that arise in clinical medical and laboratory settings where experiential learning provides students with opportunities to connect theory and practice (Buyck & Lang, 2002). The clinical education literature, especially that concerning medical education, addresses the need for clinical supervisors to recognize and capitalize on teachable moments. (Buyck & Lang, 2002; Schultz, 2002) While surprises may still occur in these settings, clinical experiences are designed specifically to highlight the theory-to-practice connection. It is important to recognize and capitalize on such moments, but the anticipation of them is fundamental to the clinical programs.
Buyck and Lang (2002) discovered in their research that even in these clinical settings, teachable moments may be missed. In a more traditional, non-laboratory college classroom, the students’ experiential backgrounds may be less predictable and less bound by specific classroom experiences. Students are freer to make wide-ranging or personal links beyond the professor-expected bounds of the subject. The professor may be oriented to accomplishing specific goals and not be looking for the same kinds of connections. The less predictable the connection, the more adaptation may be required by the professor. This study attempts to offer a rich description of the many kinds of teachable moments that arise and some expert ways of thinking about them. As a result of having a description, the surprise element, while never eliminated, may be reduced allowing more effective responses.

While teachable moments may be easy to miss if the teacher is focused primarily on covering specific material, there is real value in recognizing teachable moments. Since the sixties and probably before, students have called for relevance in their studies, and challenged professors to provide “real world” connections. Student-generated connections and teachable moments can be seen as calls for curricular relevance. Professors who miss or avoid the opportunities to establish their disciplines’ relevance risk losing the interest of their students. Iannone (1995) and Rea (2003) argue that the ability to respond to such moments enhances student perceptions of faculty credibility.

We do not at this time have an adequate description of teachable moments nor an understanding of the decision-making processes used by professors as they reflect upon whether and how to capitalize on surprises when they occur. Defining, describing and
understanding the phenomenon of the teachable moment can facilitate professors’ ability to recognize and capitalize on their occurrence. Because we tend to recognize or seek out phenomena we are familiar with, a more complete description of these unanticipated “aha” moments can assist faculty in responding to them constructively. Furthermore, a discussion of possible responses to such moments can increase professors’ repertoires of possible responses and help define those approaches that work to sustain learning.

Pilot Study

For my initial research, conducted in the spring and summer of 2005, I reviewed the existing literature on teachable moments and conducted medium-length interviews (approximately 30 minutes in length) with six faculty members at a local community college and six faculty at a large research university, all having at least ten years teaching experience, and representing several disciplines. Three men and nine women participated. All of the interviews were recorded and analyzed thematically. The key findings of these preliminary interviews addressed the manifestations of teachable moments, descriptions of some of the types of connections students might make, the creation of teachable moments, and influences on faculty responses to teachable moments. Based on these preliminary interviews, I began to develop a description of some of the characteristics that distinguish a teachable moment from usual class time.

A preliminary definition or description of teachable moments emerged from my analysis. A teachable moment is a moment in class when an instructor perceives that a student has made a connection between the content of a particular class session and something outside the instructor’s original plans for the class. The professors who
described their experiences with teachable moments said they manifested themselves in two ways.

1. Verbal manifestations such as student questions, comments or errors. Students may inquire about a current event, another course, or a personal experience. One example would be the student in a social psychology class who sought to understand the phenomenon of post-Hurricane Katrina looting. Errors can provide teachable moments by revealing a need on the part of a student. A misapprehension can be carefully and appropriately examined in the light of the course content. These often arise in classes that address social issues. An instructor who hears an expression of a stereotype can, if careful, use that opportunity to open a discussion, allowing students to develop new understandings of the nature of such stereotypes.

2. Visual manifestations. Faculty reported seeing “the light bulb” go on. Students’ eyes widen; they sit forward, showing heightened attention; they may leaf back through notes or book. In other cases a student, when challenged, may look disconcerted, with a furrowed brow, a frown or a puzzled expression. This allows the professor to follow up with a request for input or questions, or to ask students directly about their reactions.

When students make a connection between class material and some other concern these student-created connections take different forms. The connections described to me in the first round of interviews fell into three broad categories.
1. Connections that are entirely within the scope of the course, connecting previous material to current material. An example in mathematics is the student who realizes the value of factoring upon learning to solve quadratic equations.

2. Linkages between something happening in a course and something in the larger environment. Major current events such as Hurricane Katrina have provided numerous teachable moments across a range of disciplines. These teachable moments provided an opportunity to demonstrate the relevance and the methods of a discipline in framing our understandings of phenomena. One professor described her experience teaching women’s studies in the days after 9/11. The students challenged her to find a connection, suggesting that feminism was not relevant to any analysis of the attacks. She was able, however, to bring in gender issues in the training of the terrorists, in the tenets of radical Islam and in the responses and even presentation of the victims. An archeology professor explained that her task when challenged is to “Ask where is the archeology in this situation, not how does this fit into archeology.” This allows her to assume a connection and then find it.

3. Connections between the course and the student’s personal experience or emotions. One professor described a student’s response to a poem as enlightening a personal conflict he was having. The student demonstrated greater attention to the content of those sessions.

Whether the manifestation is heard or seen or both, and whatever the kind of connection, the teachable moment triggers an interaction between professor and student. One professor talked of it being like a friendly ping pong match, where the student
serves, and it is then up to the professor to return the serve so the students or students can reach the ball, and the professor and the class can sustain the volley. The implication in these descriptions is that the student can react or act comfortably and the professor can respond constructively. The preliminary research, however, did not explore the classroom conditions that may allow such connections to emerge, though it did reveal something about what influences the decision to pursue such a moment when it does emerge. The research reported here will thus expand significantly on these initial interviews and preliminary findings.

Once professors recognize that a teachable moment is potentially occurring, they must decide whether or not to pursue the opportunities it may present. This decision to pursue a teachable moment can have significant impact on perceived teacher effectiveness.

Interviews revealed at least six significant factors that influence this decision.

1. The relevance of the student perceptions to the goals of the course, or, in some cases, the larger program. Some faculty would integrate student connections if they fit with that day’s lesson, while others would consider the larger themes of the course.

2. The instructor’s feeling of mastery of the material. Faculty reported that they needed to have a breadth of knowledge in order to encourage the student to express the connection and then frame it adequately for the rest of the class.

3. The professor’s ability to manage the ethical and personal considerations, and the potential impact on students. One professor told me that if a student asks a question about gay marriage, for example, she considers how such a discussion might impact any
gay students in the class. She decides whether and how to pursue a topic based on her knowledge of the students and her confidence in her and their ability to continue constructively.

4. **The students’ interests, needs and abilities.** Deciding to pursue a teachable moment, and extend its reach beyond the original student, requires that the other students be able to make and be interested in the connection.

5. The likelihood of maintaining control of the class to prevent what one English professor called the “deterioration into polemics,” veering off into irrelevance, inappropriate self-disclosure and/or attention seeking.

6. Time and the pressure to cover the material. One professor asked himself, “If I pursue this now, how much [of this other planned material] can I expect them to cover on their own?”

Some faculty reported reaching compromise decisions. One calls the process “acknowledge, appreciate and table.” This involves pointing out the connection the student has made, addressing its value to the course as a whole and proposing either a return to the topic at a later date, resources for more independent research, or an offer to take up the conversation during office hours.

For professors to recognize potential teachable moments, they need to know their students, their levels of ability and readiness and their interests, and know how to recognize students’ opening volleys in the ping-pong game. Students need to know that they are in a class where their concerns and questions will be acknowledged and can be pursued, while the professor’s own expertise and skill will keep the class on track.
towards the course’s short- and long-term goals. The instructor’s concern is to create an optimum balance between the interests of the individual student and the greater good of the class as a whole. As we refine our understanding of teachable moments in college classrooms, we can better learn ways to maximize the opportunities offered by these serendipitous events.

This preliminary research yielded a thumbnail sketch of the teachable moment phenomenon and possible faculty concerns and responses. Since the interviews were conducted retrospectively, and generally without reference to specific events and without prior reflection on the part of the participants, the outlines are still general and somewhat vague. The purpose of this project and the more extensive interviews is to fill in more of the detail. By interviewing each faculty member two times, and by asking people to explicitly share with me their examples and definitions of moments along with descriptions of their decision-making this study yielded a more detailed and richer understanding of teachable moments.

Purpose

The purpose of the study, then, is to describe faculty experiences of teachable moments in their undergraduate college classrooms, especially the recognition of unplanned moments and the contexts in which they arise. Some professors are seemingly more aware and deliberate in watching for such moments and capitalizing on them than others. This research is intended to heighten awareness of the existence and the potential of such moments in college classrooms, so more faculty can look for and act on them when they occur. The current teachable moment literature applies largely to educational
settings other than the undergraduate classroom. This study attempts to transfer some of that awareness and/or to expand the understandings as they relate to college teaching. Since we are more likely to recognize that which we have named and defined, describing and defining teachable moments in the college classroom can facilitate faculty readiness to act on such events. A better sense of the contours of these experiences can enhance the recognition and response to unanticipated opportunities.

A second purpose is to articulate the decision-making processes some expert faculty members use to decide whether or not to pursue such moments. I also use Donald Schon’s (1983, 1987) theory of reflection-in-action as a framework for understanding college classroom interaction in moments of unplanned teachable moments. The theory as described in his books applies to one-on-one teaching situations of professional practice. It focuses on the individual’s interactions in an unplanned moment and the ability to reflect on the spot to see one’s own role in the generation and resolution of surprise. There is some debate about its applicability to classroom teaching, but it seems to connect to teachable moments. This study examines the relevance of the concept to the study of classroom interactions.

Research Questions

There are several research questions that follow each other in sequence as we begin to explore the teachable moment. Questions one and two are descriptive questions addressed in the preliminary data collection and then refined with greater detail in follow-up interviews. The last question is addressed in my analysis of data examining the applicability of Schon’s theory of reflection-in-action. The research questions are
1. What are the elements that characterize a teachable moment in a college classroom?

2. What kinds of considerations contribute to or interfere with opportunities to explore these moments when they occur?

3. Can the teachable moment be understood in terms of reflection-in-action? If so, is there both a pedagogical and discipline-based reflection-in-action? Do professors make their decisions as practitioners of their disciplines or as professional educators?

Conceptual Framework

Schon’s Theory of Reflection-in-Action

In his book The Reflective Practitioner: How Professionals Think in Action (1983) and later in Educating the Reflective Practitioner (1987), Donald Schon describes a model of expert reflection. Proposed to assist professional practitioners in examining their habits of thought outside the tradition of “technical rationality,” Schon’s theories differentiate between the simple application of rules to a situation and an artful analysis of a problem. He differentiates knowing-in-action, the spontaneous response to a previously experienced situation requiring little deliberate awareness of our processes, from reflection-on-action, the asynchronous looking back at a moment, and from reflection-in-action the synchronous reflection, self-examination and testing that experts do when an unfamiliar situation presents itself. Knowing in action requires no reflection prior to immediate action. Reflection-on-action does not lead to immediate action in the context of the original situation; rather it involves looking back on the situation and the action that resulted.
Reflection-in-action takes place in the moment of professional surprise and experimentation under certain conditions, what Schon (1983, 1987) calls “indeterminate zone of practice.” According to Schon, the first condition is the existence of a situation which develops in surprising ways in response to our routine actions thus necessitating that we reflect on our actions. We re-examine the beliefs and assumptions that led to the action we took and as a result “we think critically about the thinking that got us into this fix or this opportunity; and we may, in the process, restructure strategies of action, understandings of phenomena, or ways of framing problems” (Schon, 1987, p. 28). As a result of the reflection, the expert practitioner then experiments. If the experiment works, the problem may be solved; if it does not work, new surprises lead to new reflection and new experiments. Both art and science are involved in reflection-in-action; it is responsive, creative and experimental. Technical skill and rule application, what Schon calls “technical rationality” alone are not sufficient. Schon applies this model to various professional practice settings such as architecture, city planning, psycho-therapy, counseling and musical performance and argues for more studio and clinical experiences in schools, so teachers can model this expert practice.

In *Educating the Reflective Practitioner* (1987), Schon applies the model of reflection-in-action to the professional preparation of these practitioners. How do the people who teach the professionals enact their clinical experiences to foster reflection-in-action? These are case analyses of performing reflection-in-action in order to foster reflection-in-action. He examines how student/teacher interactions in practicum settings
for various fields model professional reflection-in-action as they prepare new professionals in clinical settings.

_The Ladder of Reflection_

Schon’s (1987) work details reflection-in-action in a teaching setting using the metaphor of a ladder, calling this the “ladder of reflection.” Since _Educating the Reflective Practitioner_ is about how to teach reflective practice, he considers moments in which that seems to be successful and moments in which the desired learning does not occur. Successful teaching and learning happen when the teacher and the student are on comparable rungs of the reflective ladder. The rungs, from the most basic to the most developed levels, are:

1. The skill being taught. At this level the student is watching what the teacher is doing, and trying to copy it.

2. Description of the skill. At this point the professor describes the skill, articulating what the student should do.

3. Reflection on the description of the skill, the instructor begins to look at the interaction and think about the effectiveness and response to the description offered and

4. The instructor reflects on the reflection to identify assumptions and make any adjustments if necessary.

Since the instructor has the breadth and depth of understanding in the subject the instructor is responsible for reading the student’s responses as indicators of student level and making the movement up and down the ladder.

Other factors that are necessary for the students to learn include willingness on
their part to follow and imitate, at least temporarily, and a willingness on the part of the teacher to reflect on the level and understandings manifested by the student responses. The ladder is really the metaphor for reflection-in-action of the successful teacher. In examining the existing literature on teachable moments we see some overlap implicit and unstated with the ladder of reflection-in-action. Faculty ability to respond to surprises in a constructive and educational manner requires reading student responses and readiness in the interactions. The classroom setting multiplies the number of responses and interactions beyond the single-student practicums described initially by Schon, but the previously untested responses to surprise and the need for in-the-moment reflection exist in both settings.

Summary

This project is intended to examine the nature of the teachable moment in the undergraduate college classroom from the perspective of experienced college teachers at a large university. The method for the study was active interviewing, in which the interviewer and the interviewee co-created a new understanding of the phenomenon. After the data is presented and organized to describe teachable moments, Donald Schon’s theory of reflection-in-action serves as a frame for the analysis of interview responses. The study is intended to yield a richer description of surprise teaching opportunities in the college classroom and effective means for capitalizing on such moments.

Coming Attractions

The remainder of this dissertation addresses the related scholarly literature, the design for the study, then it presents data to describe the teachable moment and
professors decision-making processes. Finally the data is analyzed in terms of its implications for theory, particularly Schon’s theory of reflection-in-action, and its implications for practice and future research. Chapter Two examines the literature concerning teachable moments, reflection and reflection-in-action. The teachable moment literature I include focuses largely on research efforts to describe the elements of such moments, their value and pursuit. Given that there is little relating directly to teachable moments in the college classroom, the review encompasses some of the theories from childhood and clinical education as well. The literature relating to reflection, on the other hand, is very broad. In an effort to focus and manage the scope of the project, I have differentiated between synchronous and asynchronous reflection and focused the review on the synchronous reflection exemplified by Schon’s (1987) reflection-in-action and the literature relating to it.

In Chapter Three I describe the method used and the rationale for selecting active interviewing, including a discussion of active interviewing, my selection of participants and my strategies for coding and analysis. Chapter Four then presents data from the interviews organized around the first two questions concerning the definition of teachable moments and the decision to pursue them. Chapter Five then analyzes the implications of the data as it relates to theories of reflection and as it relates to the practice of college teaching. Finally I discuss implications for further research into the teachable moment.
CHAPTER TWO
REVIEW OF THE LITERATURE

This literature review examines the current writing exploring the concepts of teachable moment and reflection-in-action. Teachable moment is a term used in both the professional literature and casual conversation to refer to a range of situations in which students appear more receptive to learning something new. Reflection-in-action, as described by Donald Schon (1983, 1987) attempts to describe expert practice in the professions, specifically expert practices used in encounters with unexpected problems. The possible link between the teachable moment and reflection-in-action emerges when we examine how practitioners capitalize on teachable moments in educational settings.

The literature selected for this review applies directly to the planned research questions or provides context for understanding the critical concepts of reflection-in-action and teachable moments. The research questions to be explored in this dissertation are

1. What are the elements that characterize a teachable moment in a college classroom?

2. What kinds of considerations contribute to or interfere with opportunities to explore these moments when they occur?
3. Can the teachable moment be understood in terms of reflection-in-action? If so, is there both a pedagogical and discipline-based reflection-in-action? Do professors make their decisions as practitioners of their disciplines or as professional educators?

I begin by examining the literature on teachable moments in several contexts, curricular and extra-curricular. Then I will summarize some of the available literature on reflection-in-action, focusing on educational practice.

Teachable Moments Literature

The term teachable moment is used in many settings from research on teaching to casual conversations about parenting. It is a phrase that is heard so often it has developed a taken-for-granted quality that often leaves it unexamined. The literature addressing teachable moments is also expansive, but the term often remains just as undefined. A search for literature on the teachable moment reveals a mix of uses from catchy titles to serious curriculum theory to analytic research on the elusive event. The descriptions’ commonalities are a learner who is ready to learn and a teacher who is poised to capitalize on this. Theories vary, however, as to how this moment comes to be and what the teacher’s response should be.

While a Wilson Education Full Text search of the phrase teachable moment yields 379 hits as of April 1, 2007, many of those citations use it as catch phrase or a reference to a moment that captures someone’s attention. Most do not include any real analysis of the moments themselves, their emergence or their pursuit. Almost any current event or environmental condition can evoke the use of the phrase. An advertisement about slavery reparations created a teachable moment by giving rise to discussions of the history of
slavery (Hamilton, 2005). A diagnosis of AIDS is a teachable moment for learning about sexual practices in Fabiano’s (1993) article about AIDS education. Little of this literature actually describes a moment in a college classroom in which a student-initiated interaction prompts a professor to change plans to pursue that new idea. Much of the literature concerning teachable moments is based in either K-12 education (Hyun and Marshall, 2003, Rockman, 1993, Siegrfried, 1992, Willis, 2007) or in clinical or practicum settings (Buyck & Lang 2002; McNutt, 1997; Schultz 2002;). The K-12 literature addresses the creation and recognition of teachable moments. The literature from clinical settings assumes that such moments arise; indeed, clinical experiences are designed to insure their occurrence, and the literature is concerned with the recognition and constructive pursuit of the moment. Both sets of literature emphasize with the need to capitalize on teachable moments when they do arise, and both provide insights into the nature of such incidents and their value.

There is, however, a smaller set of readings that actually addressed such events in the traditional college classroom. Therefore, this literature review will address literature based in K-12, clinical and post-secondary education in an effort to glean the salient aspects of the research and the applicability to the college classroom experience. The overview of teachable moment literature begins with a consideration of the stimuli for such events within and outside the classroom. This will be followed by an examination of the role of planning in the generation of such moments, placing literature on a continuum of anticipation, from those who assert that the teachable moment lies in the specific plans of the teacher to those who argue that teachable moments originate in the
surprises that arise in the course of instruction. Other literature considers the types of connections these moments create, the conditions under which such moments are likely to arise, the nature of teacher responses and the stakes involved in responding to such events.

**Stimuli for Teachable Moments**

Some of the primary considerations in teachable moment literature seem to be the origins of such moments and various factors that may create or foster them. Some teachable moments have their roots in the larger environment; others result from individual experiences. In some literature the teachable moment is planned or is the expected result of planned experiences, in some cases it is unplanned but anticipated and in other cases the teachable moment is unplanned and results from surprise interactions between teachers and students.

Since the teachable moment literature relates to the connections between something new and the need to understand or explain it, the teachable moment has its roots in the experiences and phenomena that students and faculty encounter. In her literature review concerning master teacher behavior in a doctoral pharmacy practicum Schultz (2002) sorted the stimuli for teachable moments into four distinct categories. The first category concerned encounters with developmental tasks; next she described “everyday seminal events” such as interpersonal conflicts. These two areas are addressed in Caswell’s (1991) argument that student judicial board activity provides teachable moments for students to learn adult responsibilities. Another category included larger “tumultuous or cataclysmic events” like September 11, 2001 or Hurricane Katrina, seen
in such writing as Zlotkowski’s (2003) argument that September 11, 2001 provides a teachable moment for students and for faculty to re-examine science education; or in Hamilton’s (2005) description of Brown University’s confrontation of the history of slavery as a result of a controversial anti-reparations advertisement. Finally, there were “critical moments involving life-shaping decisions” such as choosing a college. Articles such as Fabiano (1993) on AIDS education or Lassiter (2005) indicating that pregnancy is a teachable moment for smoking cessation might fit in this category. In all of these cases individuals are faced with an issue that is either personal or that exists in the larger environment but is relevant to the individual, the life of the campus and/or the curriculum and which they feel a need to understand and respond to. All of these authors recommend educational responses to these challenges; they do not, however, address individual classroom interactions or decisions that may tap into such moments.

Planning and the Teachable Moment

Other literature examines the relationship between planning and the emergence of the teachable moment in a classroom. Some literature, especially in K-12 but also in college, suggests that it is good planning on the part of the teacher that generates and allows pursuit of such moments. Other descriptions can be categorized as unplanned, but anticipated, and the rest address surprise as an element in their creation.

Within the curriculum there are both formal in informal approaches to the teachable moment. In one segment of the literature, primarily centered on K-12 education, the responsibility for creating the teachable moment falls on the teacher. Those who believe the teachable moment can be created bring in outside events or
interests in an effort to stimulate learning. It is this introduction of surprise for the
students (but not the teacher) that is supposed to create the moment. Siegfried (1992)
encourages elementary teachers to use the popular culture to stimulate students’
involvement and create teachable moments. This approach suggests the author is
equating interested students and teachable moments. On a more structured level,
Rockman (1993) writes about the teachable moment in information science as being the
responsibility of the teacher, and encourages the use of Madeleine Hunter’s (1979)
anticipatory set to create that moment. Not all of the planned teachable moment literature
is based in K-12 education. In higher education the use of computer simulations or case
studies generate teachable moments as in the dissertation on using the Fed Cattle Market
Simulator to create teachable moments in agricultural economics (Hogan, 2003).

Another area of literature which addresses the teachable moment involves clinical
or practicum settings, where students are placed in actual situations in which they need to
learn new information in order to successfully address an immediate problem. While
these are less structured than a planned lesson, the realm of the topics is likely to be
within the expertise of the supervisor and their occurrence is an anticipated in the design
of the practicum. McNutt (1997) reports that pastoral visits for those training for the
clergy provide teachable moments for the trainees and for those they visit. Wagner and
Ash (1998) find that teachable moments arise in a nursing practicum when the student
and supervisor interact over issues the student is facing. These experiences combine the
unplanned nature of issues in professional work-life with the resident expert to mediate
the learning.
The role of the teachable moment in clinical settings is examined in more detail in Schultz’s (2002) study of doctoral pharmacy students and their clinical supervisors. She argues that the teachable moment is a central element in the clinical practicum for pharmacy students. Her analysis of those teachable moments centers on the problems and interactions the students had with patients and the interactions of the students with the supervisors to address those issues. While they are less structured than specific lesson plans, they are more structured and anticipated than serendipitous moments in a classroom.

In a classroom, not a clinical or lab setting, Hansen (1998) relies on his knowledge of the subject areas and probable student connections to foster teachable moment in his college classrooms. His article on teaching college psychology and public affairs argues that the professor controls the content and methods of a class, but does so in such a way as to create learning and allow the students to bring in their questions and reflections. He asserts that it is the role of the professor to disrupt students’ beliefs and challenge their pre-existing ideas about psychology or public affairs. If instructors do this in a way that is provocative and supportive, teachable moments will occur and students will learn more because of this element of surprise. Hansen’s teachable moments may be less predictable than a planned lesson, but they remain mostly based in teacher planning within the range of probable student responses to teacher challenges.

It is also possible to anticipate teachable moments that might arise out of the outside events, like Schultz’s (2002) categories for “cataclysmic events” or “critical
moments”. In such cases students may seek connections with their academic courses to help them understand the events at hand. Again, September 11 and Hurricane Katrina provide examples. In my own conversations with students, professors who did not address 9/11 upon returning to class seemed irrelevant or detached, unable to use their fields of study to help students process tragedy on such a scale.

Since post-secondary institutions are learning environments within and beyond the classroom, portions of the literature address necessity of the connection between the environment and the classroom. Iannone (1995) warns that the teacher who cannot respond or re-organize when disruptions occur loses the students’ confidence or their attention or both. Hamilton (2005) cites protests at Brown and the debate over reparations for slavery as creating a teachable moment for the campus to consider its own historical ties to slavery, leading to extra-curricular activities, speakers and publications. King, and Lindsay (2004) suggest that the total campus environment can help to create and sustain teachable moments through the strategic use of student services, residence halls and activities to supplement the traditional curriculum.

There are also analyses of teachable moments that center on unplanned moments in the classroom. Hyun and Marshall (2003) propose a Teachable Moment Oriented Curriculum in elementary schools. This is based on the constructivist idea that the teacher and learner are co-constructors of knowledge. In their curriculum, teachers identify teachable moments by more than the readiness of the child to learn. Rather, they suggest that the teacher must also identify moments in which the child is ready to teach and the teacher is ready to learn. This requires
a purposeful practice that evolves from teacher’s careful and on-going observations, their ability to recognize the unique essence of the situation, and, most importantly, their ability to make sense of the moment from the child’s point of view (p. 120).

They do this by “by temporarily ignoring institutional identities to become participating members in an interdependent teaching and learning community” (p. 125). This is both constructivist and reflexive in nature and requires that the teacher be open to surprises.

Teacher readiness to learn and to acknowledge errors is the primary factor in Crovitz’s (2006) article about teacher bias and the teachable moment. In this piece, the author tells how he, without really thinking about it used the phrase “Too many chiefs and not enough Indians” in a composition class. Recognizing the personal history and bias this revealed, he initiated a discussion of his own blunder and reworked several class sessions to address biased language, using himself as the model. In this case the professor made a connection and experienced new learning which he tried to share as a teachable moment with his class. He does, however, acknowledge that while he felt a strong connection and rethought his teaching, he cannot be certain that the impact was as powerful for his students.

Other exhortations to attend to the teachable moment are also based on teacher readiness to confront surprise. Elsbree (2002) discusses using conversations and overheard remarks that reveal homophobic attitudes as teachable moments that allow the teacher to disrupt these beliefs. She is actively listening for misapprehensions and biased utterances and is ready to respond, but cannot necessarily anticipate their nature or their
source. In this vein, Miller (1993) cites teaching opportunities and methods relating to what he calls “objectionable utterances” that must be addressed in the course of class discussions. While the professor can anticipate that students may hold certain attitudes, the professor cannot be sure who does, what form those attitudes may take, how they may be expressed, or how they will affect other students in the class. These kinds of teachable moments may be anticipated, but unpredictable.

Recent neurological research reinforces the idea that the surprise teachable moment is significant for student learning. Willis (2007) reports that neurological research shows that when students have a personal connection between the information they are learning and their own lives and when the element of surprise is present, the student will be better able to store and recall that information. Since teachable moments are defined by the existence of the personal connection, if they also can tap into surprise, they provide some of the most long-lasting learning. The research suggests that the more vivid the experience, the stronger the memory. Willis applies this neurological research to her own elementary school classroom, emphasizing the need to be open to surprises and to keep students engaged and reflective about them.

**What Fosters a Teachable Moment?**

In cases where the teacher or professor plans for a teachable moment, its pursuit is an assumption of the lesson and its nature is believed to be predictable. Where teachable moments they arise and are made an element of educational practice, certain conditions facilitate their emergence and their sustenance. However, surprise moments require some extra conditions if they are to be generated and pursued. A survey of the literature
addressing conditions that sustain teachable moments covers both environmental and attitudinal qualities. Some suggest very general conditions, like Stewart (1993) who argues that an elementary school where children and teachers are in positive moods creates teachable moments. Others describe in more detail the elements that combine to foster such moments.

Without naming the teachable moment Dewey (1933) describes many of the qualities a teacher should possess in order to foster thinking in students. The teacher’s knowledge should be

…1 abundant to the point of overflow. It must be much wider than the ground laid out in the textbook or in any fixed plan for teaching a lesson…so that the teacher can take advantage of unanticipated incidents…The teacher must have his mind free to observe the mental responses and movements of the student members…and must make special preparation for particular lessons. Otherwise the only alternative will be either aimless drift or else sticking literally to the text. Flexibility, ability to take advantage of unexpected incidents and questions depends upon the teacher coming to the subject with freshness and fullness of knowledge. (pp. 274-276)

These qualities are echoed today in the teachable moment literature.

Almost eighty years later, in her analysis of the teachable moments in a pharmacy practicum Schultz (2002) generated a list of conditions for a teachable moment. She identified clinical practitioners (CP), who were considered master teachers in the pharmacy practicum, observed students in all aspects of their clinical practicums, and did
an analysis of potential and realized teachable moments. The conditions for a teachable moment as gathered in her study include,

1. Trust, openness and a willingness to share
2. Engagement on the part of the CP and the student with the teachable moment
3. Consciously investing time to pursue and develop
4. Time for reflection
5. Subject or content knowledge on the part of the CP and the student
6. Sustaining a process of collaborative inquiry (p. 231)

Schultz concludes that

anything and anybody has the potential for becoming part of that teachable moment or being the vehicle for that teachable moment. The CP and the student can become engaged in a teachable moment, each on an individual basis or each can draw the other into the teachable moment. P. 211

This research described conditions in a clinical practicum with advanced students, but many of the conditions are echoed in research on classroom practices.

Faculty who pursue teachable moments, need to keep their goals in mind as they do so. Consciousness about goals, and focus on particular goals can influence both pursuit and recognition of teachable moments. This goal awareness is cited in the literature covering planned teachable moments (Hansen, 1998; Rockman, 1993), clinical (Fabiano, 1993; Schultz, 2002) and unplanned (Iannone, 1995; King and Lindsay, 2004; Rea, 2003). Evidence of the influence on recognition is provided the by Buyck and Lang (2002) study of clinicians’ medical communication skills. Using a fairly general
definition of teachable moment as a “point…they believed warranted feedback to the learner” (p. 338) Buyck and Lang showed medical school faculty videotapes of patient/clinician interaction. The medical faculty members were supposed to observe the interactions and suggest moments which they thought indicated that the clinician could benefit from communication skill instruction. Faculty ability to recognize a teachable moment varied widely, for example 29.6% missed all opportunities to teach a clinician to build rapport with a patient, and 31% identified all of those chances; and 57.6% missed all of the opportunities to address responses to patients’ emotions and 18% identified all of those. The authors hypothesize that while communication skill improvement was supposed to be a goal in the clinical setting, the faculty members were heavily focused on the medical content and were not considering the communication goals. While their sample included only 67 members of the medical faculty, their results suggest that instructors who are expected to teach in clinical settings need to be aware of all of their instructional goals and develop the recognition of opportunities to teach them.

Entwistle and Walker’s (2000) narrative case study details one lecturer’s developing awareness of teachable moments and developing understanding of instructional goals. They describe the initial needs of the new instructor to cover the syllabus and be sure students have the content, but “with experience and increased confidence, institutional requirements are still acknowledged, but move more into the background. In the foreground come more advanced possibilities for learning which encourage students to explore…” (p. 352). Entwistle and Walker go on to suggest that there is both an expanded awareness of goals and of learning and “a strategic alertness,
capitalizing on chance events in the classroom to create springboards to significant learning.” (p. 357) It is the combination of the expanded goal set and the “strategic alertness” that allows experienced professors to take advantage of unplanned moments in their college classrooms.

Confidence in one’s breadth and depth of knowledge also emerged as necessary for pursuit (Fabiano, 1993; Hansen, 1998; McNutt, 1997; Rea 2002). There is also a need for trust and comfort and a willingness to work as a team on the part of the student and the teacher (Hansen, 1998; Schultz, 2002; Stewart, 1993; Wagner and Ash, 1996). In my pilot study, many of these themes emerged as professors spoke of balancing the goals of the syllabi with calls for relevance, of being sure the rest of the class could benefit from an individual’s questions, and of keeping up with their fields in a broad sense so they can draw on a wide range of information when called upon to make connections.

In addition, Hansen (1998), writing about teaching psychology and public policy college students, also asserts that for the teachable moment to be used students need to be in a state of intellectual disequilibrium. The teacher is then responsible for designing instruction, discussion and writing opportunities for the moment to be meaningful. This is reinforced in Willis (2207) discussion of surprise. The need for time to reflect and process the learning asserted in Schultz (2002) is echoed in Hansen (1998) and McNutt (1997).

The willingness to pursue unplanned opportunities for learning is discussed in the literature connecting teachable moments to chaos theory (Iannone 1995; Rea 2003). Iannone asserts that, while keeping the goals of the curriculum in mind, the teacher must
be flexible enough to respond to what he calls “disruptions.” He goes on to suggest that chaos theory opens the door to new ways of thinking about the balance between rigidity and chaos by knowing the goals of the curriculum but allowing for re-adjustments along the way.

Rea (2003) provides a more detailed analysis of the concept of chaos theory in curriculum. Using Michael Bentley’s definition of a seizing a teachable moment “producing a lesson on the spot in response to a question, an expressed student interest, or a news story about a science-related event in the outside world,” (In Rea 2003, p. 1) and his reading of chaos theory, Rea proposes that the decision to pursue teachable moments in a classroom can be examined in terms of complex system adaptability. In order for any complex system (and a classroom is a complex system) to survive it must adapt. This requires strong enough ties among the parts of the system to sustain itself, but enough differentiation among the parts to be flexible. In a classroom there is enough difference in the identity and authority of the teacher and the students to allow change, and there is a strong enough connection among them to allow stability. When that balance exists, classes can pursue teachable moments without deteriorating into complete chaos. Being either too rigid or too flexible, however, prevents a system from adapting to new complexities so it cannot survive. He proposes a continuum or taxonomy of responses to teachable moments and the style with which they are associated. See Figure 1 on the next page.
Our current understanding of chaos theory takes us back to the extremes described by Dewey (1933), “literally sticking to the text” at one end and “aimless drift” at the other.

**Teachable moment summary**

Teachable moment literature covers K-12, clinical and some higher education teaching literature. The term is used to refer to a moment in which a student is more ready to learn material because of the existence of a perceived connection between something they want to understand and the content of a course. Some literature advises faculty on how to create such moments while other literature advocates readiness for surprise and explores the conditions under which such moments can be capitalized upon. In any case, in order for a teachable moment to be meaningful, someone must recognize it and take the necessary steps to turn it from potential to actual learning. This is the connection to reflection-in-action.

**Reflection Literature**

The concept of reflection is complex. The term surfaces in many middle, high school and college classes as well in many professional programs. Students are exhorted to reflect on their assignments, their portfolios, their experiences, their learning and their teaching. They keep reflective journals, write reflective papers, and create reflective art.
In fact, Boud and Walker (1998) warn against the overuse and misuse of reflection in poorly designed assignments and feedback, suggesting instead ways to keep the use of professional reflection meaningful. While there are many definitions and analyses of reflection, they seem to have certain elements in common.

In his concept analysis of reflection Rogers (2001) identified different conceptualizations of reflection and categorized them according to their central focus, timing and content. He went on to analyze the common elements that make up reflection across the literature and defined reflection, in general as a cognitive and affective process that (1) requires active engagement on the part of the individual; (2) is triggered by an unusual or perplexing situation or experience; (3) involves examining one’s responses, beliefs, and premises in light of the situation at hand; and (4) results in integration of the new understanding into one’s experience. (p. 41)

Rogers called reflection-in-action a synchronous concept in that the timing of the reflection (in the moment, not on the moment) is a key element of the concept.

Reflection-in-action has as one of its core dimensions immediacy or in-the-moment timing while other conceptions of reflection may be more retrospective. In a broad sense there is more than one interpretation of the word “reflection”—one referring to retrospection and the other referring to the direct turning back of an image (as with a mirror.)

Reflection-in-action has generated a great deal of discussion and debate since Schon (1983, 1987) proposed it as an alternative way to understand the creative actions
of experts in surprise situations. Much of the debate over reflection-in-action centers on this immediacy—the idea that reflection-in-action occurs within a moment, sometimes barely registering as a distinct process. Some of Schon’s critics (Eraut, 1995; Roth, Lawless & Masciotra, 2002) hold that true reflection requires time and retrospection and, therefore, cannot be synchronous. Schon’s reflection-in-action has much of the immediacy implied by the mirror interpretation mentioned earlier. This literature review acknowledges the extensive body of work on reflection in general, but for purposes of this research, I have focused on that work that relates to reflection in the moment rather than the less time-bound, more retrospective interpretations of reflection.

Introduction to Reflection-in-Action

While the literature on reflection is quite extensive, the literature on reflection-in-action is focused heavily on the teaching and helping professions and on clinical or studio experiences. Research on reflection-in-action can be found in a wide array of fields: using reflection-in-action in “unforgiving environments” like scuba diving classes (Alexander, 1998), teaching pharmacy students (Schultz, 2002) developing business management skills (Seibert & Daudelin, 1999) and teaching religion (Heil & Ziebertz, 2004). Even college admissions professionals are exhorted to use reflection-in-action to make the admissions process more meaningful (Hicks and Shere, 2003).

The notion of reflection-in-action has captured the imagination particularly of nursing and teacher educators, since Schon (1983, 1987) wrote about educating reflective members of the professions. In both professions the immediacy of professional interactions and the need for decisions and reflection in those interactions make
reflection-in-action relevant to developing professional expertise. This review will outline some of Dewey’s work that was antecedent to Schon’s concept of reflection-in-action, and then describe Schon’s theory and the major works that have built upon these foundations.

**Dewey**

Reflection in American education has its roots in the work of John Dewey, especially in his 1933 book, *How We Think*. While Dewey did not specify whether this process was bounded by time, spontaneous or retrospective, he did spell out the steps involved in what he called reflection and he differentiated between reflection and ordinary thinking. Dewey defined reflective thought as

*active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends…* (Dewey’s italics, p.9)

He went on to outline the phases of reflective thinking:

1. Recognizing a problem or a difficulty
2. Defining that difficulty
3. Proposing a possible solution based on reason and experience
4. Experimenting to accept or reject the solution.
5. Examining reasons and proposing new solution if the experiment fails.

We should note that the problem is not solved unless one can identify the reasons for the new ideas. Hence, Dewey stresses the need for doubt and experimentation in reflection
To be genuinely thoughtful, we must be willing to sustain and protract that state of doubt which is the stimulus to thorough inquiry, so as not to accept an idea or make a positive assertion of a belief until justifying reasons have been found. (p. 16)

Dewey’s general description of reflection can be seen as the antecedent to Schon’s (1988, 1987) work on reflection-in-action in its emphasis on experimentation and examination of assumptions. The need to examine underlying assumptions also surfaces in Mezirow’s (1990) work on reflection, some of which precedes Schon’s theory and some of which came later.

Mezirow (1990) writes about the role of reflection in transformative adult education. Mezirow asserts that we can reflect on content, process or premise but it is reflection on premises and previously unexamined presumptions that causes us to transform our frames and our beliefs. Dewey (1933), Mezirow (1990) and Schon (1983, 1987) address the need to examine assumptions in the light of surprise new evidence or information, but in reflection-in-action, Schon is usually addressing actions rooted in prior professional experience, while Mezirow is talking about more fundamental frame changes leading to transformational learning. Mezirow’s model may be synchronous in some instances, but may involve more retrospection and a different use of time than reflection-in-action since it has as its result transformative change, sometimes in basic beliefs and understandings.
Schon’s Theory of Reflection-in-Action

In his book The *Reflective Practitioner: How Professionals Think in Action* (1983), and later in *Educating the Reflective Practitioner* (1987), Donald Schon describes a model of expert reflection. Proposed to assist professional practitioners in examining their habits of thought outside the tradition of “technical rationality”, Schon’s theories differentiate between the simple application of rules to a situation and an artful analysis of a problem. He differentiates *knowing-in-action*, the spontaneous response to a previously experienced situation requiring little deliberate awareness of our processes, and *reflection-on-action*, the asynchronous looking back at a moment, from *reflection-in-action* the synchronous reflection, self-examination and testing that experts do when an unfamiliar situation presents itself. Knowing-in-action requires no reflection prior to immediate action. Reflection-on-action does not lead to immediate action in the context of the original situation; rather it involves looking back on the situation and the action that resulted.

Reflection-in-action takes place in the moment of professional surprise and experimentation under certain conditions. According to Schon, (1983, 1987) the first condition is the existence of a situation, which responds in surprising ways to our routine actions thus necessitating that we reflect on our actions. We ask ourselves to examine our beliefs and assumptions that led to the original action and, as a result, “we think critically about the thinking that got us into this fix or this opportunity; and we may, in the process, restructure strategies of action, understandings of phenomena, or ways of framing problems” (Schon, 1987, p. 28). As a result of the reflection, the expert practitioner then
experiments. If the experiment works, the problem may be solved; if it does not work, new surprises lead to new reflection and new experiments. Both art and science are involved in reflection-in-action; it is responsive, creative and experimental. Technical skill and rule application, what Schon calls “technical rationality” alone are not sufficient.

Subsequent Reflection Models

Dewey (1933), Mezirow (1990) and Schon (1983, 1987) were writing about educational settings, either schools, practicums, or adult education. Other fields have adopted aspects of Schon’s reflection-in-action as well. In their work on managerial learning, Seibert and Daudelin (1999) propose an integrated model of active and proactive reflection, calling it managerial reflection. They differentiate active reflection, “alternating moments of inquiry and interpretation” (p. 175) from proactive reflection, “an induced activity that helps managers extract from experience the lessons it offers” (p. 175) and influences future action. The managerial reflection model that they propose acknowledges the importance of active, or on-line, reflection in some managerial moments, but focuses more on the retrospective reflection that influences future action.

In research directly linking reflection-in-action to college classroom teaching, McAlpine, Weston, Beauchamp, Wiseman and Beauchamp (1999) did a detailed study of six university professors noted for their teaching excellence. The researchers used retrospective accounts and video stimulated recall to develop a model of teacher reflection. As a result of their research they define teacher reflection as the process of thinking about teaching and learning by monitoring cues for the extent to which they are within a “corridor of tolerance” and making decisions to adjust teaching
as appropriate to better achieve teaching and learning goals. They go on to say that reflection-in-action is “is the most cognitively demanding type of reflection yet it is the type of reflection which enables teachers to understand what is actually happening in their classes” (p. 110).

While not specifically addressing teachable moments, certain elements of the work of McAlpine, Weston, Beauchamp, Wiseman and Beauchamp (1999) findings link directly to teachable moments. They found that these professors monitored cues from their students, evaluated those cues in terms of the course goals and made decisions and alterations concerning their teaching based on these elements.

The two processes, monitoring and decision making, and the concept of goals are central to our understanding of how reflection functions. Ongoing use of the processes of monitoring and decision making links knowledge and action and are essential for building and accessing knowledge…Increasing knowledge increases one’s ability to reflect effectively and develop as a teacher. (p. 114)

Clearly, teachable moments are identified by cues from the students. This article did not go into much detail about the nature of the cues, but they are significant. Cues alone, however, were not enough to lead to a change. The authors hypothesize a corridor of tolerance within which the professor may not feel a need to change or outside of which they may not wish to travel. This corridor of tolerance shapes how far from a plan a teacher may be willing to move depending on the cues sent by the class and the adherence to the goals for the day. The authors argue that knowledge of the subject matter and goals allows expert teachers to be flexible and willing, “to take risks by
moving beyond their original pre-class plans as a result of their assessment of cues” (p. 123). Their model of teacher reflection fits with Schon’s theory of reflection-in-action. The new element, the corridor of tolerance suggests that there are limits to changes or to the degree of surprise that might be acceptable without necessitating change. This idea might help to adapt the one-on-one tutorial model reflection-in-action to group instruction.

*The Experience of Reflection-in-Action*

In an effort to describe reflection-in-action Margit Szesztay (2004) interviewed seven teachers who participated in a year-long seminar on reflective professional development. She sought to define reflection-in-action, identify what triggers it and identify the impacts it has on practice. She identifies four possible experiences of reflection-in-action. The first is “the super ego watching” (p. 132) from a distance to see more without being totally wrapped up in one’s own role in the moment. This description demonstrates the synchronous nature of the experience and the mirroring effect—watching everything, including themselves. Then there is a “pause in the act of teaching”, what one teacher called “Hmmm”. (p. 132) Another is the feeling of being overwhelmed then getting perspective and finally, “stepping back” (p. 132) but with some understanding that “what you see is not necessarily what is happening.” (p. 132) Such moments are triggered by difficult work, novel situations and the need to correct a single student while helping others. Sometimes these can be handled with knowledge from past experience, but sometimes new experimentation is required.
Lynn Stockhausen (2005) looked at practitioners who teach nursing in clinical placements. She observed practitioners interacting with patients and with clinical students and described a dimension of reflection-in-action she called *Métier Artistry* which included “reflection, experience, and being in the moment as it unfolds.” (p.58) In *Metier Artistry* experienced practitioners, who may not be consciously modeling or articulating reflection-in-action, nonetheless do model it and reveal it to the student nurses. Actual articulation of the behavior in the course of the interaction with patients would disrupt and nullify the effect of the artistry, but the students can learn to build a repertoire by observing and later discussing what they observed. Thus in the moment reflective action is later examined and articulated so nuances can be highlighted without interfering with patient care.

Wagenheim (2005) studied reflective processes professors in an MBA program using video-stimulated recall of critical incidents in their MBA classes. He was examining the professors’ understanding of reflection-in-action and reflection-on-action along with the ways in which these reflective modes developed. The faculty in his study described their reflection-in-action as framing the parameters of their decisions in the face of surprise. Elements of this frame included the practical logistics and policies governing college classroom instruction—e.g. time, class size, content, student readiness. Their reflection-in-action was also revealed in their commitment to experimental course designs and the willingness to try new things. The experiments, similar to those that Schon (1987) discusses are built into the planning of the course, facilitating surprises which then require flexible course design. Reflection-in-action was sometimes
uncomfortable, and not all experiments were successful, but the act of reflection-in-action led to immediate attempts at reframing, changing goals, changing epistemology or direction. Furthermore, reflection-in-action was a mirroring experience in which professors examined their own teaching, behavior, goals and interactions often leading to changes in one or more of these areas. The descriptions, combined with the idea of examining critical incidents of surprise, make his analysis especially relevant to teachable moment analysis.

_Fostering Reflection-in-Action_

In their study of adult family educators, Ferry and Ross-Gordon (1998) suggest that there are certain characteristics that support reflection-in-action. Expertise is often cited as necessary for reflection-in-action, but Ferry and Ross-Gordon found that regardless of length of experience, those who tended to have reflective problem-solving approaches, had more flexibility in defining problems, used more context-sensitive approaches and tested their ideas in action; while the less reflective, even experienced practitioners operated in a more rule-based mode. Their research suggested that there is something besides experience that contributes to the ability of a professional to reflect-in-action. Perhaps the reflection should not be limited to the practice of a profession, but rather should be fostered in other endeavors, thus enhancing the likelihood of its application in practice.

In her dissertation research into master teacher behavior, Schultz (2002) studied clinical teachers in a pharmacy doctoral program, examining how they used the teachable moment in a clinical, one-on-one setting. In her dissertation, she describes Schon’s
model of expert problem solving combined with artistry and improvisation as influencing her analysis of clinical practitioner instructors. Her work explicitly links the concepts of reflection-in-action and teachable moments. The conditions for a teachable moment include reflection-in-action on the part of the clinical supervisors.

*Critiques of the Theory of Reflection-in-Action*

Not everyone is in agreement that reflection-in-action is a distinct form of reflection or that it is a useful concept for considering teacher decisions in the classroom. Eraut (1995) argues that the idea needs to be reframed, and he suggests changing the prepositions involved. Hence reflection-in-action will become reflection before the action, reflection on action is reflection after action, which could also be reflection away from the action. He goes on to assert that “the more reflection assumes a critical function, the less applicable it becomes to describe it as being in action.” (p. 14). He believes that analysis requires deliberation and asserts that “anything rapid is intuitive” (p. 20) and is based on similar past experiences. This overlooks Schon’s requirement that reflection-in-action be rooted in surprise and in the absence of previous related experiences. Eraut’s theories fall under the definition of reflection as being retrospective and requiring subsequent time. It does not help educators to learn about processes if we lump them into the category of intuition without trying to articulate their character.

Roth, Lawless and Masciotra (2001) also assert that reflection requires time and detachment from an event. They argue that Schon’s reflection-in-action fails to “distinguish between reflection-in-action as an individual cognitive event and emergent transactional events involving and embedding students and teachers.” (p. 184) Teachers
do not have time to reflect while they interact, rather they “enter the student world, enter their reality” (p. 194). Instead teachers develop “Spielraum, room to maneuver…within the immediacy of classroom transactions.” (p.184) If we subscribe to the view of reflection as entirely retrospective, this argument may hold. The suggestion that teachers need to build a repertoire of responses relates more to Schon’s knowing-in-action and does not address the idea that we may face situations for which our repertoire is unprepared. However, if we include the possibility that reflection also refers to the moment in which we face an interaction and our own role in it, then reflection can be said to take place. Steier and Ostrenko (2000) suggest, in fact, that “the action in which we invite reflection ‘in’ (rather than on) is better understood as an interaction--that is, with others.” (p. 67) They urge us to “consider the communication context with which reflection-in-action takes place.” (p.67). If we look at Spielraum in this way, when the teacher does enter the students’ world and interacts accordingly that teacher is doing reflection-in-interaction.

Reflection Summary

Reflection-in-action is a form of synchronous reflection in which a professional when confronted with a surprise problem outside the usual routine solutions of the profession experiments through interaction to find a solution. The experimentation involves reasoning and reflection on underlying assumptions until a solution is identified. The idea has become a topic of teaching research and debate as researchers attempt to describe its elusive, time-bound nature. In the field of education, the concept of reflection-in-action is sometimes used to describe the moment to moment student/teacher
interactions that can change or maintain the direction of a class meeting, lecture or discussion.

While teachable moments and reflection-in-action are core concepts in college teaching, their nature remains somewhat elusive. Research has begun to identify some common elements and links between the two. Both require sensitivity to context, flexibility with goal orientation a willingness to co-create a learning experience. While they may be serendipitous, researchers, especially those using stimulated recall with video are beginning to build models of the phenomena. As we learn more about how they work, we should be able to enhance the likelihood that reflection-in-action and teachable moments can be used more effectively.
CHAPTER THREE

METHODS

This chapter describes the methods of data collection and analysis I used to explore the teachable moment, including the reasons underlying my choice of method, the selection of participants, data collection, storage, analysis and questions of reliability, validity, trustworthiness and ethics.

Research Questions

There are three primary research questions. Questions one and two are descriptive questions addressed directly in the interview data presented in Chapter Four. The last question is addressed in Chapter Five in my analysis of the interview data.

1. As viewed by university faculty, what elements characterize a teachable moment in a college classroom?
2. What kinds of considerations contribute to or interfere with opportunities to explore these moments when they occur?
3. Can the teachable moment be understood in terms of reflection-in-action? If so, is there both a pedagogical and discipline-based reflection-in-action?

Pilot Study

My initial research on this topic was done in the spring and summer of 2005, when I reviewed the existing literature on teachable moments and then, with Institutional Review Board approval, conducted medium-length interviews (approximately 30 minutes
in length) with six faculty members at a local community college and six faculty at a large research university, all having at least ten years teaching experience, and representing several disciplines. Three men and nine women participated. The interviews were recorded and analyzed thematically. The key findings of these preliminary interviews addressed the manifestations of teachable moments, descriptions of some of the types of connections students might make, the creation of teachable moments, and influences on faculty responses to teachable moments. Based on these preliminary interviews, I began to formulate a description of some of the characteristics that distinguish a teachable moment from more routine classroom interactions.

The data collected in those preliminary interviews suggested that there are facets of teachable moments which, if described and discussed, can enhance faculty members’ ability to capitalize on their instructional potential. In the course of my interviews respondents described several types of moments and the thought processes they used in deciding whether or not to pursue them. While some of the themes or insights were addressed in multiple interviews, many interviews added new or original dimensions of understandings. I gathered sufficient data to believe that this line of inquiry was clearly worth pursuing further and that the initial interviews did not yield the kind of in-depth insights and opportunities for analysis that longer, two-tiered interviews might provide. The pilot interviews also revealed that not every discipline is as easily open to or flexible about responding to students’ spontaneous in-class comments and digressions. Courses with strict sequential skills requirements included teachable moments, but the nature of the moment and the decision-making, in my small sample, suggested that the
phenomenon was different enough to require separate analysis. Therefore, for the purposes of this research I interviewed individuals in the social sciences and humanities, as those seemed to yield the widest range of opportunities for surprise teachable moments to arise and perhaps be pursued.

Method of Data Collection

Because the teachable moment has yet to be thoroughly described in current literature, and because it is a highly unpredictable and serendipitous event, it is difficult to explore. The description and understanding of such moments and the elements of human interaction they entail do not lend themselves readily to quantitative analysis. While the direct observation and description of such serendipitous events would potentially provide rich data for developing a description, the process of attending different classes in hopes of directly observing such spontaneous events was outside the time parameters of the proposed research. As a result, I relied on interviews with experienced professors who were recommended for their involvement with undergraduate teaching and who report having experienced such moments in their teaching and who are willing to discuss their perceptions.

The primary method of data collection for this study was the active interview (Gubrium and Holstein, 2003; Holstein and Gubrium, 1995) This method was selected for the following reasons. First, the teachable moment is a concept which has not been fully described within the context of college teaching. Second, in my pilot study interviews, respondents often indicated an interest in the topic and a willingness to explore it in conversation; however, many expressed concern that they had not fully
developed their ideas and could not, therefore, speak as experts on the subject. In fact many said they had not really thought about the teachable moment systematically prior to my inquiries. If, as a result of this lack of certainty, I had not continued my interviews I would have missed many good examples and reflections, and I would have found very few participants for the study. And, third, the nature of reflection-in-action is by nature fleeting. It often operates in an unarticulated and spontaneous manner. It is only in certain situations that the practitioner thinks back to a reflection-in-action moment to examine its components. My interviews provided such opportunities. In active interviewing the absence of pre-existing, pre-identified expertise is not an obstacle to the data collection. Rather, active interviewing is based on the premise that the researcher and the respondent will be engaged in conversational interviews which allow them to co-construct knowledge about the topic. As Gubrium and Holstein point out, such interviews “may explore incompletely articulated aspects of experience, encouraging respondents to develop topics in ways relevant to their own experience.” (2003, p. 75) In fact, in the course of my interviews several participants began by telling me they had not researched this topic and were not experts. I responded by pointing out that very few had and that I hoped we could build an understanding out of their experiences combined with those of others.

Figure 2 briefly describes the steps involved in the active interview method used in this dissertation. Each step is described on the page number referred to in the figure.
The research design involved a two-stage interview process, in which I met with participants initially to have preliminary conversations about the teachable moment, and then met again later in the semester to follow up on some of the interviews with more in-depth questions and reflections. The intent was that the participants could build on their own understandings and interpret subsequent experiences in the light of the meaning constructed in the early interviews. The subsequent interpretations could then be explored in the follow up interviews. Holstein and Gubrium (1995) comment, “the
objective is not to dictate interpretation, but to provide an environment conducive to the production of the range and complexities of meanings that address relevant issues, and not be confined by predetermined agendas.” (p.17) This is particularly important to do when there is so little existing information about the topic. While this design was based on experiences in the pilot project, where participants came back to me to report they had had new experiences that were reframed because of our initial conversations, the calendar for the research may have influenced the success of this process. At some points in the semester, professors reported lower energy classes or more concern about covering material and therefore fewer experiences they considered “teachable moments.”

Initial interviews provided me with the contours of the concept teachable moment as understood initially by the interviewees. In addition to laying the groundwork for subsequent conversations, these initial interviews served several purposes. As Berg (2004) explains, researchers must be able to conceptualize and operationalize the topics they explore. The initial interviews provided some of that conceptualization. By asking people to discuss their understandings of teachable moments, I developed a clearer understanding of the elements I needed to examine in the more detailed follow-up interviews. This helped me to better conceptualize the characteristics of a teachable moment and formulate deeper and more probing questions for the follow-up interview.

Participant Selection

The participants for this study were selected using purposive sampling, in which “persons displaying certain attributes are included in the study.” (Berg, 2004, p. 36) Holstein and Gubrium (1995) call these “narrators of experience” and “narratively
activated people.” These were participants who were involved in undergraduate teaching, had at least five years college teaching experience and were willing to spend time talking about their experiences and co-creating new understandings of that experience for others to share.

Consistent with the need to identify individuals who can describe their classroom practices and experiences, I interviewed full-time, experienced faculty members at one large urban research university. While the university had a recent reputation for shifting its emphasis to a research-focus, and budgetary concerns were driving some class sizes higher, I was still able to identify full time, experienced professor involved in undergraduate teaching. I chose not to contact graduate teaching assistants or individuals with less than five years teaching experience. They were teaching at least one undergraduate course at the time of the interviews during the fall 2007 term. They had demonstrated an interest in and commitment to quality in undergraduate teaching as indicated either by receiving undergraduate teaching awards or referrals from department chairs, other participants, or my pilot participants. After conferring with my major advisor and choosing departments in the social sciences and humanities, I contacted the department chairs and my pilot participants explaining the study and asking for referrals. At the same time, I obtained lists of undergraduate teaching award winners. All recruiting contacts were conducted on e-mail. I first contacted faculty who were university teaching award winners and were also recommended by the chairs or pilot members. Then I contacted referrals from chairs and participants. The referral criterion involved some snowball sampling (Berg, 2004), where individuals who were interviewed
referred me to others they believed might be interested in participating. Several of my initial participants suggested colleagues even without me asking. Participants were recruited from the social sciences and humanities, as those subject areas seemed most likely to address a wide range of topics that might generate teachable moments.

I interviewed 17 faculty members from the Departments of Anthropology, Communication, English, History, Psychology, Sociology and Theater. Their years of teaching experience at the college level, not counting teaching assistantships in graduate school ranged from 6 to 27 years. Sixteen participants agreed to do second interviews as well, yielding 33 interviews ranging in length from 15 minutes to an hour. Participants chose the location for the interviews. Three participants chose a nearby Starbucks for at least one of their interviews. The other 29 interviews were conducted in the faculty office of the participants.

Interview Format

Because the goal of the research was to delineate the contours of the teachable moment, I needed to be ready to pursue new facets as they arose. For these reasons, the initial interviews were what Berg (2004) called semi-standardized or what Kvale (1996) calls semi-structured. While there were individual variations in the sequence of the questions in order to follow the flow of our conversations. In the course of the interviews asked participants about their definition of the term teachable moments, examples of experiences they had with them, how they thought they emerged in their classes and how often they occurred. The interview guide is in Appendix B.
The interview guide for the second round of interviews was based on the information gathered in the first round and on the timing of the subsequent interviews. I scheduled the follow-up interviews a few weeks after the initial interview. I encouraged participants to contact me if they had experiences in the intervening time, but no one did this. In the second round of interviews I offered to review my notes from the first interview. Most participants wanted that review. When necessary I sought clarification and additional details based on the initial interview. I then sought further experiences or insights they had had since the first interview. Since the themes of risk and of saying “I don’t know” had emerged in the first interviews I also asked for their reactions to those themes and for advice they might have for new faculty. The interview guide for the second interview is in Appendix C.

Sixteen of the seventeen participants agreed to be recorded. One second interview was completed by telephone and one person, who did only one interview, declined to be recorded. The 31 recorded interviews were transcribed by professional transcribers, and I checked the transcripts against my digital recordings and my notes to insure accuracy. I took detailed notes during the phone interview and the unrecorded interview and saved those in codable format as well.

Quotes used in the study have been edited to facilitate reading. I removed such things as “you knows”, and false starts, and incomplete references when necessary to provide clarity.
Analysis

The active interview is analyzed for both its content and the process of knowledge construction. I analyzed the transcripts of the interviews and the interviewer notes to identify themes. As Kvale (1996) points out, analysis begins with the interviewee thinking about his/her responses and interacting with the interviewer to explain and clarify information. The interviewer’s role in the analysis also begins in the interview when she follows up or seeks clarification of points being made. When necessary, I sought clarification and amplification of information from the first. I tried to make sure I clarified participants’ meaning when they used terms like “good use of time” or “goals.” As I listened to the initial interviews some themes, like taking risks, emerged, so I was alert to opportunities to clarify those themes in later interviews.

In this study the interviews were analyzed for patterns and themes that enhanced the clarity of the term teachable moment, the decision-making processes faculty use when confronted with such moments and for evidence of reflective processes concerning classroom events. As Gubrium and Holstein (2003) point out, active interviewing is based on the idea that no single participant has a complete picture of the phenomenon being explored, instead participants contribute different elements or facets to the description and the researcher assembles those pieces into a more complete analysis. Therefore, I was careful to include any facet introduced by my participants that contributed to a more complete response to my research questions. Since the interviews were semi-structured, but allowed for conversation, some of the contributions strayed from my original three research questions. I coded all of data I thought had potential
relevance to the study, but if I found upon further analysis it did not serve to illuminate the definition of teachable moments or the decision-making about them, I did not include it in the report of this study.

After checking each transcript with its recording, I coded each interview, identifying key ideas and quotes using HyperRESEARCH software to keep track of the codes. I initially coded the transcripts based on my first two research questions concerning the definition and the decision processes involved in teachable moments. While some aspects of the data may have had more resonance with my experience than other aspects, I included any aspects described by my participants, understanding that these perspectives enriched the description beyond my personal experience and beyond the experience of individual professors. I read each interview and used either words from the interview or specific topic labels to identify the subject matter of the quote itself. Once an idea had appeared in several interviews I tried to cluster the codes and use more unified terminology. For example, in identifying the elements of the decision I found that one participant may have talked about pursuing moments if they were relevant but, when asked, did articulate a definition of relevance. And another participant reported moments had to be relevant to the course in general. As I kept reading, I found that “relevance” or even “goal relevance” was not specific enough a code since one person talked about moments being related to broad concepts of a discipline and another talked about moments that related to the days class plan. Then, one person described having “levels of goals” including the ones previously coded, and this allowed me to develop set of relevance codes.
After coding all transcripts, I examined the codes and quotes, allowing a more coherent set of themes to emerge. After reviewing the 282 codes applied to the interviews I clustered those that were related and organized the data in larger categories for purposes of presentation. HyperRESEARCH allowed me to generate code reports with quotes that related to the themes. I sorted and color coded the quotes according to organizational ideas found in the quotations, allowing a description of the teachable moment and faculty decision-making to develop. So, when my participants reported considering relevance as part of their decision-making process and went on to explain what they meant by relevance, I coded according to that detail. The consideration of relevance was too broad to be useful in presenting the data but relevance to one of several levels of goals allowed me to organize the data and include a comprehensive description of the different ways in which relevance is conceptualized by my participants. Every interview yielded useful data for at least some aspect of the phenomenon of teachable moments. For purposes of data presentation I chose what seemed to me to be the most representative and expressive quotes in order to allow readers to understand the context for that selection and its contribution to the total picture.

Since active interviewing (Gubrium and Holstein, 2003) involves constructing new knowledge through a series of conversations, the facets described in this dissertation emerged from the interviews. Some were surprises to me, like the number of people who spoke of calculated moments. Some I could see developing as I did more interviews, like the value of saying “I don’t know”. Other times, patterns emerged slowly as in the description of the decision-making process, where elements often overlapped and
interacted. This description gradually unfolded through repeated analysis of the decisions people described. A number of the facets overlap and influence each other. The number of students engaged is an important consideration, as is student readiness for the concept. Readiness is one factor that influences the number of students involved. In cases like this, I placed the quotes in the category highlighted by the participant but illustrated the connections in the analysis and in Figure 5.

In doing the analysis for Question Three concerning the application of Donald Schon’s (1987) theory of reflection-in-action, I began by re-coding the interviews for reflection, and found that this question really applied to an analysis of the decision-making data. While I did code some particularly explicit examples of conversations about reflection, I also analyzed the descriptions of decision-making in question to see if the model of reflection-in-action applied to the processes my participants described. As a result, the basic interview data in the decision description is used to examine reflection-in-action, but in the latter case it is used to illustrate Schon’s model in action.

Bias, Generalizability, Validity, Reliability and Trustworthiness

Some of the concerns about the usefulness of interviewing as a research method relate to questions of bias, generalizability, validity, reliability, and bias. In doing qualitative research in general, and interviewing in particular, these are concerns to be addressed in part by redefining and clarifying the goals of the research and by re-examining the meaning of these terms in the qualitative context.

Clearly, bias can be a concern when doing active interviewing and analysis. However, Gubrium and Holstein argue that bias is a meaningful concept only “if the
subject is seen to possess a preformed pure informational commodity that the interview process may somehow taint.” (2003, p. 78) Since all participants in an interview contribute to the construction of meaning, it was important that rather than denying my role, I recognized and analyzed my role in each interview to insure that I was asking and co-constructing, not directing and shaping interviewees’ responses to my questions. As Kvale (1996) points out “neglect of the interviewer’s constructive contributions to the answers produced may lead to a biased view of the interview as merely reflecting the interviewee.” (p. 183) Sustaining awareness of my own contributions to the research and balancing my roles as interviewer and contributor required reflexivity on my part as I worked through the interviews and as I interpreted the verbal and non-verbal communications of my respondents. In the initial interviewing and my reviews for the second interviews, I observed that some of my participants interacted with me as a student, making sure I had the information they wanted me to have, being solicitous of my efforts, checking my understanding and giving me feedback on my interview or summary techniques. I reviewed the initial interview prior to conducting the second interview with each participant. Others were very conversational, asking about my teaching experience, speaking more collegially about “our students” and commenting on enjoying having a conversation about teaching. In the analysis for this project, however, the data from the two types of interactions does not seem to be qualitatively different despite my awareness of a difference in the apparent perceptions my participants had of me. Asking clarifying questions, keeping detailed notes and listening to the recorded responses promptly after each interview helped me to monitor my own contributions to
the interview and the nature of the interviewer/interviewee relationship as revealed in the interviews (Jorgenson, 1991)

Kvale (1996) refers to two kinds of generalizability—researcher and reader. In qualitative research generalizability is a shared decision between the researcher and the reader. As the researcher, my role is to provide complete enough information for the readers to determine if the cases, data and context can relate to their situations. No two teaching situations are ever alike, so the role of the researcher is to offer illustrations of some experiences in enough detail that other faculty can decide if there is relevance for them. In the case of the teachable moment and understanding reflective practice, concern for generalizability requires that I provide as thorough a description of contexts and experiences as possible to allow readers to explore their own understandings and practices in the light of this new information.

While in research there is always concern for reliability and validity, these too have different meanings in interview research than in quantitative research. Gubrium and Holstein (1995, 2003) point out that when interviewing a variety of individuals in different subject areas, a researcher cannot expect the same questions to yield the same answers, in fact the researcher should expect variety because each participant is drawing on a different experiential and contextual background. Kvale (1996) suggests that reliability in interview research “pertains to the consistency of the research” (p. 235) in the process, questioning, transcribing, analyzing and reporting. The interview guide provided a common basic structure for the interviews. While these were active interviews, my role in the interactions was to ask and to clarify with the goal of obtaining
the richest information. As Kvale points out, we cannot completely avoid asking questions that lead the interview, but we must deliberately choose questions that lead it in the most meaningful, creative and constructive directions. Occasionally participants would ask me what I thought the definition was, or what others had reported. In the initial interviews, when talking about the definition I replied that I was still teasing out the definition, that there was not one yet, but that the insights they provided were very helpful. In the second interviews I would share a few of the general themes that had emerged and ask for their thoughts on that information. When asked about other interviews, I would allude to some general themes, but re-direct the conversation to their insights.

Furthermore, reliability can be affected by analytical procedures. As the sole interviewer on this project, I did not have reliability cross checks with other readers. I checked samples of my coding with one of my advisors and with an outside colleague. My decision-making process is described above in the analysis section on page 52.

Keeping in mind that this project is constructing new knowledge about the idea of a teachable moment, and that neither I nor my respondents had fully-formed and well-articulated conceptions of teachable moments at the onset, the validity of the data lies not in its “correspondence to meanings held within the respondent, but from their ability to convey situated experiential realities in terms that are locally comprehensible.” (Gubrium and Holstein, 2003, p. 71) My participants described experiences and thoughts that they had about teachable moments, framing them in their own fields of expertise and their own experiences with students.
Kvale (1996) argues that validity should be integrated into the “craftsmanship of the research” (p. 251) from verifying understandings in the course of the interviews to the pragmatic presentation of results. This has implications for probing and follow-up questions, for record-keeping in the course of recording and analyzing data and for presentation of the results of that analysis. Since validity pertains to the truth of the data, I digitally recorded all but two of the interviews and had them professionally transcribed. I checked the transcriptions with the recordings for accuracy and integrated my field notes and observations with the transcriptions to insure contextual detail. Participants were invited to review summaries and/or complete transcripts, but only one participant requested a transcript and made a brief comment on it. Almost every participant, however, wanted to be notified of the dissertation defense, and many have replied to that invitation with a request for a summary of the findings. In the final analysis, the validity of the research will emerge from its ability to clarify the concept of the teachable moment in such a way that other professionals can read and judge the usefulness of the description.

Assumptions

Going into a qualitative study, it was important for me to examine the assumptions underlying my research topic and method. It was one of my underlying assumptions about teachable moments that despite good efforts by professors to make connections and provide experiences that facilitate learning, a true teachable moment cannot be planned because there is no certainty that a student will make the desired connection. Students bring unique experiential backgrounds, ideas, preconceptions and
concerns to every class meeting. As I report in Chapter Four, however, several of my participants describe a confidence that more than one type of moment exists, and that some can be calculated with a fair degree of certainty.

This research process relied on information gathered from purposeful sampling of experienced professors with some awareness of or readiness to explore teachable moments. This is not to say that less experienced faculty cannot capitalize on such moments as well. I relied, however, on more experienced faculty who may have a level of confidence and flexibility and who can better articulate their experience in such a way that others can learn from them. Understanding expert teaching, reflection and decision-making assists others in developing a broader range of approaches to problems.

The design of the study was intended to involve co-creation of knowledge with those people I interview. I did not expect my participants to have all the facts, rather that their perceptions and understandings would combine with mine and with others to build new understandings. An underlining assumption here is that all of the parties involved in the research had pieces of information and understanding which, when combined, could create a new understanding. The two-part interview design had the potential to cause the participants to think differently about the topic in the second interview, so there would be a change in their thinking and understanding of teachable moments that would show up in the second interview. Several of my participants reported framing something that happened just prior to the second as a possible teachable moment that they might not have previously because they knew were going to be talking, but many also replied they did not have new examples in mind, but had been thinking about their previous examples.
more. The question of the timing of the two-interview design is discussed in Chapter Five.

**Ethical Considerations**

In keeping with concerns for ethical research, I renewed my certification for IRB and filed a complete IRB proposal and the necessary subsequent updates. My interview data is kept anonymous and under password security. Names and contact information are in separate files from the data. The informed consent form appears as Appendix A.

**Summary**

This study used two-tiered active interviewing to examine the nature of college professors’ experiences of teachable moments in the classroom. I selected experienced teachers in the social sciences and humanities at a large research university to interview twice at different points in the semester in an attempt to describe teachable moments that may arise and professors’ decision-making practices in responding to such moments.
CHAPTER FOUR

PRESENTATION OF INTERVIEW DATA

The thirty three interviews with the seventeen participants representing seven departments in the humanities and social sciences yielded a great deal of insight into how faculty experience and address teachable moments that arise in their classrooms. Since I used an active interview method, for which the protocol provided a loose framework for the conversations, participants were able to report a wide variety of experiences and insights, some overlapping, some related, and some singular, all of which contribute to a larger understanding of these moments. The active interview involves interactions that result in shared construction of meaning between the interviewer and interviewee. Each stage of the process involves multiple levels of construction. Each interview built some understanding of the teachable moment within that conversation, and subsequent and second interviews built on the earlier conversations and introduced ideas from other interactions. In addition, as the process progressed, I was constructing a more encompassing understanding from all of the conversations combined. My analysis, therefore, can be likened to creating a mosaic or a three-dimensional collage in which I have tried to strategically place insights from disparate sources so that the ideas they highlight can be seen more clearly and so that patterns within and between ideas are revealed.
I have attempted to answer the research questions by assembling the relevant portions from the interviews and organizing those around the broad elements of each research question. There is, at times, a repetition, since some experiences and observations overlap into more than one element and into each other. The data, therefore, will be presented as quotations from my many sources, arranged around the identified relevant elements of the teachable moment and the decision-making process. Some elements are addressed in many interviews, while some elements are addressed in detail in only a few. Even though the number of individuals who address some aspects of the topic is small, their insights and contributions to the conversation introduce important pieces of information. I have chosen to include those contributions in my report of the data. If the same participant is quoted more than once in the same section, that is indicated. Otherwise, the separate quotes are from distinct sources. In most cases, I have chosen to not identify the gender of the participant or the discipline being taught. The selection of participants was limited to the social sciences and humanities and based on recommendations related to undergraduate teaching and was not designed to achieve gender representation. The research questions did not seek to identify gender differences, rather they sought to glean insights from a sample of experienced faculty across several disciplines. In order to describe the contexts of moments, many of the examples name the topic that was the focus of the moment. Many of these topics are examined in multiple disciplines and surfaced in different fields. My decision to avoid identifying departmental affiliations is based on concerns for anonymity and also on my observation that most of the themes and concerns cut across several subject-matter lines. Therefore,
inclusion of the specific discipline could be distracting from a description of the shared elements of the experience.

I will address each research question separately in this chapter, attempting to construct a coherent description of the understanding and use of teachable moments by a group of experienced college professors in the social sciences and humanities. I begin with the first research question, concerning the elements of the moments themselves as faculty define them, and then look at the elements involved in professors’ decision making processes centered on such moments. The third research question concerning the application of Schon’s (1983, 1987) theory of reflection-in-action is an interpretive analysis issue and as such will be addressed in Chapter Five along with analysis of the implications of the data for other theory, practice, and future research.

Question One: Definitions of Teachable Moment

In my first research question I examine the elements that characterize a teachable moment in a college classroom. In my interviews I asked participants to explain their understanding of the phrase “teachable moment” and to share examples and descriptions of these moments as they had experienced them. Those questions opened wide-ranging discussions that revealed the breadth and variety of experiences that can be classified as teachable moments. While some definitions incorporate unique ideas, most share several common elements. This section will present some of the definitions of a teachable moment and will introduce what the participating faculty members believe are the characteristics that distinguish these moments from other classroom experiences.

As the conversations with my participants built on the general definitions, the
examples yielded insights into multiple facets of the teachable moment. This section will begin with definitions, and then examine the core elements that characterized the examples including student engagement, interaction and varying degrees of spontaneity. In order to understand those elements, this section will also describe efforts by professors to stimulate and sustain interaction and engagement.

**General Definitions of Teachable Moments**

There’s a guy standing in front of a class and the student who’s got their hand up and there’s a moment where the angels are singing. You get the feeling that whatever happens right then and there is something they’ll remember.

The quote above presents the picture of the prototypical teachable moment, when the opportunity for learning and teaching match up, and it is clear to the professor how to proceed. “The angels sing.” But many teachable moments are not so immediately obvious or so celestial that they can be pursued unambiguously. Instead, teachable moments take various forms and require on-the-spot decisions by professors. We can see some of the variety in the definitions of teachable moments provided in the interviews, and we will see more variety as we look at the experiences faculty fit under their definitions. One person I spoke with defines a teachable moment as

An opportunity to kind of ride on the winds of what the students were interested in. A teachable moment is an opportunity where instead of the teacher having to solicit or try to spark interest in the students in a topic, students’ interest is already there. And so when students’ interest is already there you can then make an application.
So, a teachable moment provides a professor with an opportunity to tap into students’ interests.

Another participant gives a more structured definition that emphasizes the timeliness of teachable moments.

That particular time within a framework of a class when either deliberately or coincidently a situation arrives where one can introduce material that may be of particular timeliness or relevance to the students that doesn’t necessarily relate directly to that subject which is being taught at the time.

Another professor also spoke of being able to make connections, even if they are not directly related to course material. “When we encounter something that doesn’t necessarily have a direct relationship with the course material but I can make the relationship.”

This indirect relationship to the course material arises in many interviews, and along with that came the question of instructor preparation and the idea that much of what could be called a teachable moment is unplanned.

A teachable moment to me is when you have your path that you go into class with, as you must for every lecture, every class…. And at the end of the class you might think, aw, we didn’t get to…. But what we did do was have a great discussion, totally off schedule…. It just was that I hadn’t planned it for today, but I’ll certainly run with it

And for some it is the energy level that is notable, as in this description. “It’s highly charged because the student has an unusual motivation.”
Teachable moments are not solitary experiences. Professor and students interact to generate these moments, and for some the interactive aspects of moments are what distinguish teachable moments from individual learning or insight.

I see it as like a shared experience, and part of it’s the dyad or the hundred… when I think of that particular instance she and I were talking and we were kind of building on something, and it was almost like something popped up in her head that was her own reflection. And so I guess the dyadic part with us I would see as the teachable moment and maybe that led to an insight.

Another professor emphasizes the degree of engagement that arises when students draw on their own experiences. Relevance to the course content is mentioned often, but the relevant material resonates with the students. “Teachable moments happen when there is a fair degree of engagement and the students are talking from personal experience.”

Something as simple as the professor’s asking for questions can lead to teachable moments, where the students, the professor, or both may experience a revelation about content or process.

I walk in with, I’m going to do X, Y and Z. This is my plan. But the students…. A teachable moment can sometimes occur when you stop and say “Are there any questions or comments?” And you have 10 hands fly up. Boom! Here the signs of engagement are the hands going up. The professor may or may not be expecting questions, but is ready to go with the students’ interests as those questions are posed. Of course, the questions may or may not lend themselves to extended classroom
pursuit, so the decision whether or not to pursue a line of questions is left to the professor as the class progresses. This decision is examined in Question Two.

Clearly, experienced college professors have a range of definitions for the term teachable moment, and are able to frame a variety of experiences according to the opportunity they provide for teaching. There are, however, certain elements that are common to the descriptions. The quotes above reveal that the teachable moment involves interaction, a heightened sense of student engagement, a certain level of energy or excitement, and a degree of relevance to academic content. In its most general terms, a teachable moment in the college classroom is a situation in which a student or a group of students in a class interacts with and about an idea while demonstrating heightened engagement or interest. As a result of the perception of increased receptivity, the professor sees a possibility for significant learning and must make a decision whether to pursue that area of interest even if it may not relate directly to the plans for that day’s class. The students, the professor and the topic all come into play in creating a teachable moment. As one professor says,

You had a point that you thought was important, even if it was not in your syllabus, and you saw your students engaged on that topic. And so it was just these three things coming together, you, the topic and the student coming together.

Interaction about the topic can lead to heightened engagement, and engagement can lead to increased interaction. Once a cycle of engagement and interaction has begun, it can be sustained or curtailed by the actions of the professor or the students. Rather than
considering a teachable moment as a simple cycle or spiral, it might be helpful to think of a double helix, where the two sides are interacting and are traveling parallel to one another, but not in a straight line. Each interaction can twist or divert the path the student(s) and professor are traveling.

The Defining Elements of the Moment

Experienced faculty operationalize the three elements of the teachable moment--interaction, engagement and decision-making--in different ways at different times in their own classrooms, and many experience more than one type of moment in the course of their teaching. In the initial pilot study I looked at the types of conceptual connections students could make between course content and something else of interest to them. As the present study unfolded, it became clear that there were too many connections and that in the right situation almost any two ideas could be connected in some way at some point by someone. No professor can know or anticipate all of the personal attitudes, beliefs, experiences and interests the students bring to class or what connections students might make between their backgrounds and the course content. Sometimes these connections are clear and even predictable, as in the case of major events in the news. But other times they may not be so predictable, as when an individual student comment based on personal experience opens the door to an unplanned examination of an issue like racism. But the connection and interactions about the connections are what constitute teachable moments.

This section will examine the elements that characterize the teachable moment by describing how this heightened engagement is manifested, and how it is engendered and
sustained. I will then discuss the frequency with which teachable moments seem to occur. Once the various aspects of a teachable moment have been described, I will examine in Question Two the decision making process faculty use to decide whether to pursue a moment or not, and finally in Question Three I will look at the role Schon’s (1983, 1987) model of reflection may play in interpreting teachable moments.

*Interaction*

Many of my participants describe interactions as being central to the emergence and maintenance of teachable moments. One describes a particular moment saying, “It was a two way interaction. It was on both sides, coming from both sides.” While another describes a moment this way.

> It was a sustained interaction too, that was part of what it was, now that I think about it. It wasn’t me asking a question, they responding, and then I thought okay well what else can I ask. It’s these constant connections. That was a back and forth and interaction, exchange that kept going... And it was crazy where they were all getting these connections. And so that’s what I will do with it is try to keep going with it for awhile. Just sort of exhaust it, I guess.

In university classrooms, the number of student/professor and student/student interaction varies tremendously. Available time, individual teaching styles, class size and the nature of the material are some of the concerns that influence the nature and the degree of interaction that is possible or constructive. At times, only the professor is speaking, but the students are still nonverbally communicating their reactions. In many teachable moments interactions are increased. Students speak more to the professor or to
each other. This is true regardless of class size. Even faculty in large lecture classes report taking questions, allowing students to discuss or write about topics, assigning small-group work, or using clickers for student interaction. In smaller classes they might conduct whole-group discussions or have individual interactions where the professor tries to engage the attention of the class. While they express varying tolerance for side discussions, classroom noise, discussion and disagreement, all of my participants comment on some degree of interaction. Most of this is in-class verbal interaction, but they also report out-of-class and written interaction in the form of e-mail and reflective assignments.

But all teaching is interactive to some degree. When does the interaction shift and develop into a teachable moment? We can think of classroom interaction in several ways. Interaction can be initiated by the professor, in which case the students either engage or do not and the professor may or may not re-adjust upon reading the students response. Or students can initiate interactions in which case the professor must decide whether or not to sustain the engagement. In my pilot study one person described the interactions as being like a ping pong match, with one person serving and others returning the volley. Figures 3 and 4 below represent possible models of interaction in potential teachable moments in college classrooms. It should be noted that these are abbreviated models, as possible interactions can subsequently branch off into more and varied interactions during a class period.
Figure 3. Possible professor-initiated teaching interactions.

Figure 4. Possible student-initiated teaching interactions. Professor decides how and if to engage in the moment.
The moments when one of the parties initiates an interaction and another responds by manifesting heightened engagement (Engagement), thus intensifying and perhaps redirecting the interaction, are the teachable moments. These are the moments I am examining.

Sometimes the conversations spread throughout the class as this description illustrates. “And somewhere in there are students turning in their seats, looking at each other, responding to points that have been made in a fluid fashion where people are being civilized and intellectually engaged.” This conversation among students can be a positive sign of engagement as another says, “You know if they are having side conversations that are about the material you are willing to go with it.” And another says,

They do talk to each other and I see that going on a lot. And that’s kind of exciting. They’re going, ‘’But I thought,’’ or, “Oh, you mean,.” And they’re not talking to me; they’re talking to the person behind them or beside them.

In these cases the students may appear to be having personal conversations, but the professor gauges that the interactions are on topic and the energy of the interactions make them worth sustaining.

Whether students are talking to the professor or to each other there has to be interaction. “There has to be that give and take, where you throw out something, they throw it back.” Throwing it back, then, is one manifestation of engagement the professor seeks when hoping to generate or sustain a teachable moment. Participants report looking for engagement while they teach and making decisions about their teaching as they go.
along. The next section will examine what engagement looks like to the faculty members in my study.

**Engagement**

Since my participants find teachable moments in many forms of interactions, but consistently report noting a higher degree student engagement, this section will briefly describe the outward behaviors that signify engagement and therefore suggest the potential for a teachable moment. Initially participants report simply that students look engaged and involved. When asked for a description of that look, many provide similar sets of responses. The first sign of engagement comes from students who initiate moments with questions or comments and are therefore directly involved from the beginning of the interaction; others join in the interactions that are taking place, while some students quietly listen and communicate interest in other ways. Professors continually look for cues while they are teaching, making micro-adjustments based on the signs they see. Teachable moments are often described as light-bulb moments. “It’s also something on their face, or you see their face light up. You see that connection in the brain just going on.”

This impression of a student’s face lighting up is repeated in many interviews. One says,

You saw your students engaged on that topic…And I always have this metaphor of seeing light bulbs go off and seeing the faces and their minds light up. And another, I mean literally you can see a student’s face light up… And they’ll say “I get it! I was able to do this!”
Even while teaching large classes, professors report being alert to students’ expressions to see if they are still engaged.

In just the level of interest that seems to be on people’s faces. I mean, even if they’re not participating, are they still alert? Are they still paying attention? Are they following the conversation that I’m trying to moderate? Are they paying attention? Can I see something happening on their faces that says, “This is interesting, I’m surprised she’s willing to go there and talk about the subject.”

In large classes it may be more difficult to gauge signs of engagement, but professors still try to do so. Another participant talks about student expressions this way.

In a large class, it’s hard to say exactly how many were thinking that way. Again, you can look at their faces and you can see that some of them clearly were already thinking about that before you even said it. In other cases you can see there’s a sense of recognition.

Facial expression is not the only indicator of engagement. It can combine with body language to signal to a professor that students are involved.

And you can see them start to smile. A sense of recognition. They lean forward, a nodding of the head or a smile or you know they’re engaged, if you will. There’s a sense of engagement because of something that you have said. They may have been sitting back or sitting there passively like this (leans back with arms crossed) but there will be that language or positioning of engagement.

Faculty members I spoke with are conscious of these levels of involvement, look for the manifestations, and use them to make decisions about what they will pursue.
It has always been part of my teaching—always awareness of something clicking for the students. Are you engaging them? Are they with you? Do I see a look of, ‘Oh, I haven’t thought of that?’ I do still see them so I know I am still being effective. If I stop seeing them, it is time to quit.

When teaching, professors regularly seek signs of engagement from their students. They notice shifts in body language and changes in facial expression that signal that engagement has shifted to a higher level, either collectively or individually. It is the shift that signals a potential teachable moment.

Professors report that some of these moments are predictable to some degree, while others emerge as a surprise. The degree of predictability influences their readiness to pursue moments. The next section will examine the varying degrees of predictability and the impact that predictability has on deciding to pursue a teachable moment.

Continuum of Predictability

Teachable moments arise when interactions lead students to experience a heightened sense of engagement. In classes there is usually an interaction that either sparks or reveals a sense of engagement, which in turn leads to further interaction and further engagement. Initially, the interactions can be very basic and even heavily one-sided, as in a lecture, or they can be multi-faceted as in small group work or class discussions. In the teachable moment, however, the routine give-and-take is replaced by more active involvement. The professors in this study talk about their efforts to create a classroom environment that is likely to allow classroom interactions to flourish and generate fruitful moments. This section will begin by first examining the professor-
initiated interactions, then move to professor-anticipated interactions, and finally explore surprise interactions that can lead to teachable moments. Then I will examine the environment that fosters these interactions and allows them to emerge and develop into real opportunities for learning.

Faculty experience different types of moments at different times, and some disagree about the role of professors in creating these opportunities. Some people assert that they can create teachable moments, while others insist the moments must originate with the students. From the perspectives of the faculty interviewed, the interactions that lead to teachable moments range across a continuum of predictability. At one end of this spectrum are what one person calls the “calculated teachable moments” initiated by the professor using prepared material, assignments, examples, or media intended to capture the students’ interest and make connections between course content and the provided illustrations. Here the initial interactions are dominated by professor-generated materials that may catch the students’ imagination. Even in these moments there is a degree of unpredictability, since the real moment of engagement still lies within the student, and the professor cannot be certain that the intended connection will be made.

In the mid-range of the continuum are those moments that a professor may anticipate (from current events, awareness of student concerns or previous teaching) but may not initiate, waiting until students bring up the issue. In these cases the professor’s preparation for the moment is more generally related to the implications of assignments or out-of-class events and the relevance of those concerns to course content.
Finally, there are those moments when a student comment, discussion, or question emerges unforeseen by the instructor. From the instructor’s perspective, these are the most difficult to prepare for, and they require the quickest decisions and perhaps the broadest application of course material to students’ concerns.

![Continuum of predictability for teachable moments](image)

*Figure 5. Continuum of predictability for teachable moments*

This is not necessarily a linear continuum, because some surprise moments have such an impact on the professors that they use them later as anticipated or calculated moments. And calculated moments can lose their effectiveness altogether, providing the professor with yet another teaching surprise. For the purposes of this presentation, however, I will describe the three types separately. This section will begin with the calculated moments and work through the continuum, ending with a discussion of surprise moments.

*Calculated Teachable Moments*

In the calculated teachable moment, the instructor prepares lecture material, assignments or media presentations with the deliberate intent of heightening student interest. The goal of the calculated moment is to make the content of that day’s class meeting relevant, engaging, and enduring by tapping students’ interests in popular
culture, current events, personal concerns or professional aspirations. In the calculated teachable moment the interactions are initiated by the professor, and the content or process is intended to accomplish a specified and previously identified teaching goal.

The professor attempts to use a hook to increase students’ intellectual engagement with a topic. Since these moments originate with the professor, they are, for that professor, the most predictable, most planned-for and the least problematic to pursue. In the first cases, the professors talk about seeing the connection themselves and deliberately addressing it without waiting for students to bring it up. The first step in planning a calculated teachable moment is connecting course material to something the students might have an interest in, a familiarity with, or a relationship to. As one person explained, when preparing for her classes, “Instead of talking about exotic cultures, I almost always draw from the U.S. so they can relate to it and it is relevant to their lives.”

Some people I spoke with choose anecdotes, graphic illustrations, or media that they believe will heighten student interest, or at least serve as a supplement to traditional lecture in illustrating a course concept. These supplements are intended to make a connection for the students between the course material and the students’ experiences, or to provide the students with illustrative experiences they might not have otherwise had. For some this is the dominant type of teachable moment; for others it is part of the range of moments they described. One participant asserts that

If you are a good teacher you can create them… I structure the class to create teachable moments. I think that is what you have to do. If there is something really groovy, a couple of charts, some slides I’ll pop them up. A comic strip or
something. This is what I was going to do with my methods class next week (handing interviewer a cartoon).

Not only does such preparation enhance the probability that students can make connections, but it also may improve the chances they will be interested.

One professor describes taking a potentially boring topic and enlivening it by drawing examples that might relate to students’ concerns.

We talked about tariff policy. Now tariff policy is incredibly dull. And I said, “Okay, you know the Chinese are able to make a car for $5000 and sell it in the United States.” I said, “How many of you would buy a Chinese car?” Well, they kind of look around. “Well how good is the Chinese car?” And I said, “Well, what about your patriotism?” I said, “Don’t you want to keep Detroit afloat? I mean isn’t that important?”

And so we start talking about jobs and patriotism and what do we owe the country and do we owe Detroit anything? Do we owe the auto workers anything? Should we think of our families first and our own incomes or do we have a loyalty or responsibility beyond that to other Americans to keep their jobs? Now this all goes back to the discussion of tariffs in 1789 and the idea that we’re establishing protective tariffs. And I said “Well, okay, what if the United States government adds $5000 to the price of that car to make it competitive with what Detroit produces?” I said, “How do you feel about that?” Are you going to be angry with the government? I just gave you a $5000 car, and now I just took it away.” See? …Well, that made them mad. See, because I took away their choice.
By drawing on a specific, if hypothetical, example that might relate to students’ experiences or interests, and by setting up the conversation in class to prompt a personal response, the professor tries to augment the impact of a lecture on a topic students might otherwise consider removed from their lives.

Other times professors bring up current events and outside media which feed into the course content and can more vividly illustrate principles from the course. Here a professor was able to use a current event involving YouTube to illustrate principles he was teaching.

You do it (create connections and interest) through something that they can understand from current events, which of course is the CNN YouTube Debate. (Fall 2008 presidential primary) Now I didn’t plan like oh, when is there going to be a CNN YouTube Debate or anything like that, but it’s one of those things that when something is there at the right time, you can grab it and make good use of it.

And I think that it just has to be at the right time. I can see that if this same topic came up three months from now, it would be easy to want to try and smash something in. You can still talk about the relevant current events. But if this topic came up three weeks before you would just have to talk about the topic in a general way or in terms of maybe it’s something in current events that wouldn’t be like a big thing. That’s a thing to try to avoid because you don’t want to force something to work. I know that some things have worked in the past, but I know that it’s because of the timing. … I can do really good stuff with elections if an election is happening during the class, but it’s not as effective on an off
semester or off year to sort of force an election talk, because that’s not what’s on people’s minds, so they can’t connect so much. If there hadn’t been a YouTube Debate I had some stock things, but not with stuff that is right in front of them that can be effective for their interest level.

While YouTube is attractive to students, successful use of it, or any other strategy geared to accomplishing a teachable moment, may also depend on timeliness.

Stories in the news, especially those that students might be interested in or relate to also provide opportunities to apply topics from classes. The same professor that introduced the question of the Chinese car to illustrate tariff policy describes using an item in the news to stimulate reflection about the First Amendment.

This morning in my survey class we were talking about the young man up at Gainesville who was tasered and the issue of free speech. You can again mention the Bill of Rights. And so you say to them, “Within the context of the First Amendment, what do we deduce from what happened at Gainesville?” And you can see them start to smile.

Again, the media coverage and the fact that the taser incident took place on a Florida campus drew the students into the discussion and made the professor and the subject matter seem more relevant and up-to-date.

Other times, professors link in-class and out-of-class events to illustrate the relevance of the discipline to issues in the longer-term. Here a professor is looking at an historical event in the light of both the discipline and current events.
But I had talked about showing a clip that I had on the Holocaust. I said, “Well, you’ve studied the Holocaust in school, and you know what it is,” But Tuesday I’m reading the newspaper. There’s this article on Ahmadinejad, on the Holocaust and how he’s denying it. There’s another one criticizing a book that’s about the Jewish conspiracy, in terms of money. On the same page! Okay, so these are issues on the Holocaust. Okay? So, I pulled that information. I begin it by saying, “Who’s this guy? (Ahmadinejad). Read Bollinger’s introduction to him at Columbia.” And so I think that that also gives them a sense that these are issues that I can continually stay abreast of for the rest of my life.

So the professor’s ability use the lens of the discipline to examine the lasting impact of history on current events allows her to demonstrate the integrative nature and life-long value of the course material.

Some news items are much smaller than the Holocaust or tension in the Middle East, but still provide opportunities for a professor to introduce content.

There was this story in the news a couple of weeks ago about the cat at the nursing home that would snuggle up with a patient who’s about to die. And that was an excellent opportunity to sort of pull together some things that we had been talking about in class—about critical thinking as well as research design and empirical evidence and that stuff like that. A lot of them had heard that story and said, “Wow, that’s really interesting that a cat could predict that.” So walking through that whole scenario…The media were able to say “Oh, it was reported in the New England Journal of Medicine.” Well it was. But it wasn’t a research
article. So we sort of walked through all of that and the whole idea of empirical evidence and stuff like that. And we had fun with it because along with that you can also add some more humor about maybe there was some cause and effect. Did anybody check to see what the old cat was doing?

Here the recent news item allowed the professor to make a point about course content and about critical reading of the media, while using humor and connecting to student awareness. Applying the discipline to what students might call everyday issues.

Not all examples have to come from timely news or media items. The deliberate introduction of humor from many sources by the professor is another way to get students involved and attentive. Several participants report using funny performances, stories, and even anecdotes from their personal lives to connect with the students. The same professor who addresses the Holocaust in class describes using not only humor, but a humorous surprise to capture students’ attention and create a lasting impression.

Well, I’m trying to get them to understand the concept of gaze and the idea that a lot of our media content comes from a male perspective. And this was very much illustrated in the video they had, even though it was music videos…so I’m talking about media construction… And I said something that shows very much a female perspective a “Sex and the City” clip as a series, and used it because a lot of students are familiar with it. Then I talked about a clip from a movie “Waiting to Exhale,” where the woman is on the bottom and the man’s having sex…but her perspective was “Ho hum, when is this going to be done?” And of course a lot of the young women connected with the famous or infamous scene from “When
Harry Met Sally,” where she fakes an orgasm. And so it was the end of class and so I just kind of performed that… But, bring in a little humor there…But they’ll remember that, because the professor made a fool of herself. It was a teachable moment.

The impact of the humor is increased by the element of surprise that a professor would use such an illustration in class.

Another professor uses simple, funny stories from everyday life which not only makes the material more accessible, in the manner of the Chinese car, but also “humanizes the teacher.” This is one example.

I try to pick comedy moments from my family life… They comment in those course evaluations that I worked my family into the course in ways that were productive for the course, and that were funny, too. And my son does things that are perfect for concepts we’re covering. But having fresh material that’s hot off the press, it was really good. We were talking about his D.S. (video game) in Consumer Culture… We had a knock-down drag-out yesterday morning because he wanted to bring his Nintendo to school. And the teacher said they can, but I said no. “Why?” So I had that to fight. And I got to school, and I was still so upset about it that that sort of became a teachable moment. Because it was shaping my mood in the classroom. And here we are talking about consumer products and how they enable inclusion in groups, and I just had this argument with him, where he says, “Every single boy in class is bringing this to school except me. I feel so
left out.” You know, it’s just too perfect. It’s too perfect to ignore. And they love it.

Here the professor was able to turn what might have been a person distraction from teaching into an illustration of the impact of theories of consumer culture on personal lives, combining the humanization of the professor and the relevance of the discipline in one example that also engages the students.

However, many of the people I spoke with are aware of the need to manage the time and the number of allusions shared in class to in order to avoid becoming one of the people who “just tell stories.” This concern will be discussed further in the section on decision making. The professor above is aware of this issue when she says

And I have read teacher evaluations where the students have complained that the teacher talks too much about their kids or their family, some of my colleagues.

And I’ve never gotten that comment, ever. So, it’s got to be clearly connected and funny. Or at least entertaining. Or weird. Really weird, will work.

Some instructors use another form of calculated teachable moments to tap into what is perhaps one of the most immediate concerns for students--grades. More than one professor tries to create teachable moments by demystifying teaching processes, linking grading and teaching rationales to concepts they want to highlight. When a student asks for help or asks a question strictly for the purpose of getting a better grade without demonstrating some personal engagement with the topic beyond that grade, professors do not see this as a teachable moment, with one calling these grade concerns “trivial teachable moments.” Here the person is describing students whose primary concern
seems to be to pass the next test and drops in during office hours for just enough assistance to accomplish that without really engaging in the material more deeply or seeking connections and applications. However, some recognize that a concern over grades can help them highlight principles they are trying to address in their classes. This example uses a grading issue to illustrate a key concept in the discipline.

When I go to grade my exams and then present those grades to the class, I tell them that I don’t curve, but that I go through (if it’s an objective test), I go through the scanning form and I look at what percentages of the students got each question right and wrong. And then, if the majority of the class gets a particular question item wrong, then I usually throw out that question or give everyone credit for that question. Okay, so that’s just a very practical thing. But then I relate it to our subject matter. I say, “And, by the way, doing it this way is a perfect illustration of what C. Wright Mills means by the distinction between public issues and personal problems. That a public issue is something where it’s clear that it’s not just the individual shortcomings that result in a particular outcome but that there is something systemic going on.”

What has been discussed in class as an abstract concept takes on a very concrete reality for students when it can be used to improve their grades.

Another professor saw an opportunity to use grading concerns to illustrate learning processes he values.

So I went in, and I said, “For a variety of reasons, both because of my being away and not giving you enough guidance, this was a sucky test, and so I’m not going
to count it.” Now of course they were very happy about that. Part of me doing that and explaining was in the belief that that would hopefully teach them something important, too, that it’s okay to be up-front about what the process of teaching and learning is, and that it’s okay to acknowledge that you’ve made a mistake.

In this case, the professor prefers that students take risks and try new learning and believes that mistakes are a valued part of learning. In admitting that he has made one, he both demystifies teaching a little bit, and he contributes to an atmosphere where students can feel safer to take risks and admit mistakes.

Professors speak of wanting students to understand the realities of their field. One person tells of serious disagreements within her department over appropriate assignments, and the difficulties caused by that tension. As the issue surfaced and students, especially majors in the department, became aware of the conflict, she spoke about it with those in her upper division sections who were considering graduate school, using the problem to illustrate the realities of academic careers.

They really want to teach, and so you have to recognize it’s a volatile market; it’s a volatile job scene. I mean, any department can kind of implode, and I think that a lot of professors probably don’t talk to their students about the realities of going into the field. I do think that’s important.

This person wants students to understand some of the issues involved in practicing the profession.
In a different class, the professional concerns of the students dovetailed with the content of the course, so the professor could engage the class in a deliberately dual-purpose learning experience.

Some students were asking me questions about what they could personally do to ensure a certain level of success or career advancement and things like that. And obviously that was not only applicable to our class but it stimulated interest among students because they saw we can learn about what we ourselves need to do, too. And so I contacted the Career Center, and a representative of the Career Center came, and we planned together, looking at what we had covered in the course, what we could co-present about what kind of career trajectory they could anticipate if they went on and majored in this or this or went to graduate school in this or this.

Sometimes students themselves experience personal moments or make personal connections that they are not comfortable revealing to the entire class, but that they will share with the professor outside of class. In these cases, the professor may recognize the value of the student’s story and seek permission to incorporate it anonymously into a class.

They will come and tell me their stories privately. And then I ask permission, “Can I share it without sharing who you are?” And, in fact, I will tell them at the beginning of the class “If there’s things that you want to talk about you don’t want to say in front of the class.” Well, their stories will resonate more loudly than my stories, than the legal cases, than history, than statistics. I use all of those.
I deliberately use multiple ways, and I present information in different kinds of ways. But it is the power of their own personal stories that I think resonates the most with them.

The professor senses potential resonance for the larger group, and uses one student’s story to generate a connection between ideas for the rest class.

Media can play an important role in helping students make meaningful connections between course content and issues they are concerned with. It can also bring a new perspective to more abstract or remote ideas. Media and technology allow faculty to stimulate interest and engagement if they are used as the stimulus for further reflection or interaction, rather than as passive presentations of information. Many professors talked about the advantages of some of the new technologies and of older ones, like documentary, to enhance student engagement. One person uses a powerful documentary to create a more lasting impact than a lecture or Power Point might accomplish.

I showed this really wonderful documentary about a Floridian, Harry T. Moore, who was a Civil Rights activist in the 30s, 40s and 50s and is really a bridge between one generation and one form of the Black Freedom Struggle and what we think of as the modern Civil Rights Movement. And it’s a very well done documentary. And they had read an article about him and then we watched the documentary … The audio is very effective. The visuals are stunning and disturbing…They just had some very thoughtful comments about that…There are images of lynchings and they said they really understand what that means … They really responded very thoughtfully to that… And I think that the great thing
about documentary is that it really can shake you to your soul, even in a way that even the best lecture and images imported on PowerPoint or whatever just can’t.

Using media alone, no matter how powerful the images were, was less effective than combining the media with some opportunity to focus and to reflect. Many professors describe having time for the students to reflect, to focus and to interact about the materials. In the case of the documentary mentioned above

I gave them this exercise where it was a series of just six questions about the film that they had to ask and take notes on while they were watching it. So it was part just to make them do that or seduce them into doing that, but they wrote their little fingers off, and many of them had very thoughtful things to say.

The instructor here was using the medium of documentary to engage, but designing follow-up work to ensure that the impact of the moment is enhanced.

Another professor who does like to have classroom discussions after video presentations recognizes that time can be a problem and has devised other ways of encouraging reflection.

I’ve shown a film. The film was an hour long. We don’t have time to talk about it. And I want them to continue thinking about it. So I will either say write me a paragraph reaction, or sometimes I’ll give specific questions. It’s still a real short writing assignment, they could do it handwritten. Sometimes I’ll have them do it either as a class, a collective, some kind of an attendance thing as well. Sometimes I just have them talk to somebody sitting next to them so that everybody has a chance to reflect on it. But, you know, the teachable moment
does not always have to have you right there, physically present. I think you create the opportunity and there are a number of opportunities. But then for you to get some assessment of what actually happened to have them either have a discussion on what they said to their partner afterwards or have them write it down and then you have an opportunity to respond to what they wrote.

Here the professor wants to know and enhance the impact of the moment she has tried to create, even if she has not been able to witness it firsthand.

Another version of faculty-initiated teachable moments involves the deliberate design of assignments or group interactions to bring about increased involvement on the part of the students. In these cases the professor is not necessarily making the direct instructional connection, but is setting up an experience that will likely lead the student to participate on a more personal level in the learning experience. Many variations on active learning come into play in these descriptions. One person describes having students play a version of the Newlywed Game in order to appreciate the cultural variations represented by marriage.

I pick two people and say, “Ok, you are going to get married in Greece. And this is how you are going to do it.” And I run through all these scenarios of how to get married in a particular culture.

By assigning role playing to pairs of students this professor engages their imagination concerning different cultural practices.

Another designs practical, hands-on assignments that relate to students’ future career needs. The students in these classes are career-oriented and have a very practical
focus to their interests. This professor designs assignments to channel this quest for relevance.

So for me it’s creating that opportunity in the classroom for them to take that knowledge from their book or from presentations or from DVDs and extra media teaching materials that I use and then turn it into a hands-on product. And so for me that’s how to set up the teachable moment, to create a hands-on opportunity for them to apply their learning.

Some send students outside the classrooms to master assignments. The learning can take several forms, from broadening personal experience to realizing the value of learning other skills. Several people I spoke with create out-of-class assignments designed to immerse the students in experiences that will require they make personal connections.

They have to immerse themselves in a culture other than their own. And if they’re used to being a minority in that culture, that’s not good. You have to go someplace where you’re not used to being a minority and that really opens up their eyes because I have students who never had to really deal with minorities. It’s shocking to them. That’s a teachable moment that’s outside of the classroom. And so I provide the assignment, I provide the constraints, and then they end up teaching themselves. So we are creating teachable moments here because I don’t have to lecture them about you need to learn another language. Suddenly it becomes painfully obvious that even doing research right here in town, “Oh my god there are all these people who speak another language.”
In this case, the professor intends for certain learning to occur, and can to some extent anticipate what will transpire and what the student will gather from the experience. The goal of the professor is to make the connection personal and the issues real for the student. These assignments may not always produce the anticipated results, however. We will look at calculated moments that take an unexpected turn later in the chapter.

It is not always easy to differentiate between what some called “just good teaching” and a calculated teachable moment, except to point out that “just good teaching” does not always lead to the kind of engagement instructors may hope for. On any given day, what we call good teaching still requires good learning to be successful. Professors are aware of this catch.

And that’s the advantage of the “calculated” teachable moment, because you plan for it. And you know that nine times out of ten it’s going to work. It’s going to work. Now sometimes it won’t. And sometimes you’ll throw stuff out there and they won’t pick up on it. And you’re going, “I can’t believe I just gave them a teachable moment here and they’re not giving me what I need back to make this happen.”

Even the most calculated moments can yield surprise, but the calculated moments are the easiest to pursue since they are a part of the plan. In these cases the learning seems fairly predictable to the professors. They set up as much of the environment as possible and deliberately launch an experience. The next section will examine the foreseeable moment. These are the teachable moments that a professor might predict based on experience, current events, or student interests. Unlike the calculated moment, the
professor does not initiate a foreseeable moment, waiting instead to see if the students introduce the issues.

*Foreseeable Moments*

While the calculated teachable moment is both planned and initiated by the professor, the foreseeable moment is planned for as a contingency, but the professor does not initiate it, expecting or hoping that students will take the class along that path. Sometimes the impetus for the moment lies in significant outside events, and other times it can be found in the struggle to grasp a concept or in a reaction to an assignment or reading. Faculty talk of accumulating enough experience and doing enough preparation to anticipate when and where students might bring up issues or make connections. Several observe that as time goes by there are fewer major surprises within their classes and more chances to connect with prior events. This section will look at a range of foreseeable moments described by my participants. They range from assignment designs to student-identified interests to what Schultz (2002) calls “cataclysmic” events leading to teachable moments.

In the section on calculated moments, we examined assignments designed to accomplish a particular teachable moment, linked to a specific concept or goal the professor wanted to accomplish. In the foreseeable moment category, we have assignments which are designed to provide an experience with planned goals, but whose side effects can yield less calculated but equally useful moments. Unlike the calculated moments, however, these are student-initiated connections and observations that the professor follows through on. In these cases the professor may not know what will
emerge, but is prepared to pursue an idea within the range of the class or the assignment when the opportunity presents itself. In the case below, the assignment was broad and intended to give the students practice in observing behavior. The professor could not know all of the observations the students would make. But, when she saw a theme emerge, she was able to follow it.

I gave them an assignment on observing children’s behavior and then they had to write just a one-page kind of description of their observations. And then we reflected. It kind of opened up the discussion. A number of students started talking about how they saw mothers and fathers interacting differently with children. A lot of students were saying, “Ooh, the dads are never home; the moms are the ones that are involved.” And then someone said, “Well, I was at a Bucs game and saw the moms were gabbing, and the dads were really engaged with the kids.” And so I kind of used that moment to launch into talking about maternal and paternal differences in child rearing and how that relates to abnormal child psychology. And so it was a kind of neat confluence of all of them presenting information that’s actually very consistent with the research. And so I kind of took their experiences and then tried to add the scholarly level to it, while still validating their experience… that felt like it was something that kind of came from them and then I could, without ever thinking I was going to lecture on it, I could relate scholarly material to their experiences.
The professor was ready with the research when a topic arose even if it was not an avenue she specifically expected to explore. The three elements came together—student experience, the topic, and professor preparation.

In another case, the direction of the discussion combined with an awareness of the issues in the news let the same professor talk, not only about the topic at hand, but about the use of evidence and popular perception.

There are all these ideas that vaccinations actually cause autism, and there’s no scientific proof at all. And so a couple of times students were kind of going back and forth with “Well this is what I heard,” or, “This is what they say in the school that I work at,” and I was kind of able to join them in that that discussion of a controversial issue and then kind of bring it into the research side and say, “Oh, those are great points, and that’s definitely what a lot of Special Ed teachers think; a lot of parents think this. But here’s what the research shows and here’s maybe where the confusion comes out.” So trying to kind of use that information and then build on it.

Here it was not only a course concept; it was also a lesson about the broader issue of scientific evidence. Again the interest, the topic, and the professor’s background intersected so some new piece of learning might be more likely to take hold.

Using groups and group work is another way to stimulate probable moments without direct professor participation in that moment.

What I try to do is create mentoring situations in the way I engineer my groups.

So I always try to get a balance of race. It’s not as easy out there, but I try to do
that. I try to balance by age. So I pick a mother or a father for each group, and I try to put young students who lack experience there, because I think that also creates another teachable moment that I may not ever see again. But I’m creating the opportunity for that moment to happen in creating mentors within that structure…. I’ve been engineering groups as long as I’ve been doing group work, so almost 10 years, and I just found that that’s a really nice way to allow those teachable moments to occur, by placing people with people that they wouldn’t have chosen to be with, and allow that dynamic, that group dynamic to happen.

Even though the professor is not involved directly in the group interactions, the groups have been designed so accomplish certain goals. The professor cannot be sure that the groups will interact as intended.

One anticipated, indeed hoped-for, type of teachable moment takes place when a class has been struggling with a difficult idea until eventually one student answer, comment, or question reveals the core difficulty many students are having. Sometimes students are just not grasping a concept, and the professor realizes that something new must happen. As one person described it, “I’ve noticed, it’s that moment where you suddenly realize it’s a brick wall that you’ve been batting your head on, and if you do it again it’s just going to keep hurting. And maybe you should walk around it.”

So in one kind of teachable moment a student says or does something that will reveal the nature of that wall and let the professor plot a new path. If instructors are open to these revelations they can guide the class over that threshold and into new understanding. One instructor who had been teaching about social construction of gender
and how that might play out differently in other cultures reports how one student comment opened the door to an examination of cultural assumptions and a new grasp of the concept of gender.

We were actually talking about the idea of third genders besides being man or woman when there are other possibilities. They were having a hard time. We had watched a video; we did a reaction to a video about a gender in Samoa called faafafini. And they are men who take on traditional women’s roles, but that role has been changing as a result of globalization and westernization of that role. And so this one faafafini who is biologically a male, but in every other way is a woman. She has a boyfriend. So they were having a hard time wrapping their brains around whether the boyfriend was then gay. Did that make him gay? Were these two gay men?

And I was trying to explain to them that part of it is they don’t see themselves as gay because they are women. And I was trying to explain to them that for us gender is so tied to and based on sexuality and reproductive organs, really. That it is hard for us to separate and understand, and our only default is to say that someone is gay. And one student said “But these are 2 men having sex.” And I said “There are two biological males having sex but this one is a woman; that is what gender is all about. And they may have the body parts of a male, but she is a woman, so then it is not homosexuality that we are talking about.” And I explained it much better. But they got it. And we had spent two class periods talking about this to get to this point, and it was her question that sparked me to
explain it slightly differently. That it worked. You could see it on their faces, and they went, “OH!”

Students sometimes experience dissonance between what they believe and what is going on in class. This can provide a teachable moment as the students are asked to look back at themselves and examine their beliefs in the light of new information. While these can be profound teachable moments, they are not always easy. Some professors set up class discussions or generate topics that are designed to inspire such self-examination, without being sure if or how that self-examination will play out.

They’re going to have to deal with some public policy issues on sexuality because these are things that are in the news. And they’re going to be addressing them in your lifetime. But I’ve found that sometimes there’s an example that works so powerfully that it reflects back on them, and I will use an example. And the scenario is, assuming we’re all heterosexual, which we know is not true because up to 10% are not heterosexual, but for the sake of the assignment: Are you threatened by--to the point that you’d like to have that person leave or you leave--being with, if you’re a woman, a lesbian, in a sports locker room, or a man with a gay man? And…pretty much most women say, “I don’t care.” Or “It doesn’t bother me enough that I’m going to leave or ask them to leave.” It used to be about half the guys would, and half the guys wouldn’t. And so, for at least maybe three or four years, it was so interesting because the women would be very…well…not rude to the guys who said they wouldn’t be in the locker room with the same guy. The guys would --about half of them would do that. The
women would roll their eyes at them, go, “What? You know, get a life.” And when the guys said it didn’t bother them… one semester they actually cheered. You should have seen the faces of the guys who were, “I’m not gay and I’m not going to”... And sometimes they get mad at me in these moments and I think sometimes later on they understand they’re not really mad at me; they’re mad at themselves.

Here the professor poses a question already anticipating the answer, but cannot be sure how the group will respond. Indeed, this person, aware of the uncertainty reports watching for changes that signal changes in the impact of the activity.

Being able to connect the content of one course to other courses or ideas students may have encountered constitutes another type of moment. Professors talk about trying to be aware of the content of other courses in their fields, and in the general education curriculum as they prepare for their own classes, so they can make connections as opportunities occur.

We were talking about one of the ways that people date the Middle Ages is with the beginning of the Reformation in 1517 when Martin Luther publishes his theses. And that led to talking about changing Europe from a sort of single dominant theological system to one in which there were multiples and how, from the outside, those would look very small, but inside very different. And I made a comparison to the situation in Iraq between Shiite and Sunni. Well, I think I could see flickers of recognition or something or nods across people’s faces.
In this case the course topic was not religion, but an awareness of the historical connections of the discipline with the current events in the Middle East allowed a connection across academic disciplines and to world events. Students had more than one way to come to the information at hand.

Professors who are able to get to know individual student concerns or attitudes find that they can anticipate possible issues and be ready to address them as they arose. Though this is a luxury for people teaching large classes, some still comment on being alert to such opportunities. The same person who linked the Reformation with contemporary Iraq also describes preparing for the discussion of a reading assignment and anticipating that a particular student might have particular take on the reading based on her comments in other discussions. He did not generate a comment, but he was ready with feedback that would nudge the student to think more critically.

I have a student in my honors class, and in this case I was actually kind of looking for the moment. She seems to be an adherent in some respects of Ayn Rand’s philosophy, and of the individual as being more worthy than society, but at the same time she is talking about notions of ethics, and so because that ties in with the “Island of Dr. Moreau,” and she is a science student of sorts, I knew it would come up in our conversation today—of a way of maybe just nudging her a little to think about the paradoxes or contradictions, not that they have to be resolved, between a belief in an ethical code of behavior for scientists and an individualistic point of view that says, what the person wants is most important, and free will is what is. So whether that came through or not, I don’t know, but you hope you
don’t misread things in fleeting glances of “Oh, I need to think about that,” so I at least felt like that happened.

Occasionally events in the larger environment so dominate student concerns that instructors have to be ready to use their expertise and the lens of their disciplines to help students process what has happened. Interestingly, the people I spoke with who brought up these major news events said they were not sure when they went into class how they would address the issues, only that they would address them within their disciplines based on how the students responded. So they foresaw the likelihood of the issues emerging, but prepared more globally until they determined the direction the students wanted to go. Some mentioned September 11, 2001, as an illustration of an event they felt they had to address, but were unsure how students wanted or needed to talk about it. As one of my pilot participants told me, these are cases where, instead of trying to fit the event into a discipline, she looked for her field in the situation. Finding gender issues in the September 11 attacks and being able to apply that to analysis of the events allowed her to illustrate the relevance of the discipline and its applicability to something already on the students’ minds.

A more recent example of an unexpected outside event’s taking over the attention of a class is the shooting that took place at Virginia Tech in the spring of 2007. Professors report being ready to talk about the event without knowing exactly what direction the class discussion would take. One says,

Now, obviously the undergraduates wanted to talk about it. In fact, we talked about it, and many of them thanked me for giving them an opportunity to talk
about it in class. But I was able to relate it our course material. So we had talked about the movement for gun control in the United States. And so that incident gave us an opportunity to really dig deep into, okay, well what are the laws about gun control. Are the claims of movement activists who want to control guns in some way, the sale of guns, credible? If they had been successful in pushing for some of the legislation they want, could this have been prevented? So there were lots of ways to apply it. And, you know, it required shifting things around a little bit. We wouldn’t have talked about that as in-depth had that event not happened. But it gave me an opportunity to kind of ride on the winds of what the students were interested in…What I didn’t expect, but which I ended up starting to do a little bit more research on too (and this was generated from the students), was the whole issue of mental health and how can you detect mental health, you know, mental health concerns in the student? Is it the teacher’s responsibility to report potential mental health issues among students? If teachers do that, then do they become more like police agents or mental health professionals rather than teachers? So those were things that weren’t as relevant… but you could make the connection.

Also relating to the Virginia Tech shooting incident, another connected the material this way.

The Virginia Tech shootings were a fine example where the whole plan for the day was thrown out. I had two ideas in mind. And I had some sense of what we would do. I sort of let the feeling emerge in the classroom and sort of gauge it in
the moment to see whether they’re preoccupied with this or not. There are certain sort of floating topics in my course that can be addressed really at any time. One of them is the critique of human nature arguments for human behavior. And so I think what we did was to take the case of Cho, the shooter, and to look at some of the media portrayals of Cho. And I think I had them list for me or, I listed them on the board, with their help, what are some of the common lines of investigation into him and the circumstances surrounding that shooting. And they knew a lot about his family; they knew about his personal background. But the fact that it was in the news, it was on their minds anyway. They had the Oracle in front of them, and it was plastered across the front of the Oracle, I think, made it seem as though I was on top of my game because it made it seem like, “Oh, she can take any current event and turn it into what we cover that day.” … And I think that that was going to be a small portion of what we covered maybe in that two week period but it turned into a big demonstration and project, or in-class project.

Again the students’ interests guided the discussion which was informed, but not directed, by the professor’s readiness. In conducting the class in such a way, the instructor was able to demonstrate her field in action.

So, some moments are anticipated and prepared for by the professor, but still allowed to emerge from the class. Still other moments come as surprises. These are the least anticipated.
**Least Foreseen Moments**

Despite experience and preparation, there are still times when moments of strong engagement emerge unanticipated by the professor. These surprises can take many forms and require the quickest decision-making with the least preparation, but professors who are ready for surprises and who recognize the value of those opportunities can turn what might be an awkward moment into one of lasting educational impact. The interviews describe several different types of surprises including students attempting to fluster, shock or challenge professors, students asking unanticipated questions, or students making “politically incorrect” comments and opening the door to discussions of difficult topics. Not all teachable moments stem from positive engagement. Some can originate with a challenge or with a controversial, racist or sexist comment that the professor feels must not be left unchallenged. The stakes in these situations are especially high according to my participants, since the nature of the response can set a tone for subsequent classes and send a signal about the relative academic safety of making or examining statements in class.

Professors from time to time face classes in which a student or students set out to see if they can fluster the professor. The way in which the instructor fields such attempts can set a tone for an entire course—one that may be difficult to undo. Participants speak of being aware of these stakes and of how, when possible, they try to turn them into useful teaching moments. In these cases the initial heightened engagement in the class may not be focused on the course content, rather it is focused on how the instructor will handle the challenge.
And I was talking about language and culture and how that can be related and just
talking about meanings of words and how we have certain words for some things
that other cultures don’t and vice versa, depending on what’s important. And you
know the classic example is snow and all the different words for that so I brought
that up. And so this one kid goes “What about excrement?” And I’m like,
Think about our culture. How many different words do we have for that?” And so,
I’m like, “Tell me ‘em.” So they start throwing them out there. They come out of
left field. But, if you are able to use that question, or example, or whatever, it can
certainly turn into a teachable moment.

In cases of challenges and attempts to fluster or undermine the professor, the response
can have a double impact—on students’ perceptions of the instructor as well as the
subject matter.

Some student behavior is less directly related to the content of the discussion than
it is to the broader academic context, providing a different sort of teachable moment.
Some professors reported dealing with inappropriate or disruptive behavior by generating
a discussion on rights and responsibilities in academic settings, sharing a philosophy of
teaching and engaging students in the course in a new way.

I once had a class in which there were a group of students who sat in the back and
were somewhat disruptive. And so I said, “You know, in a college classroom, in
any classroom, there are rights and responsibilities. One of the reasons why I set
rules and say that you all have responsibilities is to preserve everyone’s rights.
Yeah, everyone has a right to learn and to be able to hear what I’m saying, to be able to concentrate and focus. And so when things interfere with those rights, that’s why I have to call people to task”. And so it just occurred to me that that gave me a moment to kind of present them with sort of a philosophy of a classroom environment that maybe they hadn’t thought about.

Rather than allowing a negative situation to fester or become more negative, the professor here saw the behavior as an opportunity to re-frame the situation and open a door to more thoughtful conduct.

There are also students whose conduct seems to stem more from individual issues, but who let those issues play out in the class. Learning to deal with those is a teachable moment for the professor, but it also sets a tone for subsequent interactions with other students, teaching them about the professor’s likely responses. One professor talks about feeling the need to balance between validating students’ participation, on the one hand, and limiting the impact of negative students on the entire class.

Sometimes you are just dealing with angry students or people who don’t want to be in college who are forced to go because of their parents or something. Or they think that teaching is a completely biased political endeavor or something and they are just convinced…. And with students like that there is not much you can do I think, other than hope that they sort of see the light later on. Or embrace something. There’s that kind of resistance. Then you’ve got the other, the other kind of shock-oriented resistance--the students who probably feel under-challenged, and so they are trying to see how far they can get things going. They
are trying to spice things up a little. These are similar issue, right? If they feel they are being taken seriously then that opens up their sense of self-teaching, right? But if you appeal to them too often then they sort of alienate the rest of the class.

So balancing between attending to the resistant student and attending to the needs of the rest of class is a concern. But attending to the resistance can open moments for the resistant students as well as for the rest of the class. Each time a professor takes one student seriously, the rest of the class potentially learns something about what that professor values and will accept.

Even if students are not trying to be controversial, they may make comments that capture the attention of the class and either open or close doors to subsequent debate. Faculty reported listening for these moments and judging, case by case, how to address them. These can be positive or negative statements, but they reveal either a need or an opportunity to address a concern. The instructor then has to gauge the probable readiness for that concern to be addressed. In the case below, an instructor describes a moment in class when a student made a racist comment. There was already a climate for discussion in the room, and the student had demonstrated a willingness to challenge and be challenged, so when the issue arose the professor pursued it.

Out of the blue, he said, “One of my teachers used to say to us ‘Blacks were grateful when Puerto Ricans came along.’” That’s racist. A loaded racist statement. I just said it flat out. I said, “That’s a racist statement.” And he did not see why. So, the women students who were in the class looked at me. You want
the students to take responsibility for what they say. You want them to recognize that language is powerful. You want them to reassess and listen to what they’re saying. So I decided to deal with it. And I said, “That’s a racist statement.” And the students in the classroom who would be most affected by it agreed. And he said, “Why? Why is it a racist statement?” And in a way that was the best response because then I got to talk about language.

This professor valued the opportunity to open the discussion even while expressing a reaction to the comment. The community in the classroom depended in part on managing the response to the comment. The professor goes on to say that the student in question seemed to benefit from her challenge to his thinking.

I think he had relied his verbal skills, and he wasn’t able to get away with that in my class because I pushed him so much with his writing, so I think that he, and probably he had even said comments like that before and just could have gotten away with it, you know. But I think with me challenging him, he had a kind of respect for me then and so he said a lot of things in class. He did extremely well in the class.

The student had recognized some value in her feedback on his work and therefore valued the challenge she presented to him. She was able to separate that interaction from evaluation of his body of work, making it clear that ideas could be explored without a negative impact on the explorer. And she had succeeded in making it clear to the rest of the class that racist comments would not go unchallenged. As she goes on to explain,
I think if I had stayed passive and let it go… I think it would have destroyed the gender dynamic in the class, I think because the women who ended up reacting to him were the black women in the class, and they were unhappy, and by me, you know challenging him, I think that set the tone for them that they could talk, they could talk in class, or they could say something in class without feeling like there was no space to do that.

This comment relates to managing surprise, but it also indicates efforts the professor makes to preserve openness in the class and to the decision-making process involved in responding to a moment.

Other moments may arise within a class discussion, when the conversation goes in a direction that surprises the instructor. Even well-planned assignments may yield surprise responses that lead to higher than anticipated levels of engagement or to unexpected twists and connections. The professor has to be ready to let these play out and to follow where they might lead. Since students bring their own histories and experiences to class and since readings are open to interpretation and discussion, multiple interpretations may arise. This can lead to debate and disagreement in class as students sort out their perceptions. The same professor who addressed the racist comment above reports a different discussion taking an unexpected turn when students reacted to an essay they had read.

And so we were having a discussion about one of the essays. …The woman they read about worked her way out of lower class poverty to a middle-class status of existence, partly by marrying a middle-class man, but also by getting a degree and
becoming a nurse and changing the way she lived and changing her behavior. And she just happens to be black. They read it as this heroic woman getting herself out of the projects. But the article was much more complicated than that. But it also dealt with race. And my students hated it. They said “I don’t understand why race is an issue here. I don’t understand. She worked hard for what she did. Why are they saying that?” And they didn’t see the race factor as an issue in this woman’s plight, where it was clear that the author, and the woman herself, talked about this in the essay. So it wasn’t just something that came out of the blue. So, we talked about that in class. They were furious. They were totally enraged, pissed off. They thought that the author was being racist. And they thought the author was trying to make the woman a kind of example. So we talked about that. And I was surprised by their reaction. And so it became a kind of faction. We had the group that thought the author was being racist and we had the group that said, “Oh, I think this is okay,” you know, that it’s just a discussion of race. So that became, in essence, a teachable moment.

The professor did not anticipate this strong response from the class, but saw in it an opportunity for discussion of an important issue.

There doesn’t always have to be a challenge for there to be a surprise response that takes the discussion in an unexpected direction. In a class examining sexism, a male student described feeling discriminated against for being in the military. The professor saw the illustrative value of the example and let the discussion go, allowing this more
tangentially connected example, in order to make a point that other direct, but less personal, examples had failed to make.

We were looking at sexism in different contexts including the classroom, and I had sort of asked them to think about what they would do, and I had asked them if sexism was really a problem at the college level… And I was trying to find out, without leading them, if instructors in their classes ever made sexist or even subtly marginalizing comments, and nobody really had an example. I said what would you do if that happened? And a couple said I would e-mail the instructor. If he pissed me off I would let him know. And it was so hypothetical it wasn’t meaningful, and then this guy who is in the military said, “Well, last year I was in a class with a professor who hated the military,” and I didn’t want to say anything and I didn’t have to teach any more.

Being open to the link between the student’s experience and her broader definition of course content allowed this professor to pursue her point in an unexpected, but no less effective, manner.

The least foreseen teachable moments can take several forms, a challenge, a controversial comment or a student’s response to assignments. There are times when those surprise moments prove to be valuable enough that the professor wants to maximize their impact by re-creating them in other classes. This is an attempt at what I call portability.
Portability

Some of the professors I spoke with talk about turning what was originally a surprise teachable moment, and therefore a teachable moment for the professor as well, into a calculated moment for subsequent classes based on the hope that the initial success was portable. Portability is the idea that a previously unforeseen teachable moment can be used by the professor as a calculated teachable moment in a new context. If an illustration, example or connection had a strong positive impact in one class, even if it had originally been unplanned, an instructor might try to use that connection in subsequent iterations of the class. These carry with them the same uncertainty of outcomes as other calculated teachable moments. Sometimes there are differences in the compositions of the classes, the timeliness of an example or event will wear off, or another class won’t have the same interests or concerns. Therefore gauging their effectiveness becomes part of the teaching process.

There are at least three different types of portability described in the interviews. Some cases, the professor tries to re-create a moment or an experience. In another type, the professor uses the lessons learned in one class and incorporates them into subsequent course work. In the final type, a small class moment becomes a thread that weaves together themes, so the professor can come back to the moment repeatedly within the same class, and perhaps in other classes as well.

In a case of a good teachable moment that a professor tried deliberately to re-create, the element of spontaneity that made it initially exciting was lost in an attempt to re-create it.
I have them study the Cold War. And so I have them do a debate. It was meant to be that History would ask questions of Russia, Britain and America. What I didn’t plan but what actually happened was that Britain, America, and Russia ended up debating each other. Now, it was meant to be directed towards History, which was another group of students. But I thought it would be History questioning each country and each country defending itself in front of History. And I didn’t plan for any dialogue between the countries. But it was brilliant because the countries started to say, “Well if you hadn’t done that.” “You never even shared the bomb. And if you’d shared the bomb, we would never have had to develop our own in the first place.” “But we only didn’t share the bomb because you were clearly….”

You know and it was just brilliant, and it was one of those moments that you just think, “Oh this is great! I didn’t know how much they knew.” And they were really into character. And it was just great.

So, of course then the next time I taught the course I thought, oh, well, forget going through History, I’m now going to have a debate where the three countries go at it with each other. But for whatever reason, it didn’t work as well. And I think maybe because I had too high expectations because it went so well by chance the first time. And the second time, I don’t know whether I limited them by saying. I just thought that went great, but how can I make it better? Well I’m going to get rid of History, so I have to make sure that they do it right so I’ll tell them how to frame their questions… Although I thought it was good prep on my
part, I think it limited them a bit, and they didn’t, in fact, have the free flow; they were more stilted.

While there is not a clear reason for the lack of portability the professor tried to capture the elements that made the exercise initially engaging and in so doing changed the outcome of the exercise. In the original moment, that particular group of students interacted in a particular way to generate excitement and to surprise even the professor in their approach to the subject matter. In trying to engineer that synergy with subsequent classes the professor, instead, limited the students’ creative inputs. Successful moments do not always translate into successful replication; not all moments have portability.

The same professor, however, stumbled upon a simple analogy that illustrates a concept in her class. This analogy catches on and becomes a recurring theme. The hook may have been very small and spontaneous at first, but its usefulness in clarifying a concept sustained its importance in aiding student learning. The professor may have provided initial link, but the student response sustained its value and carries it to new contexts.

A teachable moment can be something to be as silly as using an analogy. Like this class I’m teaching this semester, I’m trying to get across that national identity is neither fixed nor is it singular, that you can have many different identities. So I came up with this analogy off the top of my head about sweaters and clothing. That when you’re wearing a shirt you think that’s all you need but if you get a bit chilly you can put a sweater on top, and that’s acceptable; nobody thinks that’s weird. So one minute you can be English, and then you’ll think a bit of
Britishness coming on and you can put on your British sweater, and you can feel that you’re both British and English at the same time. And so that worked, and that analogy came to me just in a moment of talking and trying to get across this. I felt like St. Patrick and the three-leaf clover thing, you know. And it popped into my head about clothing. I’ve run with that now through this semester, and we keep coming back to it. I’ll say “You know it’s the sweaters.” And they’ll laugh. And now they’ve started to say “Well, this is like the sweater, isn’t it?” You know. So we talk about how certain things you can wear several of, but others you can’t. Hats you can’t, but sweaters you can; clothing you can. But one has to be able to fit inside the other so we talked that about whether you could wear shorts and trousers. And I know it sounds silly but it actually makes them think about what it is. Some identities you can’t have multiple versions of and others you can.

Here part of the surprise is the reception. We have a case where a professor’s spontaneous example comes at a moment where it meets with student experience to illustrate a course concept. The professor is astute enough to try returning to the analogy when appropriate and students pick up on subsequent opportunities to extend the connection.

One professor, whose classes often involve field work, describes two separate surprise moments that arose and led her to change her approach to, or design of, field work assignments. Classes involving field work are designed much like clinical experiences to have students actively engage in the work of the discipline. There are
many foreseeable moments that the professor hopes will be generated, but these two incidents are cases of surprise teachable moments becoming calculated moments in subsequent semesters. The first involves students interviewing workers in ethnic food stores—a task made more complex as immigration has become more of a concern.

I had a male student, who must have been in his late 20’s or early 30’s, who was working in a store, a little Mexican place. And things seemed to be going really good, and then he went in one day and nobody would talk to him. He called me up. He said “I don’t know what’s going on. They won’t talk to me anymore. They are acting weird.” And I said, “I am not sure what it is. Maybe they think you are immigration. Now there are two ways to go about this. You can try to go back in with your ID and all this stuff and explain to them who you are and that you are not immigration. Or we can just find another place for you to do this, and I am Okay with either option.” And he decided he wanted to go back and try to get past this. He went back in and yes, they were afraid that he was immigration, and they worked through it, and this guy felt really good afterwards that he could get through that. The whole immigration thing has gotten heavier over time. I have been teaching this class over 20 years, so you know things change over time. So, this was the first time we hit it, and now I warn students about it. It may happen again. That is the reality of the world we live in for immigrants.

In the second case, the same professor describes another teachable moment, also involving interviews with members of another culture. This time the issue of gender is complicated enough that the instructor subsequently put limitations on whom students
could talk to. This was in part to protect the students, not only from conflict, but also from getting too far into an assignment only to find they were unable to complete it.

I eliminated that teachable moment... When a young man goes in to a Middle Eastern store and starts interviewing the woman who works there and after he has been in there a couple of times the husband gets pissed. So that teachable moment we don’t do any more.

Students now interview people of the same gender. The professor indicates a need to balance the exposure of students to the realities of the discipline with the academic and personal risks of that exposure.

I mean his grade is dependent upon this interaction, so it is high stress. But that is the reality. You go out and talk to strangers, and things fall apart. And you have to control how much you are going to let things happen and how much you are going to protect them. I try to hit the middle; otherwise it is not real.

Not only can the context of the class change, but the social context of the course can change, too. This professor gauged the impact of surprise moments resulting from societal issues and decided to either mediate the experience or avoid it for future students.

Given this unpredictability, professors have to be ready to re-think their examples and their successes and then analyze each class and each attempt at transplanting a moment to a new context. As the professor who used the YouTube debate explains at one point

There’s so many times I’ve done a lecture or discussion that was really invigorating, and then you try it the next semester and nothing, dead in the water,
which makes it hard to figure out. So, when it’s not working, it might be great in other semesters, and you don’t want to discard stuff. It’s on my mind because that is something that came up in one of the other classes. So it’s yes, so there’s being an ethnographer of my own class, basically, several times, and being an experimenter, not in a sense to social sciences experimentation, but in the sense of I guess aesthetic experimentation.

And later in the interview, when talking specifically about the YouTube debate’s portability, the same participant points out

The half life on current events is pretty short, so if you don’t jump on it right when it’s fresh, you have to let it wait. The half life is short, but then the lag time between when it becomes historically relevant is still longer than the half life of its relevance.

Another professor talks of being curious each time to see if an example retains its impact or not. “I’ve seen the teachable moment come out of this example in the past. I resurrect it over and over again. And I give them… You know part of it’s my own curiosity… I want to see if it still happens.”

As contexts and student attitudes change, teachable moments may lose their impact. This shift of impact is one thing reflective faculty look for, since it reveals the need for change in teaching approaches. So the realization that an old moment that is no longer portable becomes a new teachable moment for the professor. The challenge is to discover what has portability and what does not.
Moments emerge in given contexts. Attempts to transplant them may or may not succeed for a myriad of reasons. But, there do seem to be elements of the classroom environment that can facilitate their emergence.

Classroom Environment

While we say that engagement and interaction are central to the emergence of the teachable moment, interaction is not necessarily easy to generate or to sustain constructively. In the current educational and political climate, some even see encouraging interaction as a risky proposition. The media often reports complaints about the bias of college faculty. State legislators suggest we limit our classroom teaching to our disciplines; class sizes continue to grow. More and more topics seem to be off limits for discussion—race, religion, politics, and class. With all of these pressures to limit or at least discourage classroom interaction, what classroom conditions lend themselves to the emergence of teachable moments? In order to discuss how teachable moments emerge, we need to look at the contexts in which they emerge and can be pursued. What characterizes a context that facilitates their emergence and sustains interactions to make them meaningful? The faculty I interviewed report several conditions that foster opportunities for teachable moments.

Since interaction with and between students is a central element, professors—even in the large lecture classes—speak of getting students to talk to each other, to ask questions, to challenge ideas. Professors in this study often set out to create classroom environments that foster and manage interaction, maximizing the probability that teachable moments will emerge and that their pursuit will be meaningful. Many
deliberately set out to convey this openness. Beginning with the first class session, professors try to set a tone or create an environment in which students feel comfortable enough to discuss, inquire, and even challenge. The initial tone allows the first teachable moments to emerge, but the professor’s response to that emergence is what shapes the context for the next potential moment. There is a cycle that develops over the course of the semester as professors and students learn what to expect from one another. This section will examine the initial efforts at establishing the general tone and environment. The subsequent section will look at the decision process and the factors that allow the moment to be sustained.

Class size

Class size has a significant impact on the way professors can interact with their classes. Many of the participants in this study teach classes with over 100 students at a time, some over 300. In classes of this size, it is both more important and more difficult to establish an open atmosphere where students feel free to speak and to question. While several people mention simply calling roll and learning students’ names, those who teach sections with hundreds of students acknowledge they are not able to do that. They do, however, try to establish a relationship in other ways, creating opportunities for students to talk to each other, to work in groups, to use clickers, to use e-mail, to meet during office hours, or to participate in TA-led discussion groups.

One tells of the difficulty of addressing sensitive topics in large classes where students may not feel comfortable revealing experiences or attitudes and where time also limits the opportunities to gradually develop ideas through interaction.
And you know the first time I had to teach a Racism class was 160. I wanted to cry. Because, you know, that is clearly straight lecture. And I think sometimes the tougher the topic, the smaller the class, or at least you know opportunities for them to break down and talk.

She goes on to say,

We talked about student-to-student moments being very powerful. In large lectures, if they are under 100, we have no TAs. So it is difficult to do some of things I usually do. Fewer activities for student-to-student interaction. We are losing those moments. It is harder to create them in class—and I feel the absence. Another feels the challenge to keep larger classes engaged to the same degree as smaller classes.

The issue is the different challenges of teaching larger classes versus smaller. You know how much more individualized you can be with smaller, like for example, lab classes or hands-on type classes. You know we have the same challenge with the active learning exercises and how much you can do with 20 students as opposed to 100.

One concern is that the large classes result in too much lecture and the simple transfer of information, which is not his primary goal in teaching.

I worry that, especially teaching a large lecture, that things are so prescribed and scripted that you miss that, and that can be an important part of my goal to help students become learners, and just giving them information, giving them instruction, doesn’t do that. It’s what you’re talking about; it’s where you see
them take some responsibility. And so I want to be able to recognize opportunities for that (the spontaneous teachable moment).

Larger classes seem to call for what is traditionally considered the most efficient means of transferring information, the lecture, and, at the same time, they make it more difficult to pick up on the cues that would allow digression from that lecture.

The need to balance the needs and interests of an individual student against the interests of a large group can be a challenge, but one person reminds herself:

That if a student has a question, I will try to make an effort and first repeat the questions and get the class in gear and make the point that that is really good and a really important question so that I hopefully get more listening… Because if one person in a class of 350 asks the question, it is probably in a lot of people’s minds who aren’t going to open their mouths.

*Overcoming anonymity*

Big classes can lead to student anonymity and sometimes a lessened sense of individual accountability. As one professor says, the students may realize that no one knows their name; and they don’t even have to be here. So, creating opportunities for interaction helps to generate different connections, making students feel accountable to their classmates in classes so large they might otherwise feel anonymous.

I do a lot of group work. I will put them in groups of four or five and I try to have groups of mixed ability. I don’t group them until the second week so I can figure out a little bit because some people I’ve had before, so I spread those people around so they are not all in one group. I will allow chitchat. I will allow
conversations as part of that group because I think that helps them bond, and I think if they feel connected to their group. They feel connected to the class, so they are more likely to come because they feel an obligation. They know that they are supposed to come and bring their report, and if they don’t, they’ve let their class down as well as me.

The group ties are a substitute for class ties when the class is too large. Students cannot hide from their small work groups the way they may be able to blend into the large lecture.

Being able to design small break-out groups to allow for the level of interaction missing in the large lectures is another way to balance the demands of large classes with the need for interaction. In fact, the selection of TAs is a concern to faculty who oversee the discussion groups associated with very large classes. One speaks of being selective about placing TAs in classes.

I think the probability of them emerging and being able to go with them will be greater in the small groups. And they told me I can be selective on my TAs, so you know I got the TAs who have good interpersonal skills, are willing to listen, and don’t have to be teaching the whole time. And I think we’ll set up the environment that way.

Another wants to see how the TAs work, and stresses their facilitator role while trying to decode what it is that makes the groups successful.

If I want to have these TAs around the discussion sections, I’m running one of them just to see what, how it’s going. But my rules are so rigid for them. You’re
not allowed to give a lecture. You’re not. You are just an administrator to get the students talking. And some of them have great classes, and others don’t. And the same people will have sections that are wonderful and sections that are not really, but it teaches them something about teaching.

One solution to the interaction problem is to use clickers. While many of the people I spoke with knew of the clickers, few were using them at the time of the interviews. One, however, was using them to enhance interaction.

Well, one of the things that I do that I find really helpful in the large lecture environment is to get people involved with each other. And we’ve clickers, as I said. And I use clickers to get them involved with the people around them. So once I’ve presented a topic then I present a question. Usually I start out with a simple definitional question, you know of what we just talked about. They click in their answer and in the time that they have to click in their answer they can look at their notes, they can talk… And I encourage them to talk to each other. And it gets kind of noisy sometimes. Because usually I follow up then with a more difficult question, and finally, you know, if I can, I’ll have a final question that really challenges their thinking beyond what we just talked about, you know, and sort of get them to think more conceptually about the topic. And at that point they do talk to each other and I see that going on a lot. And that’s kind of exciting.

In large classes the out-of-class communication may be important in tapping teachable moments.
What I dealt with last week in class was some of the myths about sexual orientation, and some things like that. And that usually goes the way I anticipate. The problem is that with 380 students, they aren’t as likely to speak up and say well, you know, and I get e-mails later. I’ll get an -email, in fact, that particular day I let them give me some feedback on the class in some informal course evaluation that was anonymous, and I got a lot of comments about this, that they were surprised at some of the stuff that came out about sexual orientation.

Whether a class is large or small, professors set the tone for interactions from the first class meeting, and even before. The next section will describe how faculty deliberately set out to create a classroom environment where interaction and engagement are more likely to emerge.

*Initial Class Sessions*

Regardless of class size, the professors’ planning and first class meetings establish a climate for interaction and engagement. Many professors describe using behaviors and explicit instructions to inform students about how and when they might participate and contribute to a class. Faculty who teach courses that address controversial comments are careful, setting explicit ground rules for class processes. Many deliberately model the behaviors they expect, and are conscious that small reactions may influence the flow of the class. Even small, taken-for-granted actions, such as calling roll, can yield teachable moments and send messages both about process and tone.

One professor describes the basis for interactions in the classroom this way.
What I’ve got to do is get 45 people very comfortable with saying something in a public forum. I’ve got to have them comfortable with the idea that when they speak out in class they’re not going to be ridiculed, they’re not going to be put down, that their ideas have merit, that there’s no such thing as a stupid question or stupid comment. There may be some stupid answers, which I might give, but there are not going to be stupid questions. And so they have a comfort level that when they speak in class they’re not going to be ridiculed by myself or their peers. And so, when I ask a question or I throw out an idea, I encourage them to react to it. They know that they’re not going to be put down for whatever they say. First thing you do is treat the students with respect. You have to treat them with respect. You have to make them understand that while you don’t expect them to have the knowledge base that you do, that their level of inquiry and their need to know is important to you, and that you’re there to function as someone who is both a provider of information and an access tool for them and someone who can leverage what they know within the context of your own biases and your own prejudice, which you can certainly admit to.

He deliberately sets out to treat students in a manner he hopes will foster discourse while acknowledging that discourse does not necessarily mean agreement.

Starting with something as simple as calling the roster on the first day of class, another person describes using name mispronunciations as opportunities to model both his concern for students and his approach to handling mistakes.
One of the things I do on the first day of most classes is I call roll. Now, experience a long time taught me that I was going to mispronounce some names, and it also taught me that the name on the list was not necessarily the name that the student preferred. So I always say something like, you know, “If I mispronounce your name, please let me know because I’m liable to make the mistake because I don’t know how to pronounce it. And if you have a name that you prefer other than the computer-generated name, let me know that because I prefer to call people what they want to be called.” And sometimes students, you know, I’ll go, “Jennifer,” and they will go, “Here,” And there is something about the way they look. “Is that okay?” And they say, “No, I really like Toni.” “Well, why don’t you say that?” “Well, I uh…,” and so I have to go, “No, I really mean it that I want….” Now that comes back often when we are talking about plays or theater history or something like that and students go, because people do this in real life too and they will go “Es-kee-less or whatever.” You go, “No, not whatever. It’s Aescalus, but it’s okay that you didn’t know that because you’ve never said it before.”

So, in this class, from the very first day, the professor demonstrates openness to individual preferences and identity, and also displays an attitude of acceptance for errors and their value in the learning process, laying the groundwork for students to take risks as the semester progresses.
Another participant talks of managing initial reactions to student questions in order to show both enthusiasm and openness to questions, even if it means returning to topics already addressed.

The very first day, how you answer questions, how you respond to students sets the tone, and they will get engaged if you have enthusiasm, if you have compassion, commitment, passion. I think that can help if you model those behaviors. I think they will stick with you. You know, having an inquisitive mind. If someone asks you a question you don’t know, it’s like, “That’s a great question. I’ve got to look that up” Or “How can we figure out that ourselves?” So I think a lot of that is what you do from the very beginning. I mean, even in terms of a syllabus, what kind of tone you have in your syllabus, what kind of tone you have when you’re going over your syllabus. You know someone asks a question that you’ve just covered. I’m like, I just spent…. But rather than doing that, I say “Well, yeah, here. Let me show you, it’s written on page such and such, and make sure you highlight that or read it.” So I think that it’s the kind of tone that faculty can set.

Even with basic questions about the syllabus, a professor who manifests a willingness to work with students until they grasp material, and demonstrates how they can access information for themselves, gives students confidence that future questions will be handled as respectfully.

Some classes and some subjects entail taking emotional or intellectual risks in order to examine ideas and attitudes in a new light. Such topics as race, gender, religion,
and class can be difficult to discuss but are essential concerns in many disciplines. Instructors and students both sense the risk, so professors try to model ways in which sensitive topics can be addressed constructively, creating a safe place for examining difficult ideas. Those who deal with controversial topics often find it helpful to be explicit about the fact that such topics will arise and will be addressed appropriately. In the example below, the professor, who is Black, uses a story to show that a racist comment uttered by a student, while initially seeming offensive, was in fact constructive and courageous in the academic context.

In fact, I think it was almost the very first semester I taught a Racism class. I had a young man (a young white man) who talked about working as an Assistant Manager at Wal-Mart and that one day someone came up to him and said, “I think that person over there stole something.” And so he chased the person out into the parking lot, grabbed him, threw him up against the car and said, “Nigger, what do you have under your coat?” And he said “I’ve never used that word. I don’t know where that came from. That’s why I’m taking this class.” … I say, “You know that was a powerful learning moment for the class because he had the courage to share that because he didn’t know it was in him.” And so I use that as an example to say even though what he said was offensive, it was also very, very instructive. And so I retell the story. And I say, you know, when you take the risk like that you allow the opportunity for others to understand how they might behave or how they might be thinking but they don’t know that it’s there. And it’s
a risk, but you know we all grow from it. Because he grew from it, as well as the rest of us, even though it was shocking.

Given the power of his original admission, her response to the moment showed respect for that student and for his willingness to learn and to change. She affirmed that she believed that through classroom discourse change is possible. In re-telling the story, using the powerful language herself, she demonstrates to her students that in her class such stories would be constructively examined, not used against those who sincerely wanted to learn. The portability of the moment allows her to capture attention and set a tone drawing on the impact to the language she uses.

**Covenants**

The instructor above and several others talk about having the class work out a “covenant” that explicitly defines the ground rules and etiquette for discussions, delineating respectful discourse. The initial contract can be drawn up as part of the first class, and is revisited as the professor or students see fit.

I usually have to develop what I call (in classes that build controversy) “a course covenant” where we ask the question… What do your peers need to do to make you feel comfortable to take risks? And then we write those out, and then I say, “Sign it. This is what you agree to for the next 16 weeks in this class.” And I let them know that argument’s a good thing, and you don’t have to agree with the instructor; you don’t have to agree with the book. As a matter of fact, I like argument. So I try to give them permission to do that. But if I don’t notice something, and you notice, it’s your responsibility to call attention to it, either to
the class or to me. So I have had students do that, saying somebody did something that was disrespectful. So it’s a time to come back, and let’s revisit our covenant.

Another suggests that the covenant be revisited at the beginning of each class discussion.

Open every class where they’re going to be having a discussion with just a basic reminder of their contract with the class and the class’ contract with each other…

It’s very brief. You can read it, you know, in about 30 seconds to 45 seconds. And to start each class off that way, I think, is a way of creating that safe space.

Encouraging Dialog

Even with covenants, professors describe having to be very explicit about the fact that disagreements are all right, that ideas can be challenged and that students can express their perceptions. Students do not necessarily believe they can or should disagree with classmates or with the professor. The way in which a professor addresses challenges and disagreements at first sets the context for subsequent discussions. The individual who teaches classes dealing with racism and with sexuality spoke more extensively and from more experience than many of my other participants about handling such topics constructively, therefore, in order to benefit from this experience, those ideas will be cited most extensively in this section.

I believe interactions come from a climate that encourages dialogue. I showed a pretty provocative video, a music video, “Construction of Sexuality in Music Videos”, which in my estimation the visual images were pornographic, and I told students that. And I saw that as an opportunity where a young man said, “This
doesn’t fit my experience.” And so, “Well, let’s talk about why it might not.” And so that opened up the door for me to see or talk about what I call intersectionality.

It was the idea that all men are not alike.

In this case a student was able to challenge the professor’s assessment of class material, and a dialogue ensued, leading to a topic the professor had hoped to illustrate. The student’s comment opened the door, not to all-out disagreement, but to an examination of multiple perspectives. The concept of intersectionality and the value of the marketplace of ideas were reinforced simultaneously.

At another time the same person talks about making it clear that it is all right to challenge her in class. The way in which a professor responds to one moment then sets tone for subsequent moments.

And I try to do that, to give them permission to have different views. And I’ve had students compliment me on that over the years. In large classes there are probably some people who think, oh she’s just this, that, or the other. And so they’ll throw labels on you. But, in fact, this semester I had a student, and here was something she brought up in class, and she indicated a disagreement. And after class I brought her up, and I said, “Thank you. I need to establish that it’s okay to disagree with the professor.” And I said, “You did that. So I thank you for doing that.” Because I sometimes have students say well, “Don’t you think it’s disrespectful when students disagree?” I go, “No! No.” You know, because the argument is the way we do things in the academy. It’s the marketplace of ideas. The best ideas will eventually rise to the top and stick.
While making sure that the atmosphere in the class is conducive to serious discussion of difficult issues, the tone does not always have to be dour. A lighter tone does not preclude seriousness, but it can facilitate interactions. Many participants express a concern about the balance between entertainment and academics that is required to maintain engagement with ideas and to sustain interactions. One person reports

I do a very rigid kind of outline on the board. I fill up the board three or four times in an outline form. So there’s that part that’s not very flexible. But the style sets a mood for the class. And the mood is pretty lighthearted, usually. When it’s not, I don’t enjoy it very well. So I try to keep it kind of light. And that reduces inhibitions.

But being lighthearted is not the same as abandoning earnestness and content. There is a tension between what some consider an emphasis on entertainment and serious teaching. Several faculty members warn that interaction and engagement do not necessarily mean learning. They speak of feeling the need to be performative in order to maintain engagement, but are not always confident that that translates to increased learning.

The bigger the class, the bigger you need to be, especially for big ideas. I try to visually reinforce big ideas…I use the stage and body to emphasize points. I place myself with points. I change physical location when I change perspective. I move myself to a new location when I enumerate a new point. Even in high school I was in drama. Find ways to help them process using visual cues…
Even those teaching upper level undergraduate classes seem to feel the pressure to be in a performative mode. “And in undergrad classes you have to be in the whole acting moment. The Tonight Show, basically. Even in my 4000 level undergrad, which is what I teach now, there is some component of that not so much.”

Although this may not really be a new problem, as two people observe, it is the medium that changes, but not the yearning for entertainment.

There can be a tension between teaching and entertaining; in the late 70s an older professor said all students wanted was “Johnny Carson instruction when I should just be able to give them ideas.” Forty years ago. Lamenting this was the TV generation. Now it’s the internet generation that wants to be entertained. They have such tech consciousness. I am a product of TV, so I don’t see entertaining as a bad thing. The lesson is not lost if it is done right.

And at least one person sees this tension as pre-dating even TV.

I suppose this is true going back to Socrates, that there was a certain aspect of teaching, as I joke about it now, but people do a standup comedy kind of thing. Whether you’re primarily a lecturer, in which case, unless you want to stand behind your lectern and talk dispassionately about whatever it is you are talking about, or whether it’s sort of mini-lectures that crop up, or interaction with students on a discussion level, there is always an aspect of performance involved in teaching, as there is in any kind of interaction.

So, performance and teaching have never been fully contradictory or fully reconciled.

Instead, the people I spoke with do on-going reflection and, as one said, sensemaking, to
differentiate and strike a balance between the appearance of engagement and actual engagement for learning.

Trying to be attentive to what seems to engage people, without falling into the trap of thinking that because something engaged someone one time that that is some kind of big solution to something. It’s an indication usually something there is working, and you have to figure out is it the topic, is it the particular community in that room and at that moment, or is it something about a style of engagement? For some kinds of topics people really want to talk about their own experience. At other times they really want to talk in more abstract terms, and, you know, either of those things can get someone excited and get a class going, so it is really trying to, it’s a lot of retroactive sensemaking going on for the teacher.

Professors want to keep their classes engaged and try to set a tone that facilitates engagement and interaction, but do not want to step over a line into pure entertainment. The focus is on the students’ learning rather than on their amusement.

*Student-centeredness*

While professors are aware of the performative nature of teaching, they are also concerned about the move from teacher-centered to a learner-centered classroom. While this is a popular phrase, it is sometimes difficult to accomplish. As we have seen, professors, especially those who teach larger classes, have to try to balance the need for efficient delivery of content with student ownership of learning. The more the students participate in the class, the more they become responsible for their learning. One person sums up the problem of lectures and teacher centeredness with the observation that
The fact that you have a teacher lecturing keeps a lot of the students in this course from doing any reading. And then, they don’t understand the lecture, or anything… My basic assumption with this class has been that the presence of the teacher teaching has been the biggest obstacle to this course. When the teacher teaching eliminates the student learning, and the students have to learn how to learn stuff on their own.

Another talks about her shift this way.

The notion that we’re giving up this idea of being the “sage on the stage” in favor of being the “guide on the side,” I would say that’s where the teachable moments happen. When you’re willing to give up your identity as the only expert. So that’s another way that teachable moments happen, when students are able to step up and become the experts.

And another prefers to step aside and let the students learn from each other.

Learning just doesn’t go from me to them. You know, I think that would cause me concern if I thought that they were looking to me for the answers or the information. You know, I want them to talk to each other and interact… When they react to each other. Because then it’s not just you as the authority figure in the classroom and I don’t teach that way, I don’t lecture. I mean, if I have to I will, especially with the Comp students. But even with my upper division class I don’t do that. I mean that’s juniors and seniors. I do some lecturing and then a lot of it is discussion and I don’t like to be the only authority. I’m happy to be the authority figure to some extent but I will say to my students “I don’t know. I’m
not sure; let me find that out for you.” Because, yeah, you know more than they do, but sometimes they tell me things, or I discover stuff through them so, I think a lot of the way I teach is walking into the classroom and treating…trying to treat them with the respect of their…whatever their knowledge is…Because you can’t always be everything to them. And if you’ve taught, especially freshmen, they want you to be everything. They want you to be a parent. They want you to be a teacher. They want you to be a therapist. You know, they want you as their best friend.

The move to increased student responsibility for the class and for their own learning will be discussed more in the section on goals later in this chapter. For now, however, we can see that those who want to have teachable moments emerge try to create a classroom atmosphere in which the students are participants, not just observers, and in which their questions and comments will be heard. Professors use specific strategies and behavior to establish a tone and a design that allows students to interact and engage, thus allowing teachable moments to emerge.

Frequency

So, how often do teachable moments occur? They are as difficult to count as they are to predict. Since each professor had a slightly different take on what one is or how they come about, each has a different estimate as to how frequently they occur. Those who speak more of calculated moments report higher numbers of moments.

When asked how often such moments occur in their classes some who speak more of calculated or foreseen moments say
Like I said, I probably create them. I mean reading Dear Abby about which way you hold the fork, creates or draws people in; passing around a comic strip draws people in. I think I must do that a lot. I tell stories a lot. I show slides of various kinds of things. I think probably a good teacher is just creating that stuff.

But even when they create them, they may not be as frequent as one would like.

One participant says, “Not often enough. I mean I consider a class to be particularly successful if I have a teachable moment in every class. But I strive for that either spontaneously or calculated.”

But some find them often, reporting, “I would say, in every class there’s at least one.” Or, “It’s probably three each class; that means one an hour. So, I mean, three in a three hour class. I guess those are the ones that I think of it being more of a community and a teachable moment.”

While the person who waits for the angels to sing, says “In undergraduate it’s very rare, I mean, the kind of thing I’m thinking about. You know, maybe once a month. Maybe less.”

The personality and dynamics of any given class will influence the frequency of the moment according to this participant.

I think it totally depends on the class. And I think it often depends on the dynamics in the class, and how many students you have who are the kinds of students who either are thinking critically about the material or who love to piss students off. I mean, those often, are the students, the volatile, loud, challenging students who love to get reactions. And if you don’t have a student like that in
your classroom, then you rely on the students who are really engaged with the material. And sometimes you don’t even have them.

The participants who do not necessarily create the moments, but who teach controversial topics also find them happening frequently, or at least believing that they are happening.

I don’t want to be presumptuous, but probably daily. But I just think they’re there all the time. And, as a teacher, you know when students have kind of checked out or zoned out, but you know when they’re really engaged in something. Perhaps there are more than we see.

For me, I think a lot more is happening than we are aware of as the instructor. But for me it is not every class, not every week, maybe a few times a semester. What happened yesterday was definitely one of those moments, but I don’t want to get my hopes up. But maybe I am using too narrow a definition. Because discussion really invites such moments, but for some reason they don’t always stand out for me. Something has to happen in order for me to identify it as that.

One participant provides a visual description of the frequency of teachable moments.

They are like popcorn. My sense is that if I’m lucky, by the end of the semester every single kernel has popped at one point in the semester. I don’t have too many of those duds that are still sitting there. I think it’s happening. My sense is that it happens for most students somewhere in the course of the semester.

These last two quotes suggest that there is one more type of teachable moment whose existence instructors believe in and whose frequency they estimate. But these moments
may remain un-witnessed. The next section, will examine what faculty report about these un-witnessed moments and their significance.

*The Un-Witnessed Moment*

There is another kind of moment that is harder to describe because it is un-witnessed and may never even be revealed to the professor. Many people describe hearing about these moments later, experiencing them personally, and needing to believe that they occur. These do not involve immediate recognition on the part of the student or the professor, and there is no immediate decision about following through. They do, however, come up in many of the conversations and highlight the delayed gratification aspect of teaching. There is a belief in the existence of the un-witnessed moment, or, to borrow Ron Suskind’s book title, *A Hope in the Unseen* (1999). These unseen moments may become manifest in students’ later class work, in subsequent classes or even later in life. The descriptions point up the hope held by faculty that what they do in class will have longevity beyond the end of the semester, and that what they do will have relevance or connectivity to future learning as yet unknown. The hopes are founded on student performance, subsequent student feedback (some of it even years after the fact) and faculty members’ own experiences as students. The person who described personal teachable moments as being “like popcorn” acknowledges she may not see all the moments, but expresses the belief that they are quietly popping and that by the end of the semester everyone has, in their own time, “popped.” Such moments stem from the regular teaching processes, and professors hope to be privy to them often enough to sustain confidence in their occurrence. Those teaching large classes express belief those
small teachable moments are happening in their classes, that students are making connections and feeling more attentive. They try to find small ways to confirm that learning has taken place and to sustain the engagements.

But you know, the teachable moment does not always have to have you right there, physically present. I think you create the opportunity, and there are a number of opportunities. But then for you to get some assessment of what actually happened, to have them either have a discussion on what they said to their partner afterwards or have them write it down.

The person who describes the moments as being like popcorn receives written confirmation from some of her students either in formal reflection or in unsolicited letters later.

I pulled some of these letters that I’ve received over the years where students describe what their teachable moments were…It happens as students are exiting the course, they’ll send me e-mails and… I do have an exit tool that I use in addition to the university tool, where I ask for a narrative feedback. And this also gives the students, too, the opportunity to speak about their own teachable moments. Where were the moments when learning happened to them?

People who teach large classes hope they happen and know they may not see them.

So in some way, I think I am teachable-moment deprived. Because I usually think of teachable moments, and I may be wrong about this, but I usually think of
teachable moments as happening more one-on-one or in small groups. I don’t think it always has to involve the teachers either.

As we saw earlier in the field experience courses, some professors deliberately create out-of-class experiences or assignments so the students experience heightened awareness or understanding. They try to create particularly powerful out-of-class experiences that will make an impact; much the way a clinical practicum is created to give students a taste of the realities of a profession. Students are supposed to confront issues in dealing with other cultures or with doing research. While professors may learn of some of the moments when students bring their situations back to class, sometimes the students do not necessarily articulate these, but simply incorporate them into their experiences. As one professor reports, “I provide the assignment, I provide the constraints, and then they end up teaching themselves.”

Since so many of the goals held by faculty for students are long-term and process-oriented, many of the “Aha’s” come after the class is over. Many professors recall having students come back even years later to tell them of finally understanding what they had been trying to teach, and others recall having such moments themselves and hoping their students will feel the same.

The ones that matter to me are the ones who report it a year later or two years later. Or who have graduated, and I see them somewhere and they report it then. Because it reflects my own experiences with the long view of the emergence that happens later, and so it’s retroactive, retrospective. I guess it’s that knowing that teaching is not something that just happens right then, which makes the teachable
moment something that might not happen when I’m there, right? Or a real teachable moment I guess is something that happens two years later when something I taught opens up, and often this happens in the former students, and they see something. So you’ve got your epiphany moment; there’s like the “AHH,” right? And you’ve got your, the moment of the change to excitement, right, where it doesn’t mean you’ve got knowledge or whatever. But it means that you’ve changed your orientation somehow. But then there’s the moment when it sort of all comes together, which I think in best cases happens later when your course is done.

And in his later interview this person re-affirms the value of these moments. It is really not good for someone being evaluated by a teaching evaluation, but I think the best work that I do is going to be when something comes together for someone who graduated six years ago and they start to see something, and they are like oh, I know. Because I’ve had people like that who come to me and say, “Oh, I totally get it now.” [laughs] Years later. And that’s the stuff. That’s when something has really happened.

At least two people express finding solace in the idea that teachable moments can happen later, and that they may not have to witness them. One says, “My fall-back is that there are a lot of classes that don’t have an immediate impact. It is six months later.” And another muses

I wonder is the teachable moment always that moment in the classroom? Or does the teachable moment come later? I have had students come back to me and say
“What we did in your class has stayed with me. And I don’t remember anything else but A, B and C.” … And you think, “God, I just felt like I was slogging through that class, and I didn’t feel like anything was connecting at all.” And then they come back and they tell you, “Actually, well, no that’s not true.” And you think, “Okay, well, I’m not so bad after all. Ha…ha…I actually have something to offer.”

So, in the description of teachable moments at least one facet of the concept maybe unobserved and unobservable unless a student comes back to talk about it. In the discussion of long-term goals in Question Two, we also see this hope that the impact of classes will extend beyond the end of the course calendar.

Wrong Term

One issue that emerges in some of these interviews is that the term “teachable moment” may, in fact be inaccurate for what has been described. One person reports having a colleague who so dislikes the phrased she wants to “strangle anyone who uses it.” Whether this was someone who did not reply to my invitation to participate, I will never know, but it does suggest at the very least ambivalence about the usefulness of the phrase. As another participant points out, “All of my moments in class are teachable moments. I hope they are learnable anyway.” He goes on to point out that, “The problem is that if you have a teachable moment, then it means that all those other moments aren’t.” Still another person pointed out, “As educators, every moment should be a teachable moment.” The emphasis here is on the teacher’s responsibility.
In fact, this is the problem according to one participant who suggests that to call something a teachable moment draws the focus to teacher-centered approaches and away from a more learner-centered paradigm while the moment we had been discussing was clearly learner centered. One alternative name was “learnable moment”, but that had problems too.

And the learning paradigm is replacing the teaching paradigm. …I’ve just got to get rid of the teacher teaching so you can get the students learning. So teachable moment seems to reinsert the old banking model, right? But I don’t think it’s right to call it a “learnable moment” either, you know?”

Since it is the material that becomes learnable in the moment the phrase is not more descriptive of what happens. He goes on to suggest epiphany moment, which another participant also referred to.

For purposes of this research, I will continue to use the term teachable moment, but in the implications portion of Chapter Five I will examine the implications of the name further.

Summary of Question One

So teachable moments can take a myriad of forms and involve a myriad of personal interactions and connections. Faculty in my study report that teachable moments involve heightened engagement on the part of the student, heightened interaction and a shared interest in the topic at hand. Moments can be individual or involve the majority of a class. Teachable moments vary in their degree of predictability. We can look at them on a continuum from calculated professor-designed attempts to
foster engagement through foreseeable interactions and on to unforeseen moments
generated by student interest. Professors have confidence in the existence of these
moments beyond the view of the professor. The professors in my interviews deliberately
set out to create a classroom climate where student engagement and interaction were
possible and even probable. The awareness of the need for a safe environment in which
to explore difficult ideas emerges in Question One and comes into play even more
significantly in the data for Question Two concerning the decision-making process for
pursuing unplanned moments.

Question Two: Elements of the Decision

The second question in my research proposal asks what considerations contribute
to or interfere with opportunities to explore teachable moments as they occur. Professors
report having to make on-the-spot decisions about whether to pursue a line of interest that
emerges during a class session. Sometimes they conclude that a moment can be
developed. Other times there are practical, pedagogical, or academic concerns that
outweigh the value of pursuit. This section will examine what some of the considerations
are and how professors address or postpone these in order to achieve maximum benefits
for their students. The data for this question is extensive and complex. There is not a
linear process or established sequence of decisions that that professors follow. Rather,
the decisions are contextual and overlapping. This section is an attempt to lay out some
of the considerations is as linear a way as possible while acknowledging the complex
interaction of elements.
In order to understand the need to make the decision whether or not to pursue a moment, we need to consider the risks involved in moving a class away from a plan. When unexpected topics or issues emerge during a class session, professors have a limited amount of time to make a decision about how to respond. Since teachable moments can emerge from a myriad of different sources, including professor provided examples, student questions, offhand remarks, and group discussions, there are a number of considerations are, depending on context, weighed differently in making the decision to pursue a teachable moment. As Bonwell and Eison (1991) point out in their work on active learning, when a professor decides to set aside planned lectures to allow for more active learning, there are inherent risks like loss of time devoted to previously planned material, loss of control of content and/or process, and loss of face if not prepared. Apparent digressions can also give rise to frustration in students who simply want to hear the professor present material for the next test, do not see connections between the course work and the digression, or who are challenged in unexpected ways. This frustration can, in turn, lead to negative evaluations. As one person explains,

The stuff of the mythical teaching moment is often stuff of various danger. You know, it’s the stuff where you’ve pushed some boundaries. I talk about something shocking or even challenge someone, and it’s a risk because they might just get mad.

A different participant is concerned, therefore, that professors become too cautious and miss opportunities.
I think most faculty tend to play it too safe. It doesn’t mean that we should be wild and crazy necessarily and say outrageous things simply to be provocative and to get responses. I mean, I think we need to be intellectually responsible. But I think in some cases we pull back from a teachable moment because we don’t have enough self-confidence to carry it through. We’re not sure. In other words, we want predictability. …We want the safe course. We don’t want the conversation or discussion to go in directions that we’re not comfortable with or that we don’t know where it’s going to go because we don’t know what the outcome is going to be. What if it does become contentious? What if it does become argumentative? What if the student contradicts us? What if the student embarrasses us? What if it appears as if we’ve lost control of the classroom environment? I think some faculty simply don’t want to go there, so they’ll pull back from a teachable moment because they don’t want to take that risk. And I think that’s unfortunate. Because I think when we do that I think we’re losing a lot in terms of what we can gain from the classroom.

This quote raises concerns that we will examine in this chapter—maintaining control, authority and classroom dynamics.

One of the risks involves evaluations. Several participants mentioned the evaluation system as not rewarding faculty who pursue unplanned moments. This emerges especially when student and faculty goals are in conflict, or when students have not learned to learn from their peers, or examine personal beliefs through an academic lens. Even tenured faculty share this concern as we see in this comment.
We are so at the mercy of the evaluations. And comments that say things like, “disorganized” “wasn’t sure what we were responsible for”, “expectations were unclear.” And so it seems like there are these institutional pressures which really interfere with better practice. I think with the discussion, that is where you have to let go because the rewards aren’t there in terms of the recognition.

The reward systems for faculty in general and student evaluations of instructors in particular are not always reliable indicators of, or even consistent with, pursuit of some of the goals that are less clearly defined than the content that appears on the next test.

Professors, trying to balance their management of the class with spontaneous learning opportunities, may err on the side of control and comfort. When they do, however, they are making other sacrifices. The risks of not pursuing an opportunity are there as well: the appearance of disciplinary irrelevance, inflexibility, unpreparedness, or apathy towards student concerns.

As we have seen, professors are aware of how their response to students’ participation influences subsequent contributions. As we see in Question One, the professors in this study are interested in generating and maintaining constructive interactions in their classes, so the manner in which they respond to a moment is significant in both substance and style.

How are these matters weighed? How do professors manage to sustain an emerging interest even if they do not pursue the moment in class? This section will examine the elements of the decision-making process and ways of responding to unplanned moments that do not fit into the day’s class.
Complex Interaction of Elements

In their study of faculty reflection, McAlpine, Weston, Beauchamp, Wiseman and Beauchamp (1999) suggest that faculty read cues from their students and decide whether to make changes based on what they call a “corridor of tolerance.” If the student cues fall within a given range, the professor will not make adjustments while teaching. They suggest that this corridor of tolerance is contextual and involves a number of factors including faculty knowledge, experience and goals. The discussions with my participants about their decisions, while retrospective in nature, give some insight into how this might play out in a teachable moment. The decision to pursue a moment can be seen as choice to change plans because cues from the class suggest a value in doing so. Faculty balance risk and opportunity when the feedback they receive from a class leads them consider a digression, or as McAlpine et al would say, step outside the corridor of tolerance.

The interview descriptions of decision-making do not suggest that one dominant element outweighs all others. Nor do they reveal a consistent, sequenced decision-tree where elements follow one another in a sequence. Instead, there is a complex interplay of considerations including available time, goal relevance, students’ readiness and involvement, classroom processes, and professor’s preparation. Professors may ask themselves any of several questions, in varying order. Is there time? What goal will this move us towards? How will this affect the operation of the class? Am I ready to address this? Are the students involved and ready? If the answers to at least some of these questions make the pursuit of a moment possible and desirable, professors will pursue it. If not, there are ways participants deflect the moment while trying to preserve student
interest. Since the elements are considered differently by different participants, and many expressed their own means of responding, the considerations and the responses will be combined in the reporting.

The diagram below illustrates the complex interaction of factors in the decision to pursue a teachable moment in a college classroom. Faculty weigh the time available and the time required, but it is only one element. They weigh their decision against their multi-faceted course goals and the number of students who can be engaged in the moment. This in turn, is affected by students’ goals and their readiness for both the content and the academic processes required. Finally, faculty readiness for both process and content influence how well the moment can be managed and how well students can be drawn into it. This section will examine each of these elements and the responses professors use as they make decisions about pursuing spontaneous moments. For purposes of analysis I have sorted the reported considerations into several categories, but those categories overlap and impact each other. For example, student readiness to handle the content of a moment will affect the number of students capable of engaging in it. Figure 6, on the next page, shows the types of concerns described by faculty in this study and the ways in which the concerns interact with each other.
Figure 6. The interaction of elements involved in faculty decisions to pursue teachable moments. Not all factors are weighed equally or considered in each decision. The consideration and interaction of elements is context-specific.

Professors read cues from the class and feel the need to make on-the-spot decisions. While these decisions are difficult to capture retrospectively, they do happen and do involve professors reading verbal and non-verbal feedback from students and changing plans when necessary, even in classes they have taught before. One describes the decision point this way.
But that’s where the openness is, is having to be ready if somebody says something. It’s usually somebody says something or has an interpretation of something, or has a comment that I never would have thought of. I am never anticipating that at all. Then you have to be ready and willing to pick that up and improvise and reformulate on the spot what is going to be happening the rest of that class period.

And another reports

I don’t know which way to go until I am going, and sometimes I don’t know I’m going someway until I’m halfway there, right, and then, then it’s a matter of do you embrace it and go follow it out or not. Like all teaching situations, you don’t want to go to the same well too often, so you try to have different things happen.

This person is watching and listening and is ready to reformulate whatever was planned in order to capitalize on the comment that emerges unforeseen.

A different participant captures some of the complexity and contextual basis of this decision by making an analogy to acting.

There is a famous, in acting circles as well, and other historical circles anyway, essay by an American actor/playwright named William Gillette called “The Illusion of the First Time in Acting”, where he says part of your job as an actor is to give every audience the performance you gave on opening night. And that doesn’t mean mechanically reproducing it, but with the same kind of life that’s involved in that. And so that means being alert and able to do that, and sometimes in a performance we have to be alert to the sort of micro-changes that occur. You
know, if somebody asks you a question that they asked the night before, but the rhythm is slightly different or they for some reason, or for whatever reason they ask it just a little bit more forcibly than they did in rehearsal, you can’t answer it the same way because the audience, although again they may not cognize it, will get this sense that there is a kind of dissonance between the stimulus and response. And so I think in teaching…I am more than willing to give up my plan in pursuit of a larger plan.

So the teacher prepares for what can be anticipated by being more highly alert to what is different in a given context. In the case of the college classroom, that difference will be manifested by student responses to material and its presentation. Faculty then read these cues.

Other participants made the analogy to public extemporaneous speaking. One explained it this way.

Good public speaking is extemporaneous which means you know what has to be talked about but you don’t know how you are going to say it, right? And so you have to be willing to stick within that framework but be ready to come up with ideas on the spot, come up with examples on the spot, that just strike you right then, to ask for examples from the class. And I do that all the time. That’s where that openness is part of being able to take something they say and show them how it fits in because it shows that they intuitively understand something, right? And I can transform it into lecture-ish stuff at the same time. So that kind of flexibility is probably important. But it requires just as much preparation. I think that just
writing out a bunch of notes and sticking to it is less preparation, even though it might take more time, because you don’t have to be thinking very much when you do that.

This theme of preparing in order to digress from a plan comes up in many interviews. I will examine the preparation aspect later in this question when I discuss faculty readiness.

The decision to change plans is then based on cues that professors read from their class. They may be verbal, like a direct question or comment, or they may be non-verbal signaling either engagement or disengagement.

And you know as a teacher you know when students have kind of checked out or zoned out but you know when they’re really engaged in something. And so your choice is if you’ve done something you see they’re really engaged do you switch channels and go to where you plan to go or do you let that go a little further? But you know for me it’s just being aware, even in a lecture class, I mean, you can tell when your students are engaged where they’re faces are. You don’t want to beat something into the ground. But at the same time when those opportunities arise... you know it’s like the choice... Can I go here?

And most report making quick but deliberate decisions about how or how far to follow an idea in class.

And when I say I made a conscious decision, I don’t mean that I’m thinking okay well you know my background or anything else, I just thought I had a moment where I said, okay, I can either let this go or I can address it. And it was a
teachable moment in the sense that I was able to address it in the context, already, of what we were dealing with.

Here are descriptions from my participants describing some of the interacting elements including time, relevance, readiness and classroom dynamics.

**Time**

Time is a concern for many of those interviewed. If the benefits of spending the time outweigh the cost in time, faculty will move on to other considerations, but if there is not enough time they will find a way to deflect, but not squelch the moment. One participant simply said, “Well I think the decision process is when I’m running out of time, which has happened.” Many others echoed this concern, and some wrestle with the concern constantly.

I view time as the enemy, because you have to make choices. You’re the professor, you’re the instructor. You’re the teacher. You have to make choices. Can I go there? Or, you know, can I go there later? Or is this something I just let pass? Because I don’t like letting those moments pass. But, you know, it happens.

The concern for class time is influenced by the design of the course and the constraints of the semester calendar. There are times in the course of a semester that do not allow as much flexibility as do as other times.

Like now, with the midterm looming, you know I didn’t do this, I didn’t do that. And so sometimes I’ll let them pass. But sometimes they’re just so rich I just say, okay, well what do I not cover? Because this is what is up. This is what is important for them to learn.
So faculty feel the tension between the potential richness of a moment and the pressures to cover material, especially when course deadlines or examinations are approaching.

Professors impose their own content-driven expectations, yet struggle with them, fearing on the one hand that students will arrive in other classes without the necessary breadth and on the other that they are being too rigid.

We’re entrenched, as faculty, and we’re dedicated to re-using some of the old questions from old exams and old assignments. And in order for that to work a certain amount of material has to be covered each time. Plus, in a class like Classical Theory there’s a certain corpus of knowledge that you want to make sure you get through. You don’t want them getting into the higher level courses and not knowing enough about the classical theorists….Because I feel they’re not learning what they need to learn…. We’re not staying with our syllabus. I’m torn about that, because you know, the teachable moment idea would tell you to not have such a rigid plan and to let it sort of unfold. I think with more skill I would be able to handle that. My problem is just time management.

Participants feel that they must cover certain bodies of knowledge in order to prepare the students properly for upcoming exams or for subsequent courses. This concern is not limited to foundation or introductory courses as one person explains, “I think it goes across all of them (upper and lower division) because I think the upper level classes may feel the same pressure to cover a certain amount of material.”
Many of the people I spoke with report that Power Point plays a role in defining time constraints. While some people mentioned their outline points or syllabi, several indicated that the number of remaining slides is sometimes their overriding concern.

“It’s how much time I have to do it. I have things I’ve got to cover. And I know that that’s wrong…. Or even if you do have 32 slides and you still have four to go…We don’t feel free to do those teachable moments or to pick up on those opportunities we have because we have a set agenda, we have PowerPoint slides we have to get through.”

And another participant puts it this way.

I mean the timeframe. I mean it’s awful to say that, and it’s one of the challenges of teaching …. You know there’s the term “tyranny of content” that you know you can get too focused on the content… I have to cover everything on the PowerPoint slide. And yet, if there is a certain amount of material that I feel is necessary to cover that night then I do get concerned….I try to gauge the timing of things. So maybe one comment I might go off a little bit longer but if we’re running out of time or if I really feel like there’s more important information to get to then I guess I would be a little more brief with that discussion.

The number of Power Point slides has come to represent the content, pace and scope of a given class session, reinforcing the tyranny of the content over time. Despite the fact that the faculty member may have created the slides, once they are created and the slide show has begun, they impose a scope on the instructor’s plan for a given class session.
The tension over time, weighing plans against unplanned opportunities in terms of time, cuts across levels and across disciplines in my study and participants believe that students worry about time as much as professors do if they feel like class is not preparing them for what lies ahead. So, “You promise them that they will finish them (the outline points the professor has provided) and if it’s four or five they don’t worry you. But if it’s a whole lecture gone astray then they would worry.”

Students’ expectations about what will be covered in a class period can, therefore, take over their attention, and they will then resist any detours from the plan, even if the professor does believe there is enough time. We will come back to this concern when we look at the potential conflicts between students and faculty goals all of which play out within the confines of the semester calendar.

*Relevance*

In deciding whether or not to pursue a teachable moment in class, participants in this study place an emphasis on the relevance of the topic to a goal they hold for their students. While this sounds straightforward, what is noteworthy is the number of different goals. Goal relevance can be relevance to something as specific as the content of the days’ lecture or to something as broad as life-long learning. Therefore, while the element of relevance is central to decisions, it allows for flexibility in choosing the types of moments to be pursued. Faculty are concerned with balancing the broad and narrow goals they have for their class, again balancing the concern for both breadth and depth within the subject matter, but adding a concern with academic skills beyond disciplinary content.
Professors have a wide range of goals for their students. Entwistle and Walker (2000) report that faculty go through a series of developmental stages in their approaches to teaching. These stages are similar to the cognitive stages that college students experience. Professors, according to their model, begin teaching focused most heavily on presentation of content and later develop more student centered approaches until they achieve what the authors call a strategic awareness of events in the classroom, allowing a balance of content with a process that is responsive to what is happening in the class itself.

Looking at the combined concerns of the professors in this study, we can see a similar range of concerns. For the purposes of organizing this data presentation, I have arranged the reported concerns for goal relevance in order by relative breadth beginning with class session specific goals. The participants in this study often mentioned that a moment had to be relevant for them to pursue it, but they report considering a wide ranging set of goals that allows them to respond to a wide range of unplanned opportunities. The goals become increasingly broad, initially covering class or course content, then discipline-based concerns, and finally academic processes and life-long learning skills. There is some overlap in these goals, or as Entwistle and Walker say, they are “nested”. For example, being able to think critically is initially an academic goal, but thinking critically has influences in life-long learning. The goals are reported here according to the descriptions and reasoning provided by the participants. The following Figure 7 summarizes the categories that emerged from my analysis of goal relevance as an element of the decision to pursue a teachable moment. Class goals are
specific to a class meeting. Course and discipline goals are broader content objectives, while academic processes and learning orientations refer more to the skills and attitudes required to succeed in the academy and after graduation.

![Diagram of categories of goals]

Figure 7. Categories of goals. Teachable moments that are relevant to at least one of these categories of goals are more likely to be pursued.

Relevance to Class

The easiest decisions to pursue teachable moments seem to come in cases where the issue that emerges is directly connected to the material planned for that day’s class, or for the course specifically. When a student’s question opens the door for clarification, as in the case of the fafafini, discussed on page 164, or when a documentary opens the door for a good discussion. Since these moments are within the specific plans for the class, my participants who talked about these are ready to pursue those opportunities, indeed they plan and hope for them. It is only a slightly larger stretch to consider course goals
when weighing opportunities. If a question, comment, or example arises that fits easily within the scope of the course, professors are more likely to pursue it. The example of students observing parent-child interactions at a football game fell within the subject matter the professor expected to cover. Even if ideas are scheduled to be addressed at a later class, if the relevance is easily established and if the students are ready, the professor may proceed.

We saw in the section on time concerns that professors feel a tension between keeping on track for the next test and taking digressions that can enhance the classroom experience. This is a concern felt by both the students and the professors.

There is an expectation that in those three hours you will help advance those students; you will help them advance their understanding of (the subject of the course.) So it’s not fair to them to advance their understanding of something else… It has to go within limits. You know I’ll always usually give a couple of minutes to somebody who’ll say “Oh, yeah. You know I saw a movie about this,” or, “I saw the movie version of this, is this appropriate? Is that right?” You know… So we might spend a couple of minutes talking about something, but then I’ll close it down. So I don’t ever just say, “No, that’s not relevant.” I’ll say “Ah, that’s interesting. But you know not really on our focus here.”

This person keeps the student expectations for content in mind and makes an effort to remain on that track, even in the digressions, acknowledging interest without allotting a great deal of time. Student-perceived connection is not sufficient reason to take a great deal of class time if the topic will lead the class too far afield.
Yeah, when they’re really interested in something and the rest of the students may be bored or not. It really depends. If it is related to what we’re talking about I will spend a minute or two pursuing it, answering their questions. But then I will move on. And if it’s off topic…very off topic…then I’ll just invite them to come talk to me in my office hours or something like that.

If something is not clearly relevant to the topic of a class, postponing the conversation is one response we see from professors.

Linking inquiries to possible paper topics is another way to engage the student, link a moment to the goals of the class and assert the value of the inquiry without involving the entire class in the conversation.

Or if it’s a class where we have to write a paper, I would usually try and link students’ questions to potential paper topics. I’ll say “But you know that would be something to explore in your paper that you’re going to write for the course. Think about it, make a note and we can talk later.

Here a single response by the professor conveys multiple messages about the value of the question or comment and about the process of selecting research or paper topics.

But the appropriate connection to course material on some level is not always obvious, even to the professor.

Sometimes you know a person is just crazy, and they start talking about something that they think is relevant but no one else can see and at that point it’s like, “Well, that’s interesting but you know maybe we should talk about this after class.”
The offer to take the conversation up after class is a way to get the class back on track without appearing to diminish or demean a contribution.

*Relevance to the Course*

While relevance to the days’ class is one criterion for assessing relevance, it is not the only criterion. Overlapping with and branching off from class relevance is course relevance. More people in this study discussed their broader course goals as being an element in the decision to pursue an unplanned moment. In fact, having longer range course goals yielded a flexibility that allowed for more possible meaningful digressions. A specific example of this kind of planning for flexibility is recounted earlier in the cases of the professors who connected the course content to the Virginia Tech shootings reporting, “There are certain sort of floating topics in my course that can be addressed really at any time.” Having the themes of the class in mind, this person was able to adapt the course content in order to demonstrate the relevance and the methods of the discipline while addressing a contemporary student concern.

One participant describes relationship between goals and flexibility this way.

I have this whole sort of constellation of things that needs to happen every semester, and a smaller constellation of things that I hope will happen during one or two class meetings…I always have to sort of put the schedule beneath the openness to whatever is unknown that is going to be happening in the world because those are always the things that make the most sense for what I am talking about. The present tense is so important.
Having broad themes that run through a course, themes that can be visited or revisited as moments present themselves allows professors to react in a timely manner to events within or outside the classroom without sacrificing their objectives for the course itself.

The idea of broad themes emerges again when an instructor of a general education course reports

I have my three or four course goals for them that are very general and very broad. And it’s all about me trying to keep their interest enough so that they’ll listen to me long enough to get something out of it. And you know given that they’ll most likely never take another course in (my discipline) in their life, this is the time to tell them that race is not a biological reality and…What are other things? That it’s important not to be ethnocentric, to appreciate other cultures for who and what they are. And gender, again, is a social construct… And those are the things that run throughout.

So timely illustrations can be linked back to the general course goals and pursued as they arise. This way the broad goals are reinforced throughout the semester to maximize their impact.

A specific example of this comes from another participant. The same person who is concerned that not too many outline points remain at the end of class reports,

At the end of the class you might think, ah, you know we didn’t get to the full range of the battles… But what we did do was have a great discussion, totally off schedule, about the meaning of nations and the concepts of national community and national identity. And so you think, well, they got that, which is a valid
concept to try and get across… It just was that I hadn’t planned it for today but I’ll certainly run with it….Does it help overall even though it seems off-topic?

Will it help in some way them understanding the larger material?

Faculty awareness of their priorities for their courses and for their content allows them to be flexible without straying too far from their intended material.

Another person reports that if a student’s question or interest refers not to the immediate class topic, but to a long term theme, it might be pursued. “Yeah, if I feel like it is a theme. I do have a few themes I try to hammer home all along.”

Having, not only goals or themes, but a logical framework that models professors’ approach to the material can also help faculty decide how and if they follow through with an idea without leaving the day’s work behind.

Sometimes they say something that is not quite it. Sometimes it is blatantly wrong. Sometimes they have insights. There are different ways to see something. I have them follow the consequences of what they say. To see where it leads. Sometimes they misread in terms of the internal logic. These let me take them through it. They reveal where they are…We have to cover a lot of material in a limited span of time. It is crucial to make connections of that day’s work to larger issues. What does the system of magic in one African society say about magic in general? And within this, how can it inform us generally? There is a logical framework. Trying to work in layers—the logic of the piece and how that fits within the logic of the course.
In this class, when students are discussing a piece of writing, they may take the discussion in various directions, but the professor makes decisions about that process based on these layers of logic, providing a consistency within the variety. This serves to develop both a general approach to academic material and a sense of the logic of the field.

The need to connect information beyond single class meetings might mean reducing the focus on some details. This does not mean, however, that errors go unchallenged.

I care more about students’ holistic understanding of the material rather than the specific knowledge of dates, of times, figures and names. Now glaring mistakes I would not allow and would correct. When it comes to the exam if they tell me that World War I happened in 1945, I’ll grade them wrong because it’s wrong. What I tell them matters more is that they know that World War I came before World War II and that there was a direct link between the two and how one led to the other. Rather than the specifics on which date the Treaty of Versailles was signed, better that they should know the contents of that treaty contributed to the creation of conditions which contributed to the growth of war fever again.

In covering course material the stronger the connections between and among ideas, the more in depth are the concepts pursued. The concern for time is addressed in part by broadening the goals. As one more person explains,

You have to learn that sometimes teaching less is really teaching more… You know, it’s kind of like what’s the key point you’re trying to make. Just not trying
to do too much. I mean, doing less but doing it well is better than trying to do too much and just getting everybody really confused.

Having in mind broader course goals allows participants in this study to be flexible, to pursue interesting moments that arise, but to not lose sight of their long-term goals for their courses. Faculty in this study have even broader goals than this. They go on to talk about their commitment to demonstrating the roles and methods of their disciplines.

_Disciplinary Relevance_

On a slightly more general scale some moments are relevant to the larger discipline if not directly connected to a particular course. In particular here, professors identify opportunities to demonstrate the methods or the relevance of their disciplines to broader interests expressed by their students. Instructors express the hope that students will begin to use their disciplines’ perspectives to interpret media or out-of-class experiences.

Participants value being able to illustrate the relevance of their disciplines to current events or popular concerns, but they did not talk as frequently about modeling the methods of their fields. In the example of using YouTube political debates as a timely illustration of disciplinary principles, that person explains, “When you can pick what you are doing and connect it to something like that, it also says something about the field and the discipline that has relevance.”

In this case, being able to take a piece of current events in popular culture and examine it from a disciplinary perspective provided an illustration of the course content.
and methods and, at least as significantly, it illustrated the timeliness and relevance of the field of study.

Another professor describes a hope that such moments will encourage students to recognize applications of the field of study even outside of class.

One of the things I strive for is for my students to take what they get in the course, whether it’s in class or in reading or in you know other avenues that are set up in course, and take it outside the course. So I could see them coming back or being…you know watching the news and recognizing that, you know, “Oh, they just said something that I know rings a bell with what Dr. ___ is saying.”

This professor, then, encourages students to use the content and methods of the class in new arenas and bring those observations back to the class.

Showing that the discipline has relevance carries over into concerns for life-long learning and the application of the discipline to current events beyond the duration of a given course. A participant who reported carrying in loads of books and planning well beyond the allotted time explains her concern this way.

Create opportunities, both structured and unstructured, to make learning a life-long orientation. This is especially and important lesson for seniors to take with them. They can see where the field is outside the classroom. Learn to learn as they go on.

Here there is a double concern, that the lessons about one’s discipline be carried outside of the classroom and that students learn to continue to learn.
The examples of discipline related goals mentioned here address opportunities to pursue teachable moments with an entire group. There are additional subject area goals that are pursued when participants choose to pursue moments with individual students outside of class. Since the focus of those relates more closely to the number and degree of engagement, illustrations of those pursuits are included in that section of the data.

Relevance to the course and relevance to the discipline factor into faculty decisions about pursuing teachable moments. These are not the only types of relevance that might be considered. Faculty I spoke with also consider the relevance of the moment to a much broader set of goals relating to academic processes and academic values beyond their own disciplines.

Relevance to Academic Processes

Many faculty in my study are concerned about students developing a set of academic skills and values that transcend their own classes and disciplines, yet apply across these arenas. These skills, which I call academic process skills, include self-expression, critical thinking, appropriate methods discourse, evaluation of evidence, responsibility for self-learning, and ethical decision-making. While these may not be content-based, or content-specific, faculty report that these skills are very important in the decision to pursue a moment. Professors look for process readiness when deciding to pursue a teachable moment. When this readiness is lacking, the professor is in a double bind, recognizing the opportunity provided to enhance student skills but hampered by that very lack. Further complicating this issue, is the fact that these skills take longer to develop and are harder to test and grade in any single course. As a result, students,
lacking a long-term integrated perspective on their academic careers, may not share the professors’ concerns about this skill set. Still, participants in this study report encouraging moments that foster student participation, discussion, critical thinking, ethical development, and responsibility for learning. These are the goals covered in the category of academic processes.

Participation. The first consideration for some faculty is simply getting students to participate in class by speaking out. Not all students are ready, and not all classes are conducive to students’ speaking out, but participation is an element of teachable moments.

Particularly in this class where part of it is getting them comfortable using their voice, I am always thinking that I would rather have them talking than me talking. Really, they should be. It is a small class. When will they get a chance to speak in an academic setting if not in that class? So I have been kind of looking at that as the goal of the class and that has influenced a lot of my decisions to stop with my plan and go…. But I just think it is different with the undergrads because they are not used to talking in periodic academic conversations, so it takes a lot of practice. You need to give it to them.

This professor goes on to acknowledge that providing this practice does not always feel productive when it is happening, and that the long-term goal may not come to expressed confidence that it within that class but will serve the students in the long-run.

When a student who rarely speaks in class makes a contribution, many professors see this as an opportunity they should capitalize on. Not only do the students notice
when a new person speaks up, but the professors want to make sure they affirm the value of the contribution and reinforce the act of participation. Professors feel accountable for maintaining a tone that allows future student contributions.

I think the most amazing teachable moments are the ones where the student has sat in your class all semester, never said anything and all of a sudden pipes up. Something sparks their interest and they speak…And then inside you’re thinking, okay, okay. Don’t stop talking. And because they’ve never talked, or because they have always been quiet, or whatever, the students respond to them all of a sudden, in a positive way, because they’re finally speaking. So you try to bolster that or roll with that or try to generate something from what they’re saying.

The student speaking is to be encouraged and the attention generated by a new voice extends the impact of that encouragement beyond that individual’s contribution.

Another professor talks about working to make sure a student contribution is attended to and connected so the class can appreciate it. “We will respond to different moments different ways. The student who rarely says anything, you really want that to be a moment, and so you really want to connect it to keep that going.” Reinforcing participation encourages that student and everyone else to contribute to the class.

Sometimes process is what demonstrates content. In the case of the student with a military background who volunteered his experiences of in-class discrimination, the professor allowed this student to pursue his illustration even though it was not a specific example of gender-based discrimination, which was the topic of the day.
I felt like I had to go with what he was saying in order to illustrate my openness. To endorse the idea that we shouldn’t be censoring people based on gender. Although he is a fairly active participant. If he had been quiet it would have been a no-brainer that I wanted him to talk. Part of my thinking at the time was with the dynamics of the class and modeling something about giving voice to people.

In order to reinforce the message that voice is valued, the professor allowed this moment to play out even though on the surface the contribution may have appeared less relevant than other possibilities. Later in the discussion, the analogous nature of this student’s experience worked into the discussion and the value of voice was affirmed in action as well as content.

So one goal held by participants is to get students comfortable speaking in class. Once they do begin discussing ideas, the next goal is to help students discuss even controversial topics in a manner befitting an academic setting. To accomplish this, faculty report wanting students to think critically and formulate arguments that are based on sound reasoning and evidence.

*Critical thinking.* Being able to think critically and use that skill to formulate arguments and participate in discussions are skills at the center of academic involvement. Many individuals in this study believe students should learn to argue and discuss ideas in a respectful and academic manner. Many cite the adage that the university is the true “marketplace of ideas” and try, therefore, to allow this to play out in their classes. In Question One I reported the efforts of some professors to establish a tone of openness by using covenants, examples, and verbal recognition.
Students need to learn to participate in academic conversations, and to form arguments in the academy’s sense of the word. The professor quoted earlier about thanking a student who disagreed, also mentioned that

I have what I call “course propositions” that are used in controversial classes. One is, “reasonable people can and do disagree.” … And so I set those out there. I let them know that it’s okay to disagree with me. And I will sometimes bracket my opinion, “This is what I think. You don’t have to think this way.” Or, “What do you think?” In other words, you don’t have to think what I do. You have to know the arguments for some of the positions that we take… I also present information I don’t agree with. But it’s an argument that I want you to know that’s out there. And so I think I give them permission to disagree… Because the argument is the way we do things in the academy. It’s the marketplace of ideas. The best ideas will rise…eventually rise to the top and stick.

Having an academic argument without having the class session deteriorate into a negative or destructive interaction requires faculty guidance and intervention. This may be risky for faculty and for students. Since surprise teachable moments give professors less time to prepare and anticipate ways a discussion might proceed, but may also be characterized by increased interaction around a topic of students care about, the ensuing discussions can provide students with the opportunity to examine their beliefs in the light of other students’ perceptions. This kind of examination provides an opportunity to use critical thinking skills.
The ability to formulate a verbal argument and take responsibility for it is an academic skill that develops slowly with practice. In many classes, students learn argument in written form, but not always as an interactive skill. Being able to formulate a cogent written argument may entail anticipating dissenting points, but it does not replicate discussion in an open forum. In oral discussions there are more variables and more potential responses and counterpoints. In a writing-focused class where a student was particularly argumentative, one professor explains managing responses to model clear thinking and verbal argumentation while avoiding getting into personal debate.

I think the students finally got a sense that he was very illogical in his arguments. And so, one of the things which I talked to them about in class is being logical and organized, even in their verbal arguments, so that they can transfer that to the page. And often students don’t see that connection. They don’t see the connection between the verbal argument and the written argument.

The same person, when talking about addressing the racist comment made by a different student, affirmed that their use of language and argument was one of the reasons the racist comment was addressed.

You want the student to take responsibility for what they say. You want them to recognize that language is powerful. It’s a writing class. You want them to reassess and listen to what they’re saying. So I decided to deal with it.

Part of being responsible for what they say is being able to examine and cite evidence in support of an argument. These skills are part of the long-term goal of teaching students to think critically.
The ability to evaluate and to present evidence to support an argument is another long term academic goal. The work of King and Kitchener (1994, 2009) illustrates just how long term this goal can be. While my participants did not discuss these theorists’ Reflective Judgment Model, many did talk about the need for students to learn to evaluate evidence and use it in their own thinking and speaking. Faculty are concerned with students learning to differentiate between personal experience, anecdote and standards of evidence in a discipline. We saw this in the response to the cat in the nursing home and the question of vaccines and autism that people mentioned in Question One. The media reported connections, but the professors urged students to look at evidence from a more scientific perspective. One of these professors, who also works with a TA leading a discussion group, described talking to the TA about how to develop critical thinking in undergraduate students while allowing a range of opinions. The TA had just led a discussion about corporal punishment.

It is important to use that discussion to actively show the difference between opinion and empirical evidence to support a theory, because she sort of set it up in a way that we are going to be respectful of opinions. Well, you are respectful of opinions, but you also have a responsibility to teach what you know is baseless in terms of empirical evidence. So let’s use the topic but work on the process that is involved in doing those critical teaching skills rather than just you know, “Well this is how I was raised so this is right or wrong.

There is a balance to be struck between respect for difference and acceptance of untested ideas. Instructors work to learn the difference and convey the need for both to their
classes. In this quote we see the concern expressed earlier, that flexibility and openness not be confused with laxity.

In a different field of study, another professor talks about teaching students to look at evidence this way.

Where I am talking about a lot of contemporary research examples, I say “One study does not a fact make.” Because you can have two studies that’ll come up with different opinions.” I say, you’re looking for the preponderance of evidence. And so that’s an interesting argument, let’s see what else you know.

Here the challenges to an idea are expected to be based on evidence, but even evidence can be in conflict and is, therefore, subject to evaluation.

When students make an assertion about a text, one professor reports looking at the not just the content of the text, but also at the means of formulating arguments about it. Students need to learn to provide evidence for their arguments.

It’s not the case that you know we are looking for what’s the formula for understanding a play, or what does this play mean in its one and only meaning, but rather what are the kinds of things that you look for. Or what are the kinds of things you found? What do you make of those things? How can you begin to put them together in some way that makes a persuasive argument? … And so a lot of times my response to student ideas or comments and things are questions. I go, “Well why do you think that? And what are the consequences of thinking that? Or where’s the evidence for that? Well, what about this piece of evidence over here? How do you fit that in?”... I mean that’s a different kind of moment in a way, one
where I, anyway, attempt to guide the student more into the process of thinking and putting information, facts, to use…

This professor seeks to balance the planned course content with a desire to accomplish broader goals so the students learn the content of the material and develop the ability to support their ideas with argument and evidence.

*Discussing religion and ethics.* Of particular concern are moral and religious arguments, as some of my participants report that students either do not know how to discuss religion, values and ethical issues, or would prefer not to. In Question One we saw how faculty attempt to create a safe places for students to explore difficult ideas. Even with these efforts, the results are not automatic and professors report wanting students to learn how to discuss sensitive issues and formulate ethical and moral stands. Again, student unfamiliarity with the process of discussion and discomfort with some topics compound the difficulty of talking about sensitive ideas. Faculty, recognizing the need for these types of discussions also experience frustration over trying to generate them. As an example, the professor who wanted students to discuss the moral aspects of the bombing of Hiroshima describes the purpose of that this way.

This is what I’d wanted them to do…And it’s where you know I want to take them because I want them to examine… You can’t teach history. You can’t teach Abolitionism and not see the morality of Abolitionism. You can’t teach Prohibition and not think that there were people out there who firmly believed that alcohol was “demon rum,” and it was evil and it should be stopped. It was a moral issue for these folks. So, you can’t ignore morality and say, “Well, we’re
not going to deal with morality because somehow it’s value-based… Or religion-based.” Because you know what? It was. It was! And so all right, let’s talk about the fact that these people have these beliefs, and that their religion was terribly important to them and they wanted to make that religion actually play out in a meaningful way within the society, and so they engaged in reform… But it’s all a process of learning and then coming up with your own set of values, your own set of understandings as to, in my discipline, what happened. And you get as close as you can to what constitutes particular sets of truths or realities or what you can accept as the past. For you. Okay? You like certain people; you don’t like others very much. You like particular events in history, which you see as positive and beneficial for people, you don’t like others. You know there are all kinds of…notions of the past that you move beyond simply looking at the textbook and answering the questions at the end of the chapter.

Since this professor’s goal is to lead students to understand the moral underpinnings of events and draw conclusions about them in ethical and moral terms, the reluctance of students to discuss the ethical and moral underpinnings of events makes the discussion process simultaneously more difficult and more necessary.

According to another participant in this study, students do want to discuss topics like religion, but lack the tools to do so.

This (religion) is an area both ends of the continuum, those who are religious and those who are not, need to learn how to talk about; I give them permission. Here are the frames, we can talk about it—ways to access it. Students want to talk
about these things, but don’t know how. They are glad for permission and for a framework. This is a teachable moment about the academy and the market place of ideas, how to conduct discussion and inquiry.

Providing a framework and a model for respectful classroom conversation and for examining ideas systematically, lets students explore ideas they may not been able or willing to examine previously. So it is not that they are unwilling to explore the topics, but they need to feel safe in doing so.

Some teachable moments arise when student comments reveal racist, sexist, or stereotypical beliefs, and professors feel an ethical responsibility to intervene. We saw this in the case in Question One where the student made a racist comment, and the instructor believed the minority students in the class were relying on her to intervene. Another professor explains the sense of responsibility this way.

I think I have realized how immature the student is and how receptive. It is important to intervene, this sounds pretentious, but in their moral development in that case. It is a profound teachable moment to interrupt the kind of stereotyping that is so easy to fall into.

Influencing student moral development dovetails with critical thinking, as faculty encourage students to examine their beliefs and make their own decisions about them. Another participant explains,

I explain often in my classes that I’m a big believer in the unexamined life is not worth living, but I explain to them that doesn’t mean that you have to change, you know. It’s the process of looking at the structures of your beliefs critically and
being able then to make a decision as to whether they are worth following or not rather than just doing it because this is the way I have been told, and this is what I think.

Learning to think about issues, use evidence, and hear other perspectives can help students arrive at their own sets of beliefs. But one person tells of a student inquiry that highlighted how difficult a process this can be. This professor, who is quoted earlier talking about presenting other opinions so students will know the arguments that are out there tells the story of a student who posed a question that influenced the professor’s thinking about revealing personal opinions in the classroom.

And I’m saying here are things… You make your decisions…blah, blah, blah…the difference between law and ethics…blah, blah, blah. And I remember, we were at the end of the unit and this young man raised his hand at the back of the class and said, “You know, we are at a moment when we are trying to learn how to make decisions for ourselves.” And I said “That’s why you’re here.” So, he said, “But how are we to know how to make those decisions or know what our options are if people we respect don’t share with us how they make those decisions?” And he threw me for a loop.

In this case a student was asking the professor to model the critical thinking processes that led to personal opinions so the students could learn that process for themselves. The professor now deals differently with personal opinions in class, going on to say,

You know I let them know that it’s okay to disagree with me. And I will sometimes… bracket my opinion, “This is what I think. You don’t have to think
this way.” Or, “What do you think?” In other words, you don’t have to think what I do. You have to know the arguments for some of the positions that we take. Here a student asking for a more explicit connection to professors’ ways of thinking yields a teachable moment for the professor as well. This requires a balance between expressing personal stances and advocating student decision making. So, teaching critical thinking and argumentation includes modeling the process of arriving at personal beliefs on complex issues without advocating that students accept those beliefs unquestioningly. Not everyone agrees that professors should express their own positions, but there is a difference between expressing them and advocating them.

*Learning orientations.* The last set of goals in the continuum pertains to what I call learning orientations. This set of goals relates to how students approach their own learning and carry it on beyond the academy. Included in this set are developing the abilities to learn from fellow students, to assume responsibility for one’s own learning and to continue learning after leaving the university.

One of the real challenges for faculty who want to pursue teachable moments is the resistance that some students exhibit to learning from one another. Since the number of students engaged in a moment is a critical factor in its pursuit, faculty want students to be open to learning from each other. As we will see in the discussion of numbers, however, students will often shut each other out. So, an academic goal that faculty hold, but students may resist, is the ability to learn from each other. Many professors report this is an obstacle to pursuing teachable moments, but they also report the tremendous value of students sharing experiences and of learning from one another. While students
may be resistant to learning from each other, preferring to hear what the professor wants them to know, once opportunities to share are available, students seem to respond to them. This may be, in part, related to how the professor communicates the value of the students’ input into the class.

One person, who told me that the goal is to get the students to become the teachers, talks about leading the class until achieving,

Teachable moments that build on each other. And the reason I say that is at least for a part of the class I try to foster discussion. And sometimes it works better than others, depending on their preparation, my preparation. But I would say, in that trying to use the Socratic Method in helping them build off of each other, that I would see their comments as really the opportunity for teachable moments. The teachable moment is when they learn that they are going to be teaching themselves…part of the teachable moment is to help them realize that ultimately we’re going to change roles here and by the end of the semester they should be teaching me as much as I’m teaching them. And we end up with reports that they give, and I hope that that’s part of the message of that ending of the semester that they’re the ones in front of the classroom and I’m in the back listening.

Leading discussions and sustaining interactions early in the semester gets students to ease into the idea they can learn from each other. Further into the semester, the primary method for accomplishing this goal is an oral history.

So they’re going to get that component. And every time we get to that part of the semester, which of course is done by then I think I’ve got to build this in to the
semester all along. Because they love listening to each other. They applaud. You know people who used to just sit there; suddenly…you know it’s like water to a flower. They perk up. I mean, the person can stand up there and look disheveled, not really well prepared, especially, but tell about interviewing his grandmamma. And people just applaud at the end. And I think that that really is, again, I think symbolically as well as in reality, you (the student) become the teacher. And so I really do try to structure that in. How much they internalize that, I’m not really sure…That’s where they really can take this ownership of the course.

There is a gradualness in building these habits up over the course, taking small steps that might not be significant alone, but which may come to fruition by the end of the semester, or, as some have suggested, even later. In the previous comment, we can see that the professor hopes that students will learn from each other, but also that they will take ownership of the course. This leads to the next learning orientation goal, which is that students assume responsibility for their own learning.

Several professors I spoke with expressed the desire that students assume responsibility for their own learning, and learn and think for themselves. They describe teachable moments as those times when students take responsibility for their learning, learn from one another, or learn how to learn for themselves.

My goal is to help students become learners, and being, just giving them information, giving them instruction, doesn’t do that. It’s what you’re talking about, it’s where you see them take some responsibility, and so I want to be able to recognize opportunities for that.
In addition to learning from one another, students need to learn to assume responsibility for their own learning. Another person echoes that desire for students to become self-learners this way.

I guess it’s an orientation in the student, right? The student’s oriented towards self-responsibility, self-teaching, right? All learning is really self-teaching in a sense. All teaching is trying to create an opening for self-teaching to happen.

In teachable moments, students’ engagement and interaction is often what drives the moment, empowering the students to take responsibility for the content of the course. The responsibility for one’s own learning is affirmed by a professor’s using a gym analogy to try to illustrate to students the need to participate in their own educations, not just rely on professors to tell them everything they need to know.

So I really spend a lot of time trying to, you know, foster the sort of twin reflexivity and responsibility, because I can’t do it all myself. And the analogy I always use is of the gym. College and the gym are the two things that you purchase that require you then to do a lot of work yourself. You know so in the analogy that I always use is that you pay the money to the gym and you come in and the trainer shows you all the things you need to do, and but if you don’t do it you don’t get buff. You know?

In many of the moments we examine, the faculty member comments on the value of engagement and of rewarding participation because it is when the student assumes ownership of the learning. As is the case with most of the goals professors have, turning the learning orientation inward results from teachable moments and facilitates their
pursuit. Once students learn to learn for themselves, the next hope is that they will continue to do so after leaving a class.

While professors always hope that what they are teaching will impact students long after the end of the class, they realize that this may not be the case. A few people in this study did explicitly mention life-long learning and changes in ethical or thinking skills as goals. The individuals who talked about the need to formulate evidence-based and moral arguments and apply them outside the class, the person who feels responsible for interrupting stereotypes, and the person who is concerned that seniors see the application of the discipline in new arenas express the value of a life-long learning orientation. Another person asserts the values of critical thinking, curiosity and the ability to make connections.

I think that one of the guiding principles of a liberal education is to try to get students to think outside the structure that the school imposes on them, and as I’m sure you know, one of the largest problems I think that we have is that from high school at least on if not earlier, students begin to think of each class as a kind of separate box. You know? And so it’s incumbent upon us as teachers, to at the very least go, so you remember that history class you took when you studied this? Well, this was happening at the same time, and you know that. But you have to remember to think about what you learned over here and apply it over here… I believe in my subject matter, but I also believe that more important than that for most of these students is just being able to think critically and to learn to foster their curiosity, which is one of the things that seems to get bleached out of
children in the industrialized public education system that we’ve created… And so if there is something that seems worth pursuing, even if it’s at the expense of my data set I will.

So, goals can range from the mastery of a specific skill or idea during one class session, to re-framing perspective on complex moral, ethical, or educational questions for the rest of one’s life. While this expanse of goals can allow for great flexibility, or professor discretion in choosing to pursue a teachable moment, students do not always share all of these goals. Many of my participants talked about their goals, but many also acknowledged the tension between their willingness to pursue a moment and students’ willingness to go along.

Goal conflict. Professors, as we have seen, are more likely to pursue moments when they see the relevance to their goals. Students share the need for relevance, and the more clearly they can see the connection between what is happening in class and their own goals, the more likely they are to participate in the teachable moment.

So the more people see whatever it is that you’re doing is relevant to their goals, their interests, their lives in some way, they’re going to use it personally, they’re going to use it professionally, they think that it’s important in some sense other than just for being what it is. The more that happens the more interest you’ve got, the more teachable people are. So whatever you can do to try and foster that is really helpful in terms of creating more of these kinds of moments.
Students are willing to participate when they see the relevance of a moment to something they want to know or do. The relevance of a moment, however, may not be as clear to students as it is to professors.

As we have seen, my participants speak of students who are unready or unwilling to address controversial topics and who are unwilling to go outside the confines of the course outline. This contributes to the professors’ dilemma concerning pursuit of the unplanned moment. Students want to make sure they have the information for the next test and may not see the long term impact of learning to discuss, or of listening to other students’ questions and comments. Professors are faced with the conflict between appealing to what students think they need and developing what the academy values.

College is a period of major developmental change when students move from a reliance on authority for truth through periods of doubt and eventually establishing their own criteria for acceptance and creation of knowledge. In any given classroom, there are likely to be students operating with differing degrees of analytical sophistication. While progress along the developmental path is enhanced through practice of higher level thinking skills, the perception of need for this practice, and the type of practice vary throughout a class. The professor, therefore, needs to monitor the class as a whole, balance the needs of all the students and construct interactions that serve to move the class and the individuals in it along the developmental path.

A lot of students have been conditioned that they just want to know what they have to know. If I could just hand them out a card that has everything they need to know on it, then they will memorize what they need to know and then it’s all on.
They think that that’s all they need, and if they get that and they don’t do well then it’s their fault. If it’s anything else, then there seems to be the teacher failing… I don’t care about what the grades are. I care about trying to do my best, trying to learn the most that I can. But that’s hard, that’s a hard story to sell to a current undergraduate, especially at a big state school with a large local population …. So there’s a lot of focus on those very practical goals, numbers, wanting to know what kind of grade can I get, how can I get two more points, these kinds of things. I need to keep my scholarship. I need to be able to play in the game on Saturday. I need to be able to, whatever, stay in the major. Those are all the kinds of things that are obviously important to people.

So, the goals the professor has for broader learning and thinking are not obviously linked in the students’ thinking about more immediate grade-based and grade-dependent goals.

Another professor describes the difference between her goals and her students’ goals this way.

And today when I was kind of winding up this discussion on sexuality, I said, you know… a lot of you will walk out of here with more questions than answers today and I’m happy with that. And so a lot of them were so focused… What’s on the exam? They’re looking to close things; I’m looking to open.

We see the goal conflict in students’ concerns over digressions, in their resistance to discussing Hiroshima as a moral issue, in their reluctance to listen to one another, and in student comments about professors going off on tangents. If they do not recognize the connection to a goal they value, they will resist the shift in their attention.
Just as faculty used the first days of a class to set a tone for open interaction, at least one person talks openly with the class about the frustration they will feel. The same person who explained that she preferred opening up more questions, tells her class:

I say at the very beginning of the class just like there’s a warning on alcohol and cigarettes, I’m saying “This class will be hazardous to your beliefs.” And that there are going to be classes that you’re going to be pissed, you’re going to be frustrated. I don’t use “pissed” on the syllabus. But hopefully you’ll also be entertained and, you know, encouraged to think you’re a good person… If the content gets too difficult for you and you don’t buy it just don’t throw out the baby with the bath water. Take what you can.

Opening students to new ideas and new perspectives is a value, but not all students will appreciate the journey equally. This professor recognizes that difference and prepares students for it.

A different participant reports that it is not easy to get students to engage in pursuing more abstract goals and processes.

That’s (getting everyone to engage in the pursuit of academic process goals) of course it’s doomed to failure, I guess, because never will you have everyone doing what we do. We are always going to have frustrated people. It only takes one frustrated person to start expressing their frustrations to try to wreck the environment, but you have to, I think that’s part of it. I mean you can try to address it but you can’t over-do it because then all you are doing is responding to the negative. I want to try to take those moments and turn it into meta-talk, but I
think too much meta-talk gets people out of the moment. The opening closes when you have too much meta-talk because you want meta-thinking, not meta-talking. I mean, you don’t want me meta-talking you want them meta-talking. Again there is a delicate balance between getting students to assume responsibility for their learning processes and having the professor talk about that process too much. Too much talk does not advance the cause, since the students do not share the goals, but not talking about these goals allows students to avoid necessary involvement in their accomplishment. Students see the talk as taking them even further away from the content of the course. But if the professor does not make the connection explicit, students may tune out as well. As another person acknowledges, if a link to a goal is not made explicit students will think it is just a case of the professor’s telling stories. “When I talk to students I think if they can’t see the connection… They’ll think, yep, that’s not on the test, why am I here? I could have slept in. You know.”

The professor may have more expansive goals for the class than some students are ready for. This does not mean abandoning those goals or expecting everyone to achieve the same level of development. Rather as one person recommends, it means “taking them where they are” and developing them as much as possible, knowing that the impact may not be felt until after this class is over.

One sums up the readiness of students to see and value the more abstract goal of self-teaching using an analogy he has heard from someone else.

Education works like this. In elementary school you have a bowl on your desk and the teacher comes along with a tureen and a ladle, and ladles out your
knowledge. In high school…you still have your bowl and the teacher still has the tureen, I think that’s high school, but you have to come up to the desk and then get them. In college, you know, you have the bowl but the teacher doesn’t have the ladle and tureen anymore and the teacher says you can go and find it over there. In graduate school they hide the tureen. Most of the students that we have are in-between. I mean, some of them are very much still in the “you have to ladle this information into my mind.” Most of them are in the transition between that and then coming up to ask, recognizing that there is some work that they have to do, to be involved in. What you hope, I think, is that in the course of their four years, they will move further towards the point of recognizing that to really learn and know things you have to go out with some guidance to find it, but then that you have to discover what the answers are, and in fact you have to discover what the questions are.

The conflict in goals between students and faculty is one of the factors that can influence student participation in a teachable moment, taking us back to the concern over the numbers who are engaged. Students do not engage in sufficient numbers because they do not understand the process, but they can’t learn the process if they are not engaged. These habits of learning develop slowly from small beginnings that might not feel significant when considered singly.

*Summary of relevance.* Goal relevance was a major consideration in the decision to pursue a teachable moment. If professors could connect the moment with goals they had for the class or for their students, they were more likely to pursue an unplanned
moment. Digressions could be relevant to a wide range of goals. A wider range of goals allowed for a more flexibility in decisions. Teachable moments might be relevant to that specific day’s topic, to academic skills or to student’s orientations towards learning. Problems may arise when the student s do not share the professor’s conceptualization of course goals.

Having time and clear goals in mind may still not be sufficient support for pursuing a teachable moment. It is also necessary that a sufficient percentage of the class be engaged in the moment and capable of following it. The next section will look at the degree of involvement, what can impact engagement, and how faculty respond when there is not broad engagement.

Number of Students Engaged

In the original definition of a teachable moment participants described a sense of heightened engagement. The degree of engagement, reflected especially in the number of students involved in the generation and sustenance of a moment, is a significant element of a professor’s decision to pursue the unplanned moment. Some occasions are idiosyncratic with only one student engaged, while others are all-consuming and seem almost inevitable to pursue.

Some moments captivate the class as a significant number of students engage and wait to see how a moment will play out. The professor who reported the racist comment describes feeling like the students, especially minority students, were all waiting to see how she would handle it. The class in which the student brought up the number of synonyms for excrement was also waiting to see what that professor would do. Other
times, outside events are so significant they weigh on students’ minds, and there is little or no way to proceed with class, except to address their concerns. As one Harry Potter fan explains:

There’s a scene [in Harry Potter] where McGonagal is teaching a class and Hermione asks her about the Chamber of Secrets. And she says “Well”… And of course the class is about transfiguration or something. It’s not about the Chamber of Secrets. But she takes the time and she explains it. And it’s okay, because Hermione wants to know and so does everybody else.

The shootings at Virginia Tech provided this type of moment in several classes. One professor reports having made preparations then waiting to read the mood of the class before deciding how to address the subject. It quickly became clear that the class was concerned and that there was a discipline-related way to proceed.

That’s a topic (theories of human nature) that would have made it into the class at some point but probably not that particular day. But the fact that it (Virginia Tech) was in the news. It was on their minds anyway. They had the Oracle in front of them and it was plastered across the front of the Oracle… I could see the Oracle on their desks. And I could see them looking at it.

When something occupies all or most of the students’ minds linking this concern to course content capitalizes on student interest and demonstrates the relevance of the field of study. Professors have to gauge the degree of involvement as part of their decision-making.
Not all moments are as immediately universal as The Chamber of Secrets or the shooting at Virginia Tech. Participants report trying to measure and adjust the degree of attention in order to be able to capitalize on a moment.

I try, as I’m lecturing, to kind of gauge the level of interest of students. So again, if this is almost like a dialogue between myself and one student and everyone else is kind of getting jittery or they’re checking their e-mail or whatever. I try to kind of gauge that and if it seems like then a lot of other hands are going up and commenting on it, then that, to me, suggests that it’s okay-- that it’s productive to go ahead and keep with it. But if it seems like it’s just one or two students interested, then I’ll probably try to wrap it up a little more quickly.

And another person reports that

Sometimes people will ask a question and it’ll be really interesting but I feel like it will get us too off topic, or too idiosyncratic perhaps for the students. I’ll try to honor what they’ve said, you know, “It’s an extremely good point, let’s talk about it after class” or “Let’s talk about it during the break.” Or, “That’s an excellent point, we’re going to get to it in, you know when we lecture on Chapter 15,” or something. So trying to not put them down in any way but also trying not to get too off task, because, especially with 100 students, it can go really far afield and maybe then I’m talking to two people who are still interested.

If a student asks something interesting to them but not generalizable to the class one person describes the decision this way
But if I think it’s fascinating if you’re interested in U.S. History or fascinating if you’re interested in Engineering but not here, not today because you think that it’s not just about a conversation that you might have with any one student or any group of students.

The number of students who participate, or who are reluctant to participate can be influenced by large class size. Some students are reluctant to participate in large group discussions, but might be willing to share insights with the professor. These are also cases where taking the conversation outside of class allows a teachable moment to flourish. But this is not a fool-proof strategy either. One person reports that this can be very effective in about half of the cases.

Another way to handle that is a teachable moment doesn’t have to be in front of the class...And so you invite them up afterwards...I’ve had fantastic discussions... And you know sometimes those little turkeys don’t even do that... it’s about half the time they do.

Sometimes taking the moment outside of class allows the professor to deal with challenges or inquiries that do not need to be played out in front of the class. This person goes on to say

If there’s something going on, a student wants to challenge you or wants more information, you don’t have to let them hijack the class. You know if this student is interested and it’s clear, it’s not a teachable moment for anybody else, you can invite the student to come during office hours or after class. I like to do it after class because they almost never come to office hours. So you have a chance to do
that. And I’ve sometimes had classes where you know…night classes where I’ve stayed like 45 minutes, going why am I still here it’s 10 o’clock. We have to go you know… Those are teachable moments. And the thing is you know I think that for many of us the closer to the moment, if you can seize it and act on it, the better.

Over-participatory students. Then there is concern about the student who tends to dominate the classroom interactions. Just as people report trying to capitalize on the moment for the student who rarely participates, faculty are concerned about managing the input of those who seek to dominate class time. Some students are naturally more interested and more engaged than others. While professors appreciate engagement, they realize that not all students respond well to what they consider over-participation by their peers. A highly participatory student can generate engaging moments, but that engagement may not be broad enough to warrant class time. Student reactions to questions and comments from other students may not be verbal, but may still be very communicative, as one person describes. “I’m looking for the certain body language, or you know… ‘Ohh’… like this. (Head back, eyes rolling) ‘Oh, that person’s at it again.’” Another describes the need to avoid alienating the interested student while sustaining the interests of the rest of the class.

You don’t want to alienate the student who cares, either. But when you get to the student who cares, you see like 100 eyes rolling, and it’s hard. And you know there’s no rules. It just always depends on the situation, and if someone is really engaged in a way that disengages others, just try to make that be after-class stuff,
or office-hours stuff. And I really try to encourage that because that’s part of setting up the environment is trying to manage an environment.

There are times when the student who cares, cares for personal or idiosyncratic reasons that the professor cannot, or even should not pursue during class time. One person tells of a student who had a personal interest in a topic, but whose degree of self-disclosure was too great for the comfortable use of class time.

And a student asked a question about some interview techniques that I was talking about and I answered it. “When was the diagnostic schedule for disturbed children developed?” “1994,” I answered that question. And then she said, “Well, it’s because,” and then she went into this very detailed observation of her own experiences of being diagnosed with ADHD when she was a child, and then she was on medications and now she’s still looking for medications…It was a challenge to help wrap her up and not disclose too much. Because people kind of started looking around and there’s this sort of stigma related to that. And so on that one I tried to curb her energy in talking about herself and turn it into more of something about the children’s experiences. And then I try to come immediately back to the lecture.

In this case the professor was able to bring the discussion back around to the class topic, managing to connect the personal experience and the discipline while protecting the student.

This concern over balancing whole class interests with individual interests is a difficult one, especially in large classes. The professor wants to stimulate and sustain
student involvement, but faces a dilemma when one student’s interest might be sustained at the expense of the attention of the rest of the class. Not that the rest of the class is unprepared because the topic is beyond their preparation, but because it falls outside their interest.

You hear the rumbling. People are talking… All the people are talking to each other on their own and they’re not giving their attention to me or to whoever is speaking, then that’s gone too far. Or if one person is all the time asking questions or making comments…and people in the class start to feel that that person is monopolizing their time or the interest or whatever and they start to get angry. So, if in the space of an hour the same student asks more than four or five things then it’s starting to get, I think, a problem… It’s difficult to do because you want to control things but you don’t want to shut them down.

So, of the people I spoke with, some set limits for these students in an attempt to teach them to monitor their own participation, and to show the class that they are making an effort to keep the class open but on track.

I have one now, for example, who doesn’t have a built-in social skill that tells her when enough is enough. And she talks a lot…enough to monopolize the classroom time. So, you know when there’s a student like that, and even if it is fascinating, I may have just heard enough from her that week to realize. You know I see the eyes rolling and I’m aware of kind of how she’s impacting the rest of the class.

But shutting down the over-participatory student carries a risk as well.
And there are others that you may want to shut down. But if you shut that one down, are you risking the one that never talks, never talking, for fear of being shut down? But you think that student can take it.

Consistent with the concerns about fostering a sense of openness, faculty are concerned with balancing that openness with a sense of relevance and appropriateness to ensure the broadest engagement.

_Broadening the scope of a moment._ Trying to strike a balance between the individual and the group, faculty strive to use class time for the broader moments and seek out-of-class interaction for the individual ones. The number of students involved in the initiation of the moment is less important than the number of students who can ultimately be engaged. Because, “Generally, if somebody is interested in something it’s worthwhile to pursue it, I think. Or it’s of interest to a lot of people. Usually if one person asks something there’s a bunch of other people who are thinking it.” So, the professor looks for the likelihood that the individual expression of a teachable moment may signify a breadth of appeal beyond the initiator of the moment.

When students do not immediately see the appeal or the relevance of the question some professors take steps to try to get the attention of more of the group on the assumption that others may be wondering the same thing even if they are not listening to their classmate.

In that really big class I do sometimes interact with the one student, but I do try to make an effort and first repeat the questions and get the class in gear and make the point that that is really good and really important question, so that I hopefully get
more listening. Because if one person in a class of 350 asks the question it is probably in a lot of people’s minds who aren’t going to open their mouths. The instructors here are reading the signs of inattention, but based on experience with the topic, make assumptions about the need for a moment to be extended. They then take steps to engage more students and tap into their need to understand the material.

Rephrasing a question in order to broaden the attention it receives also reinforces the message that participation is valued. At times when students prefer to listen to the professor and shut out other students the professor steps in to assert the value of the contribution and to draw more students into the moment.

You know the student who raised the question is probably quite happy to have me answer the question. But the rest of the class is wondering if this is going to be on the test and they’re wondering what the relevance of the question is. And so the way that I rephrase, paraphrase, and ask the question back works really well, is to connect it with what is clearly a key part of the material so that the other students can recognize its relevance. And that boosts the confidence of the question asker but it also boosts the interest level of the class.

Being able to ask a relevant question and have the professor respect it with an answer can enhance students’ participation and interest, establishing to the students that appropriate questions will be recognized and respected.

Another person reports learning from debate experience to re-work a student question so the class can benefit.
In high school I was on speech and debate and my specialty was extemporaneous speaking … So I was good at it and I think that skill has funneled right into teaching in that it allows you to figure out when a question is asked how to turn that into what would be a superb question and to rephrase it and to make them think that that was the question they raised.

So re-phrasing a question broadens its appeal, reinforces the value of the question and enhances the students’ sense that their input is valued.

Not all attempts to broaden succeed, and this in turn influences how far someone may pursue a moment.

One of the most challenging parts of the classroom experience is taking the teachable opportunity, the teachable moment, and saying very quickly to yourself, okay, what can I do with this, how can I make this work? Not just for this conversation that this person and I are having but how can I broaden this? Or can I broaden? I mean first you ask can I broaden it, and then, two, how can I broaden it. Because in some cases maybe you just can’t. It’s just not going to go anywhere. And it just may be that moment you’re responding to a particular point that somebody has raised. You talk about it for a minute and that’s as far as it goes. And maybe it’s been a teachable moment for you and one other person. And that’s okay…But at the same time you’re saying to yourself okay let’s see if this is working with this student as you’re answering the question or engaging them. And they’re talking, right? Which is okay too. How can I broaden this and get everybody else involved, or as many people as possible? And in some cases, you
know, if it’s all working then, oh boy, it all comes together and you come up with something that you can introduce to everybody else.

If the attempt to broaden succeeds, then the value of the moment has been expanded to more students than might have initially been involved. This concern that students are not attending to classmates’ questions recurs in the next section relating to student readiness for teachable moments.

Finally one professor I spoke with encourages interest and participation by turning the question back on the class to get more students involved. This can help

If it’s a comment where I can see that other students are interested, and that’s really important to gauge, I generally will slow it down and give myself time to think and ask them some questions. Because it’s all impromptu, you know, at that point in time and it helps to be an experienced teacher in a course because you have years of previous questions to fall back on and you’ve already maybe encountered that particular line of thinking and gone through that thought process that will help you answer that question well, or address it well. But it’s usually, I think, a good idea to turn those back on the class in the immediate moment in order to engage more students in the same question that the student had raised or the point the student had raised.

There are several factors that can influence the degree of involvement students feel in a moment in class. The number of students involved is affected by their perception of relevance and by their readiness to engage in both the content and the processes of the moment.
Most of the professors I spoke with gauge the degree of involvement that students manifest at the point a teachable moment emerges. If the engagement is broad enough or can be made broad enough professors are more likely to pursue the moment. If the engagement is limited to one or a few students and the topic cannot be broadened sufficiently, professors will recognize the question or comment and suggest that the interaction be resumed outside of class. At times, it is difficult to engage a high percentage of the class because students are not yet prepared for material at the level being discussed. Student readiness for content impacts the decision to pursue a teachable moment. The next sections will examine the impact of student readiness on faculty decisions to pursue teachable moments.

*Student Content Readiness*

Sometimes a student or small group of students will introduce a topic or a question that the larger class is not ready to address. While this intellectual curiosity is exciting for a faculty member to witness, it does not always lend itself to the most constructive classroom interactions. Lack of student readiness to follow a teachable moment where it might lead can take three forms. In some cases, the student generating the interaction is more advanced in the content of the class, asking questions for which the groundwork had not been laid for the whole group. At times students are not ready for content because of the sequencing of the course. Other times the moment may fall completely outside the content goals the professor has for that class.
In one class there was a student whose questions, stemming from work he was
doing elsewhere, required a level of subject-specific sophistication that the class in
general had not reached.

He’s working with a faculty member at FMHI or something and they’ve got these
data that he’s been helping analyze where it’s some national drug addiction study
and so he’s got these data and he’s writing analyses so I’ve spent some time
talking to him about what kinds of things he could do and looking at the printouts
and what it might mean. I think for him it’s a really good opportunity. But this is
Intro… so if he asked me that during in-class I would probably tell him that’s
beyond the scope.

In this case, one student and the professor and the topic are coming together, but the rest
of the group is not ready to join that discussion. While the intellectual curiosity provides
readiness and an opportunity for that student, it is not yet an opportunity from which the
rest of the class can benefit.

Sometimes the students’ lack of preparation has an impact on the professors’
readiness to delve into an idea. Even though the topic held great potential interest and fit
with the goals for the course, the connections to the class would be hard to demonstrate
until they had more background.

There were times, like even yesterday in class, when I was tempted to talk about
something that I thought the students would find fascinating. But I wasn’t sure
whether it would confuse them or not in terms of how it related to what we were
currently doing… I understood how it related but I wasn’t sure I would be able to
present it with all of its nuances so that they could see the connection yet. Yeah.

But I’ll probably do that in some future class.

The professor weighed the potential value of the digression against the potential for confusion, and despite likely interest decided not to take the risk. The connection to the content had to be more easily discernible by the students.

The time dimension overlaps with concerns about student readiness to pursue a topic as well. Sometimes student curiosity leads that professor to want to delve more deeply into a topic, but time does not allow that kind of depth, as in this example. “Once, the students were really interested, wanted to know more about Adorno. This essay they read. They want to know more about Adorno. Well we’ve got about five minutes. I can’t give you a whole background on critical theory.”

Because of the background preparation the students required, time just wouldn’t allow the kind of depth even though the students were interested.

Even taking a conversation outside of class might require a delay until the students are ready.

Or, if the understanding is the important thing then I have to say, well, this is going to take too long to develop for you to understand it. You can get this but you’ve got to have a foundation before you can build a building. We don’t have the foundation yet, so we have to build that first and that take a couple of hours. And then we’ve got to put the structure up, and that’s going to take a couple more, and so this might be appropriate a month from now. Or we can set up a time to talk about it.
Offering two options, postponing it until the larger class is ready for the material or talking about it outside of class if some students really are ready and engaged allows for the possibility of a prompt response for those who can benefit and who are ready and willing to do so. At the same time, it signifies the value, relevance and perhaps the sophistication of the inquiry to the class as a whole.

Within any class, there is a range of interest and ability levels, so professors must balance between being too easy for the more sophisticated class members, and teaching over the heads of the less savvy students.

I had two students come up to me and say that there are a couple of people in there who are just talking too much just to hear themselves talk, and that I’m letting the class go with them instead of sticking with material, which I took as constructive criticism. But what they wanted was a detailed study guide and for me to put outlines on the board, and I said you know, we have to find a negotiation point. So I’m giving them study guides now… and I’m putting a little bit up on the board. They are just not quite at the level they should be at. They are writing down every word. And then I’ve got students in there that sit back and they don’t write down anything and then they write these beautiful papers … so there’s just a wide range of difference.

Striking a balance between performance levels within a group requires negotiation and adjustment for the professor in order to meet the learning needs of students across the spectrum of readiness. Students who are working harder to keep up with the scheduled material are more frustrated by digressions that are initiated by other students.
There are, therefore, moments that cannot be fully capitalized on because students are just not ready. One person reports trying to revive the moment in a subsequent class, but with inconsistent success.

It’s possible that you might go back later and a similar subject comes up and you pick up that thread again and say, “Remember a couple of weeks ago when we were talking about…?” And then you try to tie it in and see if they’ll pick up on the thread after they have the second bit of information that relates to it. Maybe it’ll work and maybe it won’t.

Professors are continuously assessing student readiness to follow new ideas and topics as they emerge. Student interest is not a sufficient condition to pursue a moment if students are not yet ready to understand the material involved. Content knowledge is not the only type of readiness that is required. Students must also be ready for the processes required for academic digression. The next section will look at how faculty gauge that kind of student preparedness.

**Student Process Readiness**

In the examination of faculty goals we saw that student participation, discussion skills and critical thinking are all valued. Teachable moments provide opportunities to develop these skills, but they also require these skills. In some cases, the lack of process readiness weighs on faculty decisions. One person observes having to be concerned about “Whether they are drifting off. Yes, it seems like one characteristic of our population is that they don’t have the discipline.”
I have described the reluctance of students to listen to other students. The ability to learn from one another is a key component to the successful pursuit of a student-initiated teachable moment. Faculty, therefore, feel the need for balance between pursuit of exciting new and maybe more difficult material, and student readiness to participate constructively. While this is sometimes a content-driven concern, it may be that students lack the academic skills necessary—skills like thinking critically, being able to evaluate or formulate arguments, or being able to participate in a discussion of difficult issues. Student process readiness weighs heavily on faculty concerns for classroom management. The tension between process and content leads professors to weigh the value of discipline-specific instruction against the need for student to develop academic skills and values. Therefore, faculty describe struggling to achieve a balance that satisfies their sense of academic necessity while meeting student and self-imposed expectations for coverage of course content.

Faculty frequently assert that students can and should learn from each other, but student unwillingness to do so thwarts some attempts, or at least leaves professors unsure as to how to proceed and foster such processes.

I also have read more about the dialogic classroom and not wanting the instructor to get the last word and I am aware that I could just stop talking and just let go of control and see what they come up with. It is just so hard to do that. One day…I said “What if I was late for class one day and I didn’t come and I didn’t come, what would you do?” And they all said they would leave. And then I said, “Well, consider another scenario then.” So, they are just scared or not ready to deal with
this…Yeah I don’t know how you reward or if you mark. You would almost have to start from the first day and they would resist in the beginning and probably come around.

Here the professor recognizes the value of having students learn from each other and participate in academic interactions, but also recognizes how slowly this develops, referring back to the importance of initial class meetings in setting the context for subsequent interaction.

We see this dilemma in the case of students not wanting to discuss Hiroshima from a moral point of view and in the case of the professor who is happy to leave the class with more questions while they want more answers. While the professor in the Hiroshima class had prepared what he anticipated to be an engaging class debating and ethical question, the students’ discomfort with the conduct of such a discussion impeded its successful pursuit.

If too many students in a class are waiting only for the professor to tell them what they need to know for the next exam, it is difficult to construct the sorts of interactions that develop and rely on higher order academic processes valued by the professors.

But the times when I’m really trying to get that reflexive talk going on in a class, especially in a big class, is trying to get them to see that the really, really important moments of learning you can’t write a multiple choice question about. And that’s what I really care about them learning. And I mean, it’s tough when you start to do that kind of stuff and you see, you know, 15 people leave because you’re not going to just give the basic facts. We don’t even want to listen. We
don’t even want to be here. We are going to walk out right of this huge room, and that happens all the time. And I try not to let that stuff affect me either, because then I keep on the message about the difference between these things. And everyone’s not going to go with the process first. But I also think that it’s the long view again that’s important. So not just with talking about this process but it being something that I think a lot of these kids will sort of click two or three semesters down the road. “Oh, I know what he was talking about.”

The hope in that delayed click is part of the description of the teachable moment, and it is one of the factors that allow people to decide to pursue moments despite student resistance. This person also focuses on to the longer-term process goals for the course, trying to fill a need the students may not understand they have. So student process readiness is tied to their understanding and subscribing to the process goals the professor has for students.

Students are not the only ones who need to be ready for teachable moment. Faculty too must be prepared to manage the class, the processes and the content. As we have already seen, they need to have clear goals, long and short term, in mind, and they have to be able to gauge interest. If professors do not feel ready, or act as if they are not prepared, the smooth operation of the class and students’ confidence in the instructor can be undermined. The next section will examine how faculty think about their own preparedness to pursue moments while maintaining constructive classroom dynamics.
Classroom Dynamics

Faculty make decisions based in part on how they will impact the functioning of the classroom and relationships between and with students. There is a need to weigh the ability to manage the content and the processes of the class against the goals the moment might achieve. If professors feel unready in terms of process or content they risk losing control of the learning context. Several people in this study say that their own willingness to wade into controversy or even to answer questions that fall outside the class routine depends on their own degree of comfort with the material and the processes required. As one person sums up the concern about management and preparation this way,

So I think it’s that balance between having good classroom management skills and planning the flow of work, but also… And sometimes in a discussion class particularly, like in the cultural studies course where we’re talking about ideas, it’s more of a concepts than a process course, you have to be willing to throw out some discussion questions on whatever media…visual media you’ve been looking at. And then just see what happens. And sometimes you know you may have allotted 20 minutes but it may turn into 40 minutes and then you have to be also willing I think to be a little flexible and let that moment happen

There are a number of issues that can have an impact on the dynamics of the class. These include overt challenges to authority and the preservation of openness and tolerance.

Challenges to authority. One category of classroom management concerns involves direct challenges to professors’ authority in terms of either content or conduct of
the class. These concerns emerge in cases where professors feel they are being baited by students who attempt to fluster or lead them off course. In these cases, failure to respond constructively is seen as detrimental to the operation of the class in the future. While some students may be trying to take the class off course, others learn by challenging, questioning and participating more. The challenge for the professor then is to distinguish between sincere interest and attempts to derail the plans for the class. Sometimes, even baiting can yield teachable moments, as in the anecdote about the student soliciting terms for excrement when the professor was able to turn a potential challenge into a teachable moment.

He was trying to, fluster me, so I was not about to let that one pass. Because it would completely undermine my authority for the rest of the semester, and with 350, you can’t let it happen…Had it not been a good example, I just would have said, “Well, you know that wouldn’t be a good example.”

As that person points out the comment related directly the topic of the class, and the decision had a direct impact on the potential tone of the course.

While some of these challenges may be obvious, like the excrement example, others become clear over time. These students may begin with what appear to be interesting questions, but the tone or frequency of the questions reveals the curiosity is less than sincere.

But I feel like I have been in classes where there will just be these kinds of constant questions, so that I’ll have to say “You know, I really don’t know. I’ll have to get back to you on that.” And it’s really interesting because I did tell that
student… I did get the information. I haven’t had a single question since then that I can’t answer. I mean, I think in a way it showed she will answer the question, as opposed to this is going to expose her vulnerability. I think it’s just the confidence. And it’s almost like go ahead and answer the first one or two. And I think that if there are people that are going to use that to just make your life difficult versus real intellectual curiosity you can nip that in the bud.

The professor’s response reveals a willingness to investigate and to follow up on student inquiries, defusing the implication of unpreparedness or inability and, at the same time, treating student inquiries seriously so future sincere inquiries will not be squelched. This theme of following up on questions is explored further in the discussion section on not knowing an answer.

One professor reports that some students who set out to disrupt the class can be brought into it if the professor can respond by turning things around. As with the excrement example, another participant explains,

They will say things maybe to shock, or they will say things to try to undo the environment, right, to try to create discomfort or something, right? Those kinds of moments. And depending on the situation, that’s a kind of moment where you can turn it around and make the comment be the kind of focal point for the content. So, you know, you sort of show the student that they can’t get out of the content, no matter what they do. The more they resist the more central they are to the content, and so they get sort of folded into the discussion, and some students like that can be then inspired because it turns out that they really just feel like some
kind of outsider or some kind of cog in the machine. And you just show them that they have something to contribute.

So, responding to the disruptive student in a constructive manner, drawing them into the class and addressing their comments can involve students in a class they might otherwise feel disconnected from and can demonstrate to other students in the class that the professor can manage challenges and turn them into learning opportunities without losing control of the classroom dynamics.

Even when professors think they know an answer to an inquiry, students may have asked others and gotten different answers. Rather than treating these challenges as threats to one’s authority in the field, these moments can be opportunities to demonstrate the fact that even within fields, and within the academy, not everything is agreed upon.

I think another moment is when students will challenge you. Right? And this happens more in my upper division courses. And they say “Oh, well, isn’t it this?” You know you’ll say something and they’ll say “Oh,” And then they get that pompous tone, “Oh. Well, isn’t it A, B or C?” You know. “What are you saying? Isn’t it…” “In my other class, Professor so and so told me it was this.” And then I get to say, “Well, that may be true, but, this is what I know…” And often, what I’ll say to them, “Well, in my research, this is what I found.” And so then I can say to them, “You know maybe your teacher is teaching something different or has different research or has different background.” Instead of getting defensive, I can just try to teach into that moment… What you’re telling them
and what another professor has told them might be contradicting, because that’s
the nature of the way we exist on the planet. Multiple perspectives. Absolutely.
Responding to a challenge from a background in the field opens the door to a discussion
of the nature of debate in the academy and the nature of evidence within or among
disciplines.

Sometimes the problems manifested by the students go beyond the concerns of
the particular class, and professors have to deal with issues they may not be directly
involved in. Their response still has an impact on the participation of the class.

I had a student who was an angry, angry student… He had been in a really terrible
car accident and he had this pretty extreme physical disability that he was
rehabbing back from… he was angry in general, but he would come to class and
he would try to say things that were just racist or homophobic or something,
right?, To just try, I don’t know, to get a charge out of me or out of his classmates,
but he didn’t care because he was angry…When do you engage it? You have to
engage it for the sake of some of the students, at least at first, and when do you
not engage it? Are you going to get through to this student? If you don’t think you
are, are you going to lose everyone else by focusing too much time on this?
Management in this case involves addressing the angry student and maintaining or
creating a teachable moment by showing the rest of the class that you will address issues
of appropriateness in student participation, and assessing the impact of your responses on
that student, on the other students and on the class as a whole.
But sometimes these moments may not be worth pursuing if all they do is result in another round of the same interaction. Instructors balance the messages conveyed by responding vs. not responding to consistently abrasive students. One of the professors who discussed students making racist and sexist remarks observes:

Even though you could get a lot of teachable moments from a student like that who challenges and who’s very kind of abrasive in the classroom, I’m not sure every teachable moment is a desirable teachable moment, because if you have a student who’s constantly in that frame of mind, of a challenge, or a push, it can get very frustrating for both me and the students. I mean, what are they learning? Okay, this student wants a battle. Even though he might create the teachable moment, I’m not sure that I could reach him.

So the utility of some moments may be minimal once the professor has established a tone and a quality of responses. But this participant does describe managing the impact of the abrasive student in order to preserve the openness of the class in general.

You don’t want to get emotionally caught up in what the person is saying, because I’ve done that in the past and it always backfires... The students just get out of control and they get upset. And that’s just a learning process for the teacher. And so with this student I just always remained very calm, and I picked apart his arguments because he was not being logical. And it was important I thought for the other students in the class to recognize that he could say what he wanted to say without me getting emotionally involved.
Other times students may not be intentionally disruptive, but may be passionate about the topic or a particular idea. Again, professors have to decide how to manage their own responses and respect the commitment of the engaged student.

And, you know, what one needs to do, I think, is to see it, as an environment in which you may, in fact, come to a point where you simply agree to disagree. And you’re unable to make a point with certain students or a student where you don’t win. You don’t convince them. And where the argument simply goes nowhere and you have reached the point where the teachable moment is gone. And you have made a particular point, they have made a particular point and you simply, again, at that juncture you need to know that that’s where you move on. And that’s not always easy to do. Because again, if a faculty member feels as if he or she has something invested here and that they need to come away (and I’ve seen faculty do this) where they need to throw out more and more and more information to demonstrate to the student ‘I know more than you do. And I’m really smart and you’re really not. You’ve got an opinion but I’ve got the knowledge and I’ve got the truth.’ Then you end up not necessarily enhancing your reputation with the students but damaging your credibility because then you come across as arrogant. And there’s a line there somewhere between demonstrating that you are pretty smart and you do know your field and you’ve got a lot of knowledge to bring to the table here, but knowing enough to leave the students with pride and with some dignity. And you don’t humiliate them. That’s a mistake. Now there are exceptions. I’ve had students who were absolute jerks.
And it’s really difficult, I mean, not to just put them in their place. But we’re talking about (broadly here) the teachable moment where you’ve got a student who for a variety of reasons really disagrees. … So there’s a point there in these discussions of the teachable moment where you’re drawing contemporary references to someone who can personalized where you’ve got to pull back.

Yet another person talks of difficult students and the moments they provide this way.

Yeah, so to take what is antagonistic, to show the class that I’m not nervous about it, I’ve heard it all before, and to show this sort of kernel of really brilliant thought inside her comment, I think, makes her feel smarter, makes the class feel like they’re learning something interesting, makes them maybe realize that this teacher knows that this student has no social skills but still thinks she’s valuable.

Responding to one student can send a message to the entire class about what the professor values and how the professor expects a class to function.

Teachable moments are points of high engagement, but that does not mean they have to be moments of positive interaction. We have seen that there are times when challenges or unpleasant comments can open the door to learning as well. The issue is to preserve the relationships in the classroom so even difficult the moments can yield positive results.

*Preserving classroom relations.* There are times that faculty may not feel attacked, but instead feel the need to step in to protect students from classmates. With or without the covenants and caveats described in Question One, faculty still may be called upon to intervene when an interaction turns unpleasant. This serves more than one
purpose, first to maintain the openness and the climate of the classroom and also to teach appropriate methods of discourse. The latter concern is discussed further in the section on relevance to goals. The same professor from the previous example also talks about deciding to step in to moderate what might be a teachable moment, but a heated one.

These are issues where students bring their very judgmental opinions and it’s very hard for them to stay objective. So if students are getting nasty or if they’re getting sort of too judgmental, too emotionally insistent upon being heard over everyone else then I think you have an obligation to step in.

And in the second interview, speaking of a student who made a racist comment in class, and the decision to challenge him, the same professor says:

I think if I had stayed passive and let it go he would have taken a, I think it would have destroyed the gender dynamic in the class. I think because the women who ended up reacting to him were the black women in the class, and they were unhappy. And by me challenging him, I think that set the tone for them that they could talk. They could talk in class, or they could say something in class without feeling like there was no space to do that... And so I try always to think about that. (How the students are feeling.) Which is why, when my student did make that comment, that racist comment, it was just an instant kind of thinking process of two things. How are my students feeling at that moment? And then, what do they see as my responsibility to them?

This person is looking at the class from the students’ perspective and trying to incorporate that view into the decisions. In order to maintain a functional atmosphere in
the class, the instructor is responsible for challenging inappropriate comments even if students do not do so, modeling so students can learn to do so in the future.

While participation is valued, some participants are also concerned that the student who receives too much recognition or who talks too much might have a detrimental effect on participation in general. We see in the discussion of goals that faculty frequently pursue moments because they will foster the goal of increased participation. And in the section in engagement they are concerned about the over-participatory. Feedback is used to encourage more interaction when it is needed and to discourage excessive participation if it is a problem. Here is case where, for the sake of encouraging other people’s participation, a moment is avoided.

I had them doing presentations of specific readings and there was one the other day where the student presenter talked about profanity and talked about how sometimes people use profanity to take charge of a situation. I thought it was a brilliant point, but I had never even thought about it and my uncertainty was do I reinforce this? And then the process things came back into play because he is already apparently smart and he doesn’t need any more elevation in the eyes of the other students, but I also felt it could deepen their learning. And I didn’t say anything I just wrote on his evaluation it was an excellent point, and often overlooked. I guess that was an example of missing a teachable moment because I was so preoccupied with the process and the community that I missed an opportunity and I decided to go with the processional.
In this situation, the professor decided to keep a teachable moment out of the classroom interaction, not because of the content, but because of the potential impact on classroom relations. The one student did not need the reinforcement, and the professor believed that giving it would have a negative impact on the other students, who might just have heard enough praise for this presenter already.

There is one particular situation in which the concern for classroom dynamics and the professor’s role in the class come under particular scrutiny. When instructors are forced to confront a question or comment that they are unprepared for, they are particularly concerned about how to admit this without hurting the dynamics of the class or their own authority within it. The next section will examine this admission as it relates to teachable moments.

*Professors’ Readiness*

Professors feel the need to be ready to address both the content and the processes involved in pursuing a teachable moment. If they are not confident about the importance, the relevance or the appropriateness of a response, they are less likely to enter into a moment. But how does one get ready for the unexpected? Some participants compare what they do in class to improvisation in music, theater or extemporaneous speaking. Many speak of the value of preparation in permitting flexibility.

*The role of planning.* Faculty in this study talk about how they prepare for class and how that preparation can facilitate taking the class in unplanned directions. Since goal conflict can be an issue for classes students who learn to trust that the professor does
have a plan and will cover what they need are more likely to be willing to follow along when a digression occurs.

The way a professor plans for and organizes a course sets a tone for class interaction and the pursuit of teachable moments. There is no consensus on one best way to plan or to organize a class, but most of the people I interviewed talk about the need for a plan and the need for the students to see that plan, and to see that they are progressing through it. Pursuing a surprise moment is actually easier if there is a plan and a set of goals in place. Students are more likely to raise an issue or participate in a discussion if they can see where their contribution or digression fits in and if they can be confident that the material they are responsible for is still going to be covered. The planning element is therefore, paradoxical, planning for digression and flexibility while remaining concerned for coverage. One person describes it this way, “As the architect model, it’s trying to construct an environment in which the maximum learning potential is there, and it’s always going to be; it has to have a lot of vagueness to it. It just has to.”

The professor who worries about the outline points on the board as an indicator of material to cover bases that concern on students’ concerns over time and content and makes teaching decisions accordingly. W can see here how planning plays a role in the management of the teachable moment.

They say “I love your class because it’s so organized and you have a list of terms on the board.” And I follow that list. I tell them at the start of the class (the semester) I write this whole outline on the board and that my lecture will follow those terms. And they say, “Oh, you know so and so, she’s all over the place,” or
“He’s all over the place with anecdotes and too many stories.” And I think that there’s a danger with teachable moments that it could be too disorganized, that I might see the relevance to jump around, but if you don’t know the context just the way that a professor does, the student gets lost… …I would try not to talk about something that was not on the lecture for more than probably 15 minutes. I’d run a discussion. And say, “Well what do you think about that?” … it was a wonderful topic to bring up because it does go back to our subject matter. About 15 minutes or so. And then, yes, when you get to the end I’ll try and bring it to a natural conclusion, and then I’ll say, rather than rush those, (the terms remaining on the board) we’re going to pick those up next time. So you promise them that they will finish them, and if it’s four or five they don’t worry you. But if it’s a whole lecture gone astray, then they would worry. And likewise, if I came in now with nothing and I seemed to only talk according to their questions I think they would find that off-putting.

On a different scale of planning, one professor describes an overall course design that allows the injection of current events, media, cartoons etc…while still using the structure of lectures with Power Point presentations. PowerPoint is a way of making the class more dynamic and keeping students involved. Since PowerPoint is often considered to generate passivity, this design is intended to overcome that. The basic information is on PowerPoint, but the professor uses that only as a jumping off point or baseline. This allows a framework in which to insert the interesting connections, media or examples without having to divert too much attention from the core goals and content.
Students are alert for the diversions and their connections to the material. The medium, therefore, does not preclude students’ need to engage with the material, but the professor is providing connection points to stimulate that engagement.

I’ve managed to keep the dynamism and spontaneity in … class. Because I’ve taught it enough times that I’m not too focused on the information that’s presented in the book. That when I present my lectures, yeah, I know what’s in the book but I’m able to present it in a way that covers the basics but opens up opportunities for other pieces of information or for personal teachable moments. And so I’m gratified when… I’ve overheard one of my students say that just this semester that “there’s never a dull moment in this class.” That I keep them engaged in some way and… And that’s because I have the core pieces of information available to them in their notebook. And then we can jump off of that when the topic raises questions for them that is applicable to their own lives…The book is the baseline…The notebook is just PowerPoint slides with blanks in them for the whole semester…. And then so they have this, but then on top of that I have my PowerPoint slides, which have these, but in addition to these, they have the fun things that I like to insert. So they don’t have all the fun insertions until they come to class…They can be pictures or cartoons or… Yeah. So this is the content and they can make sure they have all the content…. And so they don’t know what slide’s coming next… And it does allow you to go through the information a little bit more quickly than if they were writing everything.
The professor uses the preparation to stay open to and even to create opportunities for teachable moments to emerge. One person I spoke with draws the parallel between preparing for class and the preparation actors do for a performance.

One of the things that Stanislavski talks about is the need to prepare yourself through training for those moments of inspiration. That you can’t depend upon inspiration as an actor, but you can do certain things that make it more likely to show up, and that also then when it doesn’t show up will still be adequate for you to get through whatever it is that you are doing. And I think there is something about that, I guess in the recognition that oh, this is something that I can glom onto … So much of acting is based upon a sort of stimulus and response model, that is, I react to what you do, you react to what I do, not only the words we say but the whole demeanor and everything. And we do that in everyday life, but most of that is on an unconscious kind of level. But I think, and I think you prepare for it, or at least I prepare for it in a way as a teacher by trying to make sure that I am as aware of as wide a range of things as I can be.

Another called it “a strange kind of rigor, I guess. It’s an unstructured rigor.”

Over-preparation can lead to either flexibility or inflexibility depending on how the professor uses it. Several talk about learning to let go of some of that planning in order to pursue moments or achieve other goals. One person reflects on planning and over-preparation and the need for “quiet periods” so the students can learn to participate as well.
I do think some of our younger faculty, because they have grown up in the Power Point era, do have a command of the technology and have benefited from the teaching workshops for the new grad students, and they kind of over prepare. I have had to do a couple of observations with grad students teaching and I think that would be my advice: prepare rigorously, but take in half of what you prepared, or just allow space because I think what took me a long time was my fear was having 45 minutes of material and then running out, and ok, well I have to let them go early because there is nothing left to do here. And I do that sometimes, but I think that to be more confident that the calm periods or the quiet periods are useful… But you can build in more time around ideas and concepts. You don’t really need a lot of stuff. We talk about that in teaching graduate students what you need to know. If you are teaching three hours you need so much stuff. But I just think it is different with the undergrads because they are not used to talking in periodic academic conversations, so it takes a lot of practice. You need to give it to them.

Even professors who present less rigid plans to their class have ways of communicating the value of their apparent digressions. At least two talked about “teaching by tangent” and about being able to do so when the teaching process and the goals for the course are made clear, so the tangents are not idle diversions, but alternate paths to a goal.

Based on mid-semester, and of the year assessments, some (students) get it and some don’t. But, you know, I don’t go off on a tangent as some of them call
it…and then go oh, geez, I forgot we were over here. Sometimes you have to go a very long way out of the way in order to come back the right way correctly.

A different person tries to demonstrate the value of reading and research by preparing more extensively than she needs to for the time limits, allowing her to change directions. My students will say to me that “You read a lot don’t you?” And I say, “Of course I do.” And I say, “Don’t all professors?” And they go, “No.” Or sometimes I’ll get a comment because I’m always bringing in the large classes the document camera. I can just put books up there and I’ll read some books and things like that that we usually carry lots of stuff. And they talk about, “You’re so well prepared when you come to class,” and what they don’t know is a lot of times I come with you know like six hours you know for two hours. And part of it allows them the flexibility. Oh you’re interested in this? Teachable moment. Let me pull this out. But you know I’m making choices, I’m making choices then. And that’s why I say time is the enemy. Then it’s like okay I can’t talk about this but you know I can refer them to it. And sometimes in my best semesters I have a thing on Blackboard “Books We Mentioned.” And I will go into Amazon.com and I will put up links for them. Or I will put up links for articles. I put up links for websites. And so it’s like you know you can continue this on your own. And these are in addition to the readings that they’ve been assigned.

While another tells of needing to be responsive to students and where they are.

The tangential discussion that goes off on some route that you did not expect. Or, you on purpose take it down a different route, which I often do… I go into the
classroom with a plan. Okay, we need to discuss something or I need to teach them something or we need to deal with basics and then I’ve got twenty-two students, all on different levels, all with different brains staring at me reacting or not, to what I’m saying…A lot of the teachable moments for me come from the students themselves in terms of how they perceive what’s going on in the classroom.

Rather than limiting options wide preparation and order can allow for more relaxed interactions. If the class knows its destination and its responsibilities, it can enjoy the voyage and the sights along the way. The same is true for the professors. If they are confident that what is happening moves them closer to something they want for their class, they are more likely to allow even unexpected events to unfold.

The role of experience. For many of my participants, the longer people they had been teaching and the more they had read, the more they felt ready to field different moments, and the more moments were foreseeable. Each surprise moment provided something else to keep in mind the next time they prepared. Every time they taught a class, they felt they had a little more to work with than the time before. For others, there is a comfort level with improvisation and spontaneity, but even that comfort is increased as they are called on the improvise more. This section will look at people’s comments about the role of experience.

It definitely helps to feel mastery of the material I have taught that course six times now, so even when they are a surprise it is not such a surprise that I can’t think of how to integrate them some way. Usually I can. And because I have
witnessed a whole lot of surprises over the years, there isn’t too much they can come up with that will totally surprise me.

Every time a person confronts a surprise, they learn from the experience and incorporate it into subsequent planning and teaching. Even if a professor does not seek portability for a moment, there is a comfort that develops over time.

Another person points out that the pursuit of teachable moments is made easier with experience.

It was a moment that was not anticipated. But I think past experience with similar kinds of moments creates a kind of game plan for what to do should that arise.

And I do teach the same courses over and over again. And I love them, and I do well at them, so I get to keep teaching them. And that helps.

As the ability to anticipate increases, the role of preparation shifts.

Sometimes when I first started teaching, when I walked in I taught everything I knew about…ha…ha… If it wasn’t in the notes, I couldn’t go much further. And now it’s just flip flop, the notes almost get in the way. And so having the flexibility to move where the discussion’s going or where you think this is going to serve your students best.

This does not mean that there is no need for preparation, just that it takes different forms. A different person explains that

The stuff that I mostly teach I’ve taught a bunch of times now, so I already know what most of the issues are, and I’ve reworked things so that that most of those
questions are already answered. If I have gotten a bunch of stuff the first time then I changed my example or I’ve done something to try to stop that.

Another likens the preparation to being able to do impromptu speaking.

Because it’s all impromptu, you know, at that point in time, and it helps to be an experienced teacher in a course because you have years of previous questions to fall back on, and you’ve already maybe encountered that particular line of thinking and gone through that thought process that will help you answer that question well, or address it well.

But one wonders about the changes he has made over time as he has accumulated experience.

Some of it I think, some of it comes from just having been in similar situations and beginning to finally go okay, I know that there are certain kinds of things that are likely to happen and I have had similar things like it. I can handle them. So there is an experience type of thing, which again is one of the dangers of teaching, and education I’m sure I’m a better teacher now than I was 25 years ago when I started, more or less. But I can’t go back and be a better teacher for those students that I had…Part of it I think is you begin to recognize things because you’ve seen them before, which is how we recognize anything. Or because they are close enough to something we’ve seen before we go oh, okay. And not just in the classroom, of course, because we stay alert as human beings and to how they behave.
So we incorporate what we see, not only in the classroom, but in all kinds of interactions, and we learn of things to be alert to. Not only can we respond more readily, but we may notice more opportunities than before. But professors cannot prepare for everything that might arise in a class. Sometimes they do not know the answer or how to respond to a student comment or question and have to admit they do not know.

_Saying “I don’t know.”_ While professors are concerned with making sure that students do have correct information they cannot always address every student question or concern immediately. There are times when the professor does not know an answer but still must respond. The potential risks involved in pursuing any teachable moment outside the planned class work, appearing unprepared, losing control of the classroom processes and losing time needed for content, are magnified if the professor is unfamiliar with the ideas that emerge or is unable to respond to them. Participants in this study talk extensively about the dilemma—the fact that they can lose credibility by being unresponsive to student interests, but they can also lose credibility by offering an unsatisfactory response such as, “I don’t know.” Participants report being able to say they don’t know something if they have confidence and a solid awareness of the information that is within their grasp. Several faculty members in this study describe the factors that they weigh in deciding to reply to a teachable moment by acknowledging they don’t know. Professors, using a sense of what they do and should know to guide them, react to not knowing in ways that sustain and may even enhance the teachable moment. This section describes some of the factors that allow professors to admit not knowing and reveals some of the responses that can make that a constructive admission.
At times professors may be unprepared to address a question or concern, but are able to explain that the material will be addressed in a later class. We saw this in the discussion of time. Ideas too complex to address at a certain point in the term might be postponed until the groundwork has been laid. One participant reports

Sometimes, I will say “Well, we’ll talk about that in the future,” if I don’t feel prepared enough to talk about it. I think that’s probably what determines it most. If I’m prepared to talk about it and I know I’ll be able to do a good job of explaining it, I may do it right there.

In this case, the participant does not have to reveal not knowing, and can just defer the moment. But not everything can be deferred or falls within the plan of the course. When confronted with information they are unprepared to address professors weigh their options using several considerations including risk, resources, relevance, and knowledge at hand.

While saying they don’t know is admittedly risky, the majority of the people I interviewed agree that it is preferable to any of the alternative responses. The real issue is not whether to say it, but how to frame the response to maintain their credibility and their control of the class. One professor described the paucity of alternatives to saying “I don’t know,” this way. “Because what are my recourses? Make something up? Lie? I mean, I don’t have a lot of choice. I either make it up or I lie to them. And both seem a little unethical to me.”

One participant advises, “Don’t worry about saying I don’t know because it would be lying to tell you that you won’t have to say that very much…I think it’s good to
be honest. I don’t think you should bullshit people.” And another points out that misleading the class and pretending you have knowledge when you don’t is as hazardous to credibility as saying you don’t know. “You lose credibility so quickly and so permanently if they know that you are making it up and you are pretending what you know.”

Setting oneself up as an expert with all the answers is not a good solution because it is difficult to maintain that status. Furthermore, student perception of your authority is even more problematic once that authority has been undermined.

It’s better for you to be human than to be super human because if you say you have all the answers then they hold you up on this pedestal… So when you do fall, you fall hard. And why should you fall hard when you could just topple over slightly instead of just you know falling on your face?

Some professors report a sense that students seem more likely to want to see professors who set themselves up as experts fall from their pedestals. One person describes coming to this realization after initially feeling the need to be that expert in all things.

I realized that is just the best response is to say “I don’t know” because one, it was okay with them and at least it wasn’t like the semester before where it was like they wanted to mess me up, or didn’t want to mess me up but I felt a resistance there… I realized that saying I don’t know was okay and they weren’t going to dislike me any more or resist what I was trying to teach them. And as
long as I followed up on it. It was important to say I don’t know, I will look it up and get back to you.

A professor who works with teaching assistants describes teaching them about acknowledging they may not know something. There is an emphasis on the importance of follow up in maintaining credibility and modeling academic processes even when a student challenges something in class. One professor tells of being challenged with the information presented in the lecture did not match the specifics in the textbook.

One of those times was, it was the capacity of short-term memory or something like that, anyway. A student asked the question. I thought it said that. I had to follow up on that because it may be the case. And so that’s where we might utilize Blackboard. That was one time we did, post an article for them to look at that showed some of the updated information. The textbook mentioned it, so she saw it in the textbook, but I hadn’t kept up on that area enough… So that was a point where it was learning for me. And I do make it a point in telling graduate students anytime that I say I don’t know, if it has to do with the content, you find out and you tell them, because that models behavior for them. It’s not just “I don’t know” and you leave it at that. I will find out. And I always tell my graduate students you don’t have to know it all, but you do have to know where to find out and how to ask the questions.

Once faculty are able to admit not knowing or making mistakes they report that it becomes easier to do so the next time. Some even express relief, as one says, “It just was extremely liberating not to have to be the expert, to be the person who creates the
learning situation but who doesn’t have to always be the expert.” Having one expert in front of the class undermines the shared responsibility for learning that is one of the academic goals faculty report. Instructors’ admissions of not knowing are sometimes the start of a shared learning process.

Still acknowledging that they do not have an answer requires that professors have confidence in what they do know and can answer. One element of the decision, then, was how to frame their response to represent what they did know and offer solutions for the problem, not leave the question hanging or unaddressed.

It depends on the domain. If I’m comfortable that I pretty well know what the stuff is that I’m talking about then I don’t feel bad about saying I don’t know because I don’t feel like it’s something that I ought to know, usually. It’s kinda funny, but the less I know about it the more worried I am about saying I don’t know. And it’s because it’s exposing my ignorance or lack of preparation or whatever.

In a way, the ability of professors to say I don’t know is directly related to the amount of confidence they have in what they do know.

This seeming paradox of being able to say “I don’t know,” if you have a strong enough sense of what you do know is described by another participant this way. “It’s problematic if you say you don’t know something and it’s something they expect you to know, something that you’ve assigned them. But you know when we trip off into these tangents or related areas.”
So, if a topic is outside the discipline and neither the professor nor the students expect the professor to have the information then it is less problematic to admit not knowing. One individual in the social sciences reports

I usually say, “I don’t know but I will find out.” And that seems to be fine… We read a couple of articles about women and illness and one of them was about fibro-myalgia and they did ask a medical question about chronic fatigue syndrome. I said, “I don’t know,” and that did not feel problematic at all because it was not anything that I felt like I needed to.

Even within a discipline, professors do not have all the answers in hand and further research may be required. We can see in the previous responses and in the ones to follow, that the important element in this response is not the admission of not knowing, but the solution to that admission. If no one knows, then someone needs to find out. The discussion of time indicates that sometimes technology allows a quick response.

If not, I’d say, well that’s a good thing for you to look up. So maybe letting them have more responsibility in the process…You know someone’s already wireless and you’ve got the website. And, so it’s almost like a shared process.

Other times professors may admit they do not know the answer to that particular question but their knowledge of their field allows them to respond while modeling disciplinary thinking. One person who emphasizes cultural logic in courses reports sometimes being able to reply by modeling the logic and understandings of the field.

Constantly. I will say I don’t know. It is a learning experience…It is impossible to know everything about a people, a society etc. I sometimes deal with is as I
would (in my profession.) And try to figure it out. If I can get into the cultural
logic I can give a good guess. If I know about the set of relationships in a culture,
its values and world views, I can deduce an answer to a question I may not know.
For example: If I know a society is patri-lineal and polygenic. I can deduce the
form of residences and the organization in space and if there is co-wife
cooperation.

A strong knowledge about the discipline and how it arrives at its own knowledge allows
this professor to reason, and show students how to reason through their questions,
applying the logic of the field.

If a question has to be answered after class time, some professors do the research
themselves, others let students do it, or they share the responsibility, but questions are not
allowed to lie unanswered.

And there’s no embarrassment, there is nothing wrong with saying, well, you
know, I’m not sure about that. I don’t know the answer to that. But certainly your
question seems like an interesting and/or important one and certainly worthy of
looking up and whether it’s you that look up the information, or I check it, or we
both look at it and talk about what comes of it. And the thing is though, you have
to follow through. You can’t just do it for appearance sake. You have to follow
through on a question that’s asked … Because this confirms in the student’s mind
the importance of the question that they’ve asked. But it also reinforces your
seriousness about not only them but about what you’re doing, and that you
yourself want to learn and you yourself seek joy in discovery of new knowledge.
And you say, you know, “Wow! I didn’t know that, but you know what I learned?”

So saying they don’t know lets faculty in this study model their commitment to work in their fields and their own curiosity while validating the students’ inquiries.

At least one person responds differently depending on whether the topic in question is something within the area of expertise or not. If there is a sense the professor should know, the professor finds the answer. If there is a sense it is outside the professor’s expected domain, the student is referred to others who would know.

It depends what it is. Right? If it’s something that I think I should know. So they say to me, “How old was Winston Churchill when he became Prime Minister?” And … I’ll say “Oh, I don’t know. I should. But I don’t.” Or they’ll say “What role did Thatcher have before she was…?” And I’ll say “Well, she was Education Minister. But that’s a good question. What did she actually do? I don’t know. But I’ll get back to you. Let me look at that. But I should know it.” But, if it’s something that I feel I shouldn’t know, I’ll just say “I don’t know. But it’s interesting. It’s good to know what the Americans thought. But I know didley squat about American History so why don’t you find out? Talk to (other professors). Let us know next week.” Something like that. I’ll direct them to another faculty member that I know does that field. And I’ll say, “Not mine.” But I won’t say “I should know.”

This person is demonstrating several points at one time. When a professor differentiates areas of specialization within the discipline this reveals more the nature of the field and
the areas of study within it. By agreeing to research the information, or guiding the student in locating the answer, the professor is taking responsibility for learning or helping the students learn for themselves. And, as in the other examples, the value of the moment is reaffirmed to the students.

The ability to refer students to appropriate sources and resources is one part of a larger area of confidence that professors have. In fact, sometimes teachable moments allow the instructor to develop students’ research skills within their fields. One person recounts a particularly successful moment where the responsibility for developing a topic was turned over to a student. He reports that he had to say

Hey, you know, don’t know the answer to that. But, I know where you can find the answer to that. And if someone in here wants to go hunt down the answer you have some air time here next class. And some people do that. Yeah, I remember in one class… we were talking about what explains the fact that there is such varying levels of inequality between advanced industrial countries. So why is the United States the most unequal country among the advanced industrial countries? But many of the countries in northern and Western Europe have really, relative to the United States, low levels of inequality…. And so we talk about, well what explains this? And obviously one thing that I bring up is, well, they’re more willing to tax the population and then use that tax money for either redistribution or social welfare programs that meet the needs of children and elderly much more than the United States does. And immediately some students were like, “Oh, well that’s socialism.” And, you know, “We don’t want to be like the Soviet Union
was, because that didn’t go anywhere.” But then other students were like “Well, Norway and Sweden aren’t like the Soviet Union.”

And so this one student said “You know I’ve…I treated a little bit of this in a research project I did for another course. I’m willing to do a little bit more and kind of share with you what I know.” And I said “Hey, well go for it.” And so she did that, and she came in the next class with PowerPoint slides on the percentage of Socialist Party representation in the legislatures of these different countries, and their corresponding levels of inequality, and money directed toward programs in aid of elderly and children and the poor….And I guess what was good about that was that it challenged everyone who disagreed to do their own research. And if they didn’t want to do the research then they have no basis for disagreement.

In this case the professor was not ready to address all the comments in the class, but was willing to facilitate a students’s undertaking of research in the subject. He then goes further by giving the student class time to share the discoveries—making students responsible for teaching and learning from each other. By giving the student “air time” report to other students, the professor is making a strong statement that student input is valuable. Here the instructor’s response eventually accomplishes three goals, covering more content, covering resources relevant to the field, and developing shared responsibility for learning.

This turning the research back to the students is a constructive and often-reported response to the idea that the professor does not have the information at hand. But one
person warns that, “You don’t want to say, ‘you can find out’ too many times because then the students stop asking because they are afraid you are going to make them do more work.” So there is a balance between encouraging student research, participation, and discussion, and turning questions or interests into burdens students are not willing to shoulder. When faculty do not know an answer themselves they also have to gauge student willingness and depth of interest.

Even if the professor does the research, the response can validate a student question and encourage other contributions.

And one of my students asked about a character’s moral…a woman character’s moral make-up because she was an opera singer and described initially as “wild.” And they asked me, does that mean she’s sexually loose? And I had to say I didn’t know. Because I didn’t know about opera singers in late 19th century, how a woman would be perceived. Is she a kind of player or something? So, there’s a Victorian listserv of academics. And I wrote them, and I asked them, and I started this whole discussion. And then when I went back into the classroom I brought it up on the web and I showed them some of the answers. And you know, even people in my field, scholars I knew, didn’t agree. So I said, you know, “Your question started a very interesting thread for people, because some people thought, ‘Yes, she would be because she’s not domestic, and some said, no, absolutely not, that was a reputable career.”’ And so there were these different points of view. So I brought that into the classroom. Because I wanted her to
know that her questions spurred on more discussion, and there was a place that they could go if they wanted to ask.

Here a student’s question that the professor could not answer opened up an academic debate beyond the classroom. By sharing the research, the listserve and the debate with the class, the professor validated the original question, taught something about resources in the field and demonstrated how discussion takes place in the academy.

So, technology can make some research and information dissemination easier and some participants report being able to follow up on moments more easily as a result of the internet and communication systems like Blackboard.

Blackboard helps with teachable moments, I think, because it gives a way of interacting, for students too. And they can post links and they can get on the forum pages and things like that. And I can post things as they become available. Or as I find them and say, here’s something interesting to check out, you know. Have a look at it and see what you think. …At 2:00 in the morning. Two in the morning, you can sit there and you go, okay, this is going up on the course documents.

At another point this person goes on to say that I had taught last night, so I was kind of foggy today. And he wanted to know “What does this passage mean in Weber?” Well, Weber’s translated from the German and it’s all these really long sentences with a verb at the end. And frankly, I hadn’t gone through the piece within the past week. I had gone through it earlier, creating study questions for them. And I could not make sense of it in
the classroom. It was oddly written. And I said “I don’t know, but I will find out.” And then I wrote a note and I had them all watch me write a note “Look into this.” You know. So they appreciate that. They know I’m working for them….And there’s the Internet now, you know, you can find out. I could probably put that quote in on Google, or part of it, and it would probably pop up in somebody’s interpretation and pop up right after it.

Access to the internet also allows students to find answers quickly while their interest is piqued

With the internet it is a lot easier because they don’t mind so much if you say “find out now.” So and I think that is just the sort of self-recognition that you come to, may come to, that it’s okay not to know everything, and that the students are more likely to recognize the value of learning if they see it as something you are still engaged in.

Technology makes it easier for professors to acknowledge they do not have an answer but can find the material. Technology speeds the response time and the dissemination of certain kinds of research and, therefore, it allows more flexibility in responses even if the professor does not know the information immediately.

The theme that emerges from the quotes on saying “I don’t know” is that this admission can be the opening for a larger teachable moment. It is not the closing comment. The follow up to the admission, offering a means for answering the question or researching the topic sends a message to the class that questions are worth asking and worth answering. It tells students they share responsibility for learning, and that learning
continues beyond the confines of the classroom. These messages are consistent with the goals described earlier in this question, learning academic processes, learning the methods and logic of the disciplines and learning to learn throughout one’s life.

Having to acknowledge that they don’t know an answer or how to respond to a moment is only one aspect of professors’ readiness for teachable moments. As we have seen, there are cases when a concern for processes and classroom dynamics may prevent the pursuit of a moment. But we also see that faculty prepare in order to digress or improvise as the need arises. They read more than is necessary, bring in extra materials, and consider other disciplines, contemporary events, popular culture, and even family anecdotes. They learn from previous moments and incorporate those experiences into subsequent teaching experiences. And they learn to read cues from the class and be reflexive in order to make decisions about how to proceed.

*Reflexive Considerations in the Decision*

When professors decide whether or not to pursue a teachable moment in class part of their decision process is reflexive in the sense that they see, in their students’ responses reflections of their own teaching. Many of the participants in this study report trying to see the material or their own interactions as their students would see them. In deciding whether to follow up on a moment, or to engage in a particular interaction many report such considerations as

> If I’m not excited by my curriculum that’s going to show to my students and they are going to be bored. And I think sometimes if my students are frustrated with
this reading, or if I’m frustrated, or if I’m feeling this and I have all this educational background or whatever, and then how… how must they be feeling? Watching student reactions to get feedback and recognizing that student reactions reflect their own input lets some professors make adjustments to their teaching as they go.

It is not only interest, but also energy that is cyclical. Professors seek energy from their students and feed it back to them in an interactive loop. The cues that professors get about engagement inform their decisions about continuing along a given plan.

What I give you is only partly a reflection of what I get from you. So if you display enthusiasm and attention then you’re going to get that same thing back from me…. Like a charismatic black church, you know… And the dynamism of the preacher is a reflection of the response that he or she gets from the congregation.

The teachable moment is a moment of excitement for professors. They describe it as heightened energy or freshness. That energy, they believe, is contagious. As one professor explains,

You have to trust that you know what you are doing, that you know the material and that, and also trust that you, that when something happens that would obviously be exciting to the teacher, that that excitement would be seen.

So, teachable moments are moments of reflexivity. Professors and students experience heightened awareness of each others’ engagement and connection to the topic. The decision to pursue a moment is a result of this exchange of ideas and energy.
Summary of Question Two

The elements that faculty report considering when deciding if and how to pursue a teachable moment form a complex network of concerns. Professors report weighing different elements in different situations. The decision does not entail a linear set of steps; rather there are different elements that surface depending on the nature of the moment, the class, or the point in the semester. Many of the elements influence each other. Time is a major concern, but it is one that can be tempered if students and professors are ready, if the moment has sufficient relevance to any of a wide range of goals, if the idea prompts sufficient engagement, or if pursuit can positively influence classroom dynamics.

Summary of Chapter Four

The teachable moment, as described in this composite assembled from interviews with 17 experienced professors is a complex phenomenon that can manifest itself in a myriad of ways. The experiences have certain elements in common, including a heightened sense of engagement and increased interactions. Some professors believe they create such moments with active learning opportunities, others believe they are unplanned surprises, and so there is a continuum of predictability across my data. In the most predictable teachable moments, the professor initiates the interactions and students engage with the professor or with each other about the professor-selected topic. Even in these cases surprises might emerge as students bring in new ideas or react in unanticipated ways. Surprise moments require more on-the-spot decision making on the part of the professors as they decide how much class time to turn over to previously
unplanned explorations. Some professors report learning from their surprise teachable moments and attempting to recreate them as calculated moments.

In any case, professors work to deliberately create and maintain classroom environments where the necessary interaction and engagement can be sustained so teachable moments can arise. This is true regardless of class size, though it is more difficult to accomplish in larger classes. Many use explicit covenants or class contracts and guidelines to establish the ground rules for academic dialog. Others use feedback or encouragement to stimulate student participation and many deliberately model the values of academic discourse and curiosity. All of this requires a balance of planning and flexibility. While faculty plan for class, part of that planning for many of my participants is intended to allow for flexibility which facilitates decisions concerning the pursuit of teachable moments.

The decision to pursue an unplanned moment involves a complex set of concerns which influence each other. Not all concerns are weighed in every instance as the decisions are highly contextual. Faculty weigh the availability of time against the value of the moment, the degree of engagement and their own and student readiness. In order to pursue a teachable moment, professors should see it connects to goals they have for their students; goals, however, fit into a wide range of concepts from mastery of material within a specific class session, to formulating and evaluating arguments to a life-long learning orientation. Professors need to feel prepared to address the content and the academic processes required of the moment and they must sense that the students have content and process readiness as well. At times they risk having to admit they do not
know or are not prepared, but even in these cases they demonstrate a willingness to follow up on ideas, demonstrating the value of student contributions and of academic inquiry.

Different professors frame different situations as teachable moments. What one professor might view as problematic, like a challenging student or a racist remark, another will describe as a teachable moment. A few of my participants think there should be a different phrase, but none offered a phrase they were satisfied with. Many refer to the individual nature of learning, pointing out that students make connections to different ideas at different times. One participant used the metaphor of popcorn popping.

Teachable moments happen to one student at a time, but by the end of a semester one hopes that every kernel will have popped.

Chapter Five will discuss some of the conclusions and implications to be drawn from this data.
CHAPTER FIVE
ANALYSIS AND IMPLICATIONS

In examining the implications of this study, this chapter will begin with a brief synthesis of the data presented in Chapter Four and then address the third research question concerning the applicability of Schon’s (1983, 1987) theory of reflection-in-action to an analysis of the teachable moment. The chapter will then look at other theories of reflection-in-action that assisted in the organization of the data. Important implications for the practice of college teaching, faculty development and designs of general education are also identified. Finally, since the design of this study was only one of many that are possible for this topic, and since I became aware of several noteworthy design issues in the course of the study, I will make suggestions for further research into teachable moments.

While professors in this study have different experiences with and different examples of teachable moments, the themes of interaction, engagement and complex decision-making run through the interviews. This chapter will begin with a brief synthesis of the data as presented in Chapter Four, and then examine the implications for theory, then for practice and finally for future research.

Brief Analysis of the Data from Chapter Four

Since this study is qualitative in nature, in order to organize the data presented in Chapter Four, concurrent analysis was necessary. To avoid excessive redundancy, this
section will briefly summarize the conclusions of the data presentation. A more thorough summary can be found beginning on page 255.

Elements that Characterize the Teachable Moment

The illustrative quotations presented in Chapter Four suggest that the concept of teachable moments covers a broad range of experiences and that different professors frame different moments as being teachable moments in different contexts. In fact, what one professor might find to be a problem or a difficulty, for example a racist comment, an unexpected question or an angry student, another professor might frame as an opportunity for expanded learning. There is a continuum of predictability for such moments, but even the most foreseeable carry with them the potential for surprise. The greater the element of surprise the more the professor may have to reflect prior to responding. The data suggests that if faculty learn to frame occurrences as teachable moments, by connecting them to course material, broader goals, or contemporary concerns, and then risk venturing into unplanned areas, the impact on student learning may be increased.

In response to my first research question concerning the definition of the teachable moment, the various teachable moments described in Chapter Four have three things in common, a topic of mutual interest, engagement and interaction. They all involve heightened student engagement and interaction about a topic of interest. Whether the professor sets up the moment or it occurs spontaneously from a student comment, everyone is more engaged and interactive. Also observed in the interviews is a continuum of predictability for teachable moments. Figure 4 on page 83 illustrates this continuum. Some are deliberately planned by the professor to be teachable moments.
These fall at the calculated end of the continuum. Others are anticipated but not initiated by the professor and finally some emerge unanticipated as the result of a student comment or inquiry. In a sense, the teachable moment is a significant manifestation of active learning as described by Bonwell and Eison (1991). This connection will be explored more fully in the implications for teaching. When confronted with this combination of conditions, and while in the midst of classroom interactions, professors engage in a complex set of decisions, quickly weighing several elements, to decide whether to pursue a moment in class, out of class or not at all. Question Two focuses on how professors go about making that decision. Figure 6 illustrating some of the interactions of those elements is presented on page 159 in Chapter Four.

**Elements of the Decision to Pursue a Teachable Moment**

The elements that factor into the decision include time, student readiness, professor readiness and potential impact on classroom dynamics. One major consideration, relevance has a number of possible definitions. Some participants talked about moments having to be relevant to the particular class session in which the teachable moment emerged, others talked about relevance to “broader course goals” or general concepts and academic skills. However, the degree of student involvement and the availability of time also impact professors’ choices.

*Saying “I Don’t Know”*

The issue of having to admit to their students that they don’t know something emerged in my interviews as an important consideration for many professors encountering surprise teachable moments. While that admission seems potentially risky
in terms of maintaining constructive classroom dynamics, many professors in this study report learning to make that admission. They go on to describe doing so in a way that allows them to still affirm the value of the moment, the value of curiosity and inquiry and the value of student contributions. Admissions of not knowing become teachable moments about more than the content as students see what their professors do when they do not know. Professors who follow up on this admission, or help students to do so, provide multiple lessons in these teachable moments, about the content of the initial inquiry, the value of curiosity and the processes of learning throughout one’s life.

Is Teachable Moment the Wrong Term?

Like other taken-for-granted phrases, such as “have a nice day,” the phrase “teachable moment” can be over-used and under-examined. While the origin of the phrase is difficult to trace, it appears in early childhood and child developmental literature first related to the Bank Street Project and describes moments in which young people are more receptive to learning because they are confronted with what Havighurst (1972) calls “developmental tasks” that must be accomplished for personal development.

A few of my participants questioned the phrase, talking instead about “learnable moments” or “learning moments,” but they were not really satisfied with the options they proposed. The question is one of what exactly is teachable, the student or the material; and what exactly is learnable. If a moment is teachable, or learnable, what are all the other moments that aren’t included in this discussion? Learnable moment, which one person suggests, centers on the material and learning moment does not seem to differentiate between moments of heightened involvement and moments when more
routine learning takes place. The fact that the people I interviewed were able to talk about these moments and, in so doing, distinguish them in their own minds, is evidence that the phrase, while sometimes used carelessly, does carry a connotation of being different from the routine flow of classroom instruction. Trying to coin a new phrase that captures the complex set of elements of this study may, instead, overlook the cultural traditions associated with the phrase. This traditional use entails the ideas that the moments are somehow different from other moments involving teaching and learning, that there is increased involvement with a topic or readiness to learn new material. If we think of “teachable” as a condition of enhanced receptivity to a learning opportunity, the phrase still makes sense in describing college classroom moments of heightened interaction and engagement.

Implications for Theory

Question Three: Schon’s Theory of Reflection-in-Action

Question Three asks if the teachable moment can be understood in terms of reflection-in-action and goes on to ask if professors’ reflection-in-action might be both pedagogical and discipline-based. Does the decision-making process used by participants follow Schon’s (1983, 1987) model and if so, do professors make decisions as teachers and as practitioners of their disciplinary specialties?

In the description of teachable moments I presented a continuum of predictability. While some moments are initiated by professors to deliberately enhance engagement, the moments of greatest challenge are the surprises. Since Schon (1983, 1987) describes the reactions of professionals in moments of surprise, these are the moments I will focus on
for purposes of analysis. The facets of Schon’s reflection-in-action are clearly visible in the descriptions gathered from my participants when they describe moments of surprise and their decision-making as they respond to them.

Donald Schon, in his book, *Educating the Reflective Practitioner* (1987), argues that professionals use more than technical knowledge to operate effectively in their disciplines. Writing in part in response to the technical rationality of positivist methods, Schon argues that there are moments in which training and prescribed methods may fail to solve an unusual problem and that in those moments competent professionals exercise what he calls a “professional artistry”. In the absence of having direct prior experience with a particular situation, professionals must experiment with responses and monitor the success of their experiments as they decide how to proceed. Steier and Ostrenko (2000) propose a variation on Schon’s theory that is useful in this analysis. They suggest that in communication we experience what could be called as “reflection-in-interaction,” which they describe as being

Better understood as an interaction –that is with others. We need to recognize the communicative context in which reflection-in-action takes place. More importantly we need to recognize that our “others”… may be engaging in the same process, radically altering the situation-at-hand as well as who “we” are (to them and even to ourselves) in the transformed situation. It is a kind of mutual responsiveness… (p. 67)

This variation allows us to look at the multiple interactions that might take place in a classroom, among several people at the same time, each person influencing the context of the subsequent interaction.
When professionals encounter a situation that is unforeseen and presents challenges including unclear choices and potential conflicts, Schon (1987) calls these moments “indeterminate zones of practice” and calls the experimentation and on-the-spot decision making “reflection-in-action.” Reflection-in-action is thinking about an action while still in the moment, so the reflection has a direct impact on the immediate interaction. Since the situation is new, any action is experimental, and the results of the action reveal the appropriateness of the decision. This is different from reflection-on-action, where the individual has time and the benefit of hindsight to think back on an event and make decisions about it.

The unforeseen teachable moment is an example of the indeterminate zone of practice that Schon (1983, 1987) describes. Professionals enter these zones when a problem is new or unique, and its resolution may require a choice between conflicting values or interests. Any response is an experiment whose outcome may be uncertain while, at the same time, it yields new insight into how to proceed. In the description of the unforeseen teachable moment we see surprises experienced even by seasoned professionals; surprises such as students encountering conflicts in their research, making racist comments, sharing anecdotes that might seem unrelated or asking unanticipated questions. Surprise moments in the classroom always require that professors make decisions on-the-spot. Will it be instructionally productive for the professor to pursue this? How? What if they don’t engage in this moment? What are the stakes? What are the risks? Is there time? Can the students manage the processes or the content? Is the professor ready? We see in Chapter Four that the faculty in this study go through a set of
decisions in a split second. Furthermore we see, as Schon describes, potential value
conflicts, for the professor and for the students. There are several levels of value
conflicts. Time can conflict with engagement. Long term goals may impede the pursuit
of shorter term goals or vice versa. Professors decide whether devoting class time to
broader concepts or skills is more important in that moment than the previously planned
points on their PowerPoint slides. Any decision to pursue one thing in class is a decision
not to pursue other things. Furthermore, a moment may be teachable because students
are engaged in challenging value-laden ideas on difficult topics like race, class or gender.
And students may be looking towards different goals altogether, so a decision to digress
has to include a manifestation of its value if students are going to follow along.

If a surprise teachable moment can be seen as a zone of indeterminate practice,
then the on-the-spot decision-making may be examined in the light of Schon’s (1987)
reflection-in-action, or even more clearly as Steier and Ostrenko’s (2000) reflection-in-
interaction. The response to a surprise, according to Schon is an experiment which either
succeeds, in which case the surprise problem is solved, or it fails, in which case the
nature of the failure suggests further adjustments and additional experimentation. When
confronted with surprise teachable moments, professors describe “thinking quickly”,
weighing alternatives, considering goals, reading interactive cues and making “on-the-
spot” decisions about if and how to follow up. Some speak of “reframing” or
“broadening” the comment so more of the class can benefit. In these cases, they may
attempt to broaden a moment, and read the subsequent cues being sent by the other
students. Signs of disengagement and boredom may lead to a delay or curtailment of the
interaction, while signs of interest and wider participation may encourage further exploration. Students who over participate require that the professor assess the signals being sent by the larger majority of the class. While these over or under participatory students are a very small percentage of the classroom population, they impact can be powerful. Professors draw on what they know about their students, what they see happening and what they think needs to be accomplished and make adjustments accordingly. This is what Schon (1987) calls “continuous detection and correction,” or Steier and Ostrenko (2000) describe as transformation “in and by the situation.” Participants report trying to remember how it felt to be a student, trying to see their classes as their students see them, or trying to think how their students are feeling. This reflexive behavior allows them to examine the role they are playing in the interactions. If students signal disengagement, concern about coverage of material or if they take the material too far afield, the experiment may have failed and the professor may need to try a different tack. It is true that professors make adjustments on some level even while lecturing, but they report being forced to make more new decisions when confronted with surprise. Their views about the material and what is important become manifest when they are forced to make choices and decisions. Every student comment or question has the potential to “radically alter the situation” for the professor and the other students as does the professor’s response. This leads to a cycle of interaction. It is important to note that the data in these interviews does not suggest that the professors make decisions based on the reactions of their students, rather that there is a complex interplay of interactions,
actions and reactions including consideration of what students reactions suggest about the moment.

Reflection-on-action is easier to study since the time element is less immediate and the process is more deliberate. Reflection-in-action, as Schon (1983, 1987) describes and reflection-in-interaction as Steier and Ostrenko (2000) describe, may be more difficult to articulate since these two types of synchronous reflection shape and respond to immediate interactions in a compressed timeframe, and therefore each result influences the lens through which participants look back on their decisions. This study is retrospective in nature and therefore asks participants to think back about their decision-making processes and recall the elements that influenced their interactions. Participants do discuss elements of their decision-making and how those elements impact their interactions, they also describe surprise, a continuous sense of experimentation and a willingness to make on-the-spot adjustments. The data reported in Chapter Four addressing the definition and response to teachable moments suggest that the concept of reflection-in-action is a frame that may help us to understand what happens in such moments of surprise. The interviews also suggest that an analysis based on Schon’s model may be more complex when dealing with larger groups of students.

We can see the difference between reflection-in-action and what Schon (1987) calls knowing-in-action which involves the “skillful execution” of one’s profession based on experience and reflection-in-action. A well-crafted lecture or even active-learning assignment may go along as planned and yield the desired learning outcomes. This success may set the stage for subsequent use of or modification of the original plan. But
the surprise moment is what requires consideration of a potential detour from a plan. Professors do, however, try to incorporate some of the surprises they confront into new “knowing-in-action.” This knowing-in-action is a result of reflection on an experience in order to incorporate it into future action. Portability is one aspect of the teachable moment that demonstrates this incorporation of surprise as a result of reflection-on-action.

While Schon (1987) was talking about modeling professional artistry in such a way that apprentices could learn it, this examination of the teachable moments suggests that college professors exercise their own sort of professional teaching artistry in their classes, influenced by, but also independent of the disciplines they teach. When working with a small or large group of undergraduates instead of a single apprenticeship, the potential for surprise is increased because there are so many more students and therefore, so many more personal contexts the professor cannot be aware of. Participants in this study report wanting to know about their students and trying to do so, but with each additional student in a class, that possibility diminishes while the number of spontaneous personal connections, ideas and insights made by the students increases. As a result, professors in large classes are even less likely to be able to anticipate how an idea will be perceived or an interaction will progress. The probability of surprise increases. Even experience cannot eliminate surprise because each group of students is different and interacts differently and as a group some characteristics of student populations change with time. So, along with the continuum of predictability described in Research Question One there seems to be a continuum of knowing-in-action where the most predictable
moments allow the professor to draw most reliably on experience and the least predictable moments allow the least reliance on experience. But each experience builds a degree of comfort with surprise that may allow for future pursuits.

There is another factor that Schon (1983, 1987) does not explicitly discuss. This is the development of comfort with surprise in general. Many of the faculty in this study report being, or at least trying to become, comfortable with the idea of surprise. Each surprise they confront not only prepares them for the next time that surprise arises, but it also gives them confidence that they can respond appropriately and productively. Many speak of learning to “teach by tangent”, “teach by digression” to “throw out the plan for something larger” to bring in “six hours for a three hour class” so they can digress. They may not encounter another explicitly racist comment, or the same reaction to a reading, but they will encounter another potentially offensive comment or another controversial response. So, in talking about college teaching where flexibility is valued and surprises may arise, there may be a set of experiences, reflections or experiments which yield, not knowing-in-action per se, where the same response can be put into use, but reinforcement of the value of experimentation and reflection-in-action in new teachable moments which is how artistry emerges. And, in college classes, the sheer number and diversity of students involved makes surprises more likely to appear.

Professors describe attending to cues from their classes, constantly scanning the group for signs of how to proceed. This is not the same thing as knowing what they will do, but rather that they know to look for signs that will help them decide what to do. Compare this to Schon (1983, 1987)’s assertion that those who exercise professional
artistry choose what they will notice and are prepared for improvisation. Again, as Schon points out, instantaneous reflection-in-action, when looked back upon, can yield knowing-in-action for subsequent similar moments.

Indeed, Ferry and Ross-Gordon (1998) find that it is not simply direct professional experience that develops reflective problem solving skills and that some practitioners prefer experimental models while others prefer more rule-based practice. They suggest that the more reflection is fostered in multiple areas, the more likely it will be practiced in a profession. Several professors spoke of being trained in improvisation or extemporaneous speaking, not as faculty but in some other aspect of their lives. They refer to this as a valuable foundation for them to be able to respond spontaneously and constructively in class. So, professors do not so much need to learn to handle a particular set of surprises, as they need to learn to handle all types of different surprises.

*Pedagogical vs. Discipline-Based Decisions*

As for the part of Question Three addressing the existence of multiple professional frames when doing reflection-in-action, the data did not yield many decision elements that were discipline specific other than those that relate to covering content or disciplinary relevance to the material in question. In other words, participants did not often base their decisions on what a psychologist, sociologist or anthropologist would do. Instead, when we look at the elements of the decision—time, readiness, and goal relevance—we see more pedagogical than discipline-based factors. This may be because I was researching college teaching and they were, therefore, targeting their comments to my area of inquiry. It could also be because I was focused on undergraduate classes,
many of which are general education classes and therefore faculty did not view their role as preparing students to be future professionals the particular field of study. Perhaps teachable moments in specialized upper division and graduate courses would yield different decision-making elements related to disciplinary specializations. Furthermore, research concerning Schon’s theories and teachable moments can be helpful in learning how different professors learn the pedagogical reflection demonstrated by my participants. In the implications for practice I propose faculty development programs that can enhance awareness of the elements involved in making decisions in class. Additional research as to how reflection-in-action plays our pedagogically in different teaching fields can enhance that understanding.

_Ladder of Interaction_

Since this study has a retrospective interview design it is difficult to capture the details of the decision-making processes as it relates to what Schon (1987) calls the “ladder of reflection”. It is difficult to tease out the specific rungs on Schon’s ladder in my interview data. This may be in part because of the study’s design and in part because many of the teachable moments described in these interviews are less skill oriented and more broadly conceptual and, therefore, do not involve explicit directions for and practice of a skill like architectural design. Rather they involve complex, abstract thinking about issues like race, gender, religion, ethics or history the modeling of which is more abstract and less continuous within a class period.
**Relationship to Other Reflection Literature**

Question Three specifically addressed the issue of the theory of reflection-in-action. In analyzing the interviews, and organizing the data, however, I identified connections to other writing about issues of reflective practice and faculty decision-making.

*How faculty conceptualize goals.* In their article, “Strategic alertness and expanded awareness within sophisticated conceptions of teaching,” Entwistle and Walker (2000) outline what they call a “nested hierarchy” of conceptualizations of good teaching. Based in part on a review of the literature and in part on the journaling of a physics professor about his teaching, this sequence parallels in some ways some of the theories that outline students’ conceptualizations of learning, such as Perry’s (1968) theory of intellectual development. According to Entwistle and Walker, faculty conceptualizations of teaching and the goals of teaching develop over time. The initial stage in their theory is what they call “organizing and conveying testable knowledge.” This involves presenting material, and assessing students’ comprehension of it. After working on this level, professors develop insights into the content that they may not have had before and begin to “promote understanding” which entails helping students see the relevance of the course content to what they call the real world. The third level the authors describe involves an awareness of the real conceptual challenges and epistemological nature of their field. Once that awareness develops, teaching methods change and professors try to encourage student reflection and turn lectures into conversations. Finally, professors develop an awareness of the “transformative nature of learning” by making personal connections to the material and to the process of learning and encouraging students to do
the same. They warn that students may be uncomfortable with student-focused, and
learning-centered classes so the authors suggest that professors need to keep in mind
more than one focus at a time to allow students to operate at the level of their intentions
and take from the class what they need to. Entwistle and Walker suggest that faculty experience

A change in the general approach to teaching which stemmed from the expanded awareness. The focus of attention had changed from the content and its logical coherence (which was then taken for granted) to ways of involving the student more actively in the some of the ‘big ideas’ of the discipline. Looking for such opportunities led to what we might call a strategic alertness, capitalizing on chance events in the classroom to create springboards to significant learning. (2000, p. 357)

In this quote, what Entwistle and Walker (2000) call chance events, I would call teachable moments. The strategic alertness they describe is the picking up of cues, gauging interest and decision-making described by my participants, which allows professors to “capitalize” on them.

Looking at Entwistle and Walker’s (2000) description of the development of goals, we see some parallels to the goal relevance professors described in my data. My participants, for the most part, do not describe themselves going through the stages outlined here, though some do talk about starting out needing to be prepared and needing to stick to their lectures, only to later become more flexible and aware of options so they could respond to classroom events. They also describe choosing to pursue different kinds of moments that would yield different kinds of learning. Moments could be directly
related to class, but could also demonstrate the relevance of their disciplines or broader academic and learning skills.

Entwistle and Walker’s (2000) research focused on physics instruction, and it was more focused on the specific concepts, values and applications of that particular field, while my participants responded in more general terms. They spoke of the goals more often as being either content-specific or broadly academic, but they were less focused on in-depth appreciation of their fields, speaking instead of “a few broad goals” or a “constellation of things.” We can see, however, that their responses to those student inquiries that are more discipline-focused were often pursued outside of class and led to individual student projects, presentations or conversations. This then, is one manifestation of the adjustment the authors call for in order to accommodate different learning expectations and needs of students. Not everyone in a class may be interested in a spontaneous moment; if they are and it is relevant, fine. But the professor sees the value in more moments than the class might and makes decisions to help students who are interested without penalizing those who are not. They are using what the authors called “strategic alertness.”

Proposed corridor of tolerance. In their work Building a meta-cognitive model of reflection, McAlpine, Weston, Beauchamp, Wiseman and Beauchamp (1999) study the reflection-in-action and the reflection-on-action of experienced mathematics professors. They examine the instructors’ decisions to make changes in their instruction, during class or upon further reflection. In their analysis of professors’ decisions to make changes and adjustments to their teaching, the authors of this study found that over two thirds of the
teachers’ decisions to make changes and the changes themselves are made within the
class session. The decision to pursue a teachable moment is an example of that in-class
change. The authors cite this as evidence of reflection-in-action as professional practice.
McAlpine et al speculate about a “corridor of tolerance” which defines the range of
comfort with how a class is progressing. If the feedback from students suggests that the
class is progressing well, the professors are less likely to make adjustments than they are
if they are receiving signals from the class that a change is needed. The corridor defines
how strong those signals have to be before they necessitate change. The authors go on to
propose that professors make a decision to change more often when the cues they observe
are negative or neutral. In my data, however, the signals may be different. Students may
be making comments or asking questions that open the door to digressions. At this point
professors are looking for such positive signs of engagement as smiling, nodding, or
talking as they decide what to do.

The difference between my data and that in McAlpine et al (1999) seems related
to the nature of the disciplines being studied. In math classes, where surprise questions
and connections may be unlikely and the plans for the class are highly sequenced,
students looking frustrated or disengaged would trigger change, but students
demonstrating comprehension and engagement would be signaling that the class was
progressing and that the professor should continue on. In social science and humanities
classes the opportunities for unanticipated connections and their expression may be
greater, so signs of positive reactions may signal the value of digression as much as
continuation. Negative responses to surprises, disengagement, or eye-rolling for
example, might prompt the professor to minimize the changes made during class. In terms of the corridor of tolerance, then, professors do read cues and make decisions about change, but the limits of the corridor and the flexibility of its walls may vary by subject as well as by professor preference.

*Analysis of MBA professors’ reflective practice.* Wagenheim (2005) conducted a study of the use of reflective practice by experienced professors in MBA classes. Using video stimulated recall, he interviewed faculty about what they perceived as “critical incidents” in their classes. These incidents might have been questions, difficulties or comments that required them to make decisions about how to proceed. His study was different from this dissertation in that he had the video, that the classes were all in MBA programs and the interviewer was asking explicitly about reflection-in-action, while I was inferring it from the descriptions. Wagenheim suggests that faculty view their reflection in action as falling within any of several frames. One theme in these descriptions that corresponds to my data concerns the limitations placed on classes by the clock, the calendar and the realities of working in specific program. Another set of descriptions he calls “epistemology in action” which includes gauging student interest and skills, just as participants in this study describe those elements as a part of the decision-making process. He also described reflection in action leading to either “new directions” when questions or problems necessitate a re-working on-the-spot in order for students to accomplish what is expected; and “new learning outcomes” when professors saw opportunities to pursue goals they may not previously have had in mind. The data in the teachable moment research reflects many of the same types of reasoning and even uses
some of the same descriptions. While our analyses may be of different disciplines and may name themes differently, there is a marked overlap in responses that helps to confirm the data and interpretation of this qualitative study.

Implications for Teaching Practice

This study has several implications for the practice of college teaching. The participants in this study reveal valuable insights into what can constitute a teachable moment, how to create a classroom environment where they are likely to emerge, how to plan for and manage a set of goals for maximum flexibility. The faculty quoted here are able to frame a wide variety of moments as being teachable and as being goal-relevant. As a result, we can expand our understanding of the dynamics of the moment and of the possibility of participating in them.

Conclusions

In some sense the teachable moment can be seen an illustration of active learning in practice. According to the definition arrived at in the data, a teachable moment is characterized by heightened engagement and interaction about the topic at hand. It may be an experience shared by a large percentage of the class or by a few students, and it may be sustained within the time frame of the class or it may be re-visited outside of class, but students are engaged and interacting about ideas. The goal of active learning is to achieve just this combination of elements.

Bonwell and Eison (1991) describe active learning as involving students doing “more than listening”. The focus of the class time is not so much on the transmission of information as it is on “higher order thinking” “engagement” and student “exploration of
own values”. Many of the quotes in my data indicate that these professors are interested in moving off center stage. Those in large classes worry about being able to generate sufficient engagement and creating an atmosphere where students are comfortable speaking and discussing difficult ideas. Even those who lecture and use Power Point want give and take with their classes. Some of the most challenging moments involve discussion on ethical issues and require students to use or develop critical thinking and argumentative skills. When a student makes a comment or asks a question that reveals to the professor a potential teachable moment, students are often challenged to think in new ways. The participants in this study talk about re-framing or broadening comments to engage more of the class.

As Bonwell and Eison (1991) point out, this kind of participation occurs when students perceive the classroom is a safe place to explore ideas and students and professors share an understanding of the value of the experience. Attempts to design active learning experiences fall at the more predictable end of the continuum, but unforeseen moments can lead to active learning opportunities if the professor is ready to let them play out.

The same obstacles that limit faculty use of active learning in general, according to Bonwell and Eison (1991), apply to the pursuit of teachable moments. In order to foster active learning there is risk for faculty in giving up control and allowing more student input into the class, in admitting they do not know something students are interested in and in allowing discussion of difficult or controversial topics.
The problems and benefits of active learning continue to be topics of discussion and are addressed with each new generation of students and professors. This means that even as professors become more comfortable and conversant in dealing with surprise, new groups of students and professors must be introduced to the values and processes of the academy in general and active learning in particular. Surprise moments, as some participants say, “keep things fresh,” for the professors, who also need to remember that this is all fresh for the students. This brings us to another implication of this study—students need to see and have trust in the value of what the professor decides to do, and not all will come to this understanding at the same time.

Setting a Classroom Environment

The interviews revealed a great deal of concern with creating and maintaining a classroom environment that is open and accepting. The faculty in this study spoke of getting students comfortable to talk in a large group, of openly valuing student participation, even in controversial forms, if it could forward the interests of learning. This meant managing one’s own personal responses in order to foster the skill of academic argument and exchange in the marketplace of ideas. At the time of the interviews, and even today, political rhetoric in the media can be strident, and the internet allows people to filter news to fit their pre-existing politics and values. It is easier to escape systematic examination of ideas of ideas and beliefs. The college classroom is one of the few remaining places where the examination and exchange of perspectives is still a value. Some of my data suggests that students may resist this, but it also suggests that if given a framework and a safe place in which to try, many do want participate in

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this exchange. Professors then need to create the space and model the processes repeatedly so students can catch on. One person reports that students are “grateful for the opportunity, for a framework” for discussing religion. In her book *Teaching to Transgress*, bell hooks (1994) makes the distinction between classes as safe places to explore ideas and as comfortable places. Safety still allows for challenge, but challenge may not always be comfortable. My participants also made that distinction, acknowledging that it is not always the positive or comfortable moment that yields the most learning, but it needs to be a safe moment. When a topic challenges long-held beliefs or values, one participant encourages students to “take what they can” but if it is too difficult to step away, but not “throw the baby out with the bath.” Here again, we have the recognition that not all students are going to participate equally in every opportunity, but that does not make it less of an opportunity for others.

Even the smallest acts can be framed as contributing to a constructive environment. Mispronouncing a name, encouraging students to talk to the person next to them, or quickly googling the answer to a question, take on meaning when viewed as ways of constructing a context where teachable moments can flourish. Putting together small groups creates bonds that help fight the anonymity of large classes. Then there are more overt behaviors like using events from the media or the news that students would care about, creating covenants or deliberately taking a different side to expose more aspects of a topic. Many of the professors in this study make continuous adjustments to maintain an atmosphere of openness and flexibility that contributes to the emergence of teachable moments. Every interaction lays the context for the next.
Students go through stages of intellectual development. There are several prominent theories that explain students’ cognitive development in terms of changing from expectations that someone in authority will teach them the right information to a recognition that knowledge may be constructed based on a combination of evidence and personal standpoint. These theories vary in their descriptions of the stages but all encompass a range of movement away from external authority as students move through higher education (see Belenky, Clinchy, Goldberger and Tarule, 1986, Kitchener and King, 1994, Perry, 1968). The faculty in this study who commented on students unwillingness to discuss something from an ethical perspective, who leave a class when the professor works on process rather than content, or who do not assume responsibility for their own learning are talking about students who are in the earlier stages of cognitive development. Students at this stage may not accept that a professor does not know an answer, that another student may have a valuable contribution to make, or that an experience that is not on the test might still have value to their education. Research on cognitive development, however, suggests that people progress in their intellectual development when exposed to experiences just beyond where they currently are. This speaks to faculty trying to pursue new moments and expose students to new processes so that they may practice them and eventually master them. Unfortunately, the students who need this the most will be the students who value it the least, placing professors in a quandary. Thus the difficult surprise moments are at the same time more difficult and more necessary to pursue. Some professors choose not to engage in such moments out of...

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a concern for their evaluations or for the time it takes to achieve incremental developmental growth.

If faculty resist the kind of digression presented by some teachable moments then the opportunities for students to develop these incremental skills are more limited than they might be otherwise. Faculty who pursue moments despite feeling like they cannot accomplish the goal themselves report having faith that the growth will happen eventually, perhaps even when students are in another class. Perhaps if faculty discussed these long-term developmental benefits within and between departments there would be a stronger sense of both the probability of accomplishing them and value of individual professor’s fostering them in class. The message of the value of the moment and the skills involved can be more strongly conveyed. Increased communication about these values could also increase confidence in the accomplishment over time.

*Evaluations and Rewards*

Unfortunately the evaluation systems for faculty do not incorporate this long term view. Many participants commented that student evaluations are a major personal concern and that what faculty reward systems there are at this institution do not seem to recognize the kinds of risks professors might take in exploring uncharted opportunities. Professors are concerned about student evaluations which are influenced by students’ perceptions of the management of the class. Professors worry that pursuing too many apparent digressions, dealing with emotional topics, fostering student participation over professor-centered lecture or allowing some students to dominate class time will lead to unsatisfactory evaluations. Several participants commented on the difficulty of pursuing
unexpected teachable moments when too many students are unready or unwilling to engage in discussions of difficult or controversial material. For example, students did not want to discuss Hiroshima from an ethical perspective. Many participants talk of students wanting to focus on the material that they believe will be tested or will help them accomplish short term goals or get the right grades. Skills like critical thinking and academic argument develop incrementally and are more difficult to assess, especially on the kinds of tests necessarily given in large classes. Professors want students to develop these skills but are not sure about how to do so in such a way that students see the value and concur on their importance. Without students’ concurrence long term goals may slip by the wayside out of concern over teaching evaluations, student satisfaction and easier assessment. Professors, therefore, need to be explicit about the value of what might otherwise just be seen as a digression. Some do this when they try to broaden or reframe a moment to engage other students, when they tell students it is okay to have more questions than answers, or when they admit they do not know something but it is worth finding out. Being explicit about the goals and values they have and how what they are doing fits in that framework can help maximize the impact of teachable moments without having them seem like random digressions.

In the absence of short term rewards and evaluations, the people I spoke with allude to a “fall back” and even “sustaining” belief that some learning continues after the class is over, and that student may not realize the value of what they have done until much later. So, the rewards the faculty reap may be in the form of evaluations, but may also be much more delayed and intangible. One of the problems that is highlighted in
this study then is how to sustain professors’ confidence in the value of the teachable moments in the face of immediate resistance or risk.

Faculty Development

One strategy to reinforce faculty confidence is to increase the number of conversations faculty have about teaching in general and managing risks in particular. More conversations within departments might distribute the responsibility for developing students’ academic skills more evenly across the course load. Skills like critical thinking, formulating arguments, carrying on discussions and evaluating evidence are not the topic of isolated classes, rather they cut across the curriculum and should be the responsibility of everyone. If faculty agree on the need for certain skills and some broad definition of them, then perhaps more will share the responsibility for their development, so when new professors and teaching assistants join their ranks, part of the acculturation of new faculty will include the value of engaging students in these long-term skills. The professors in this study rarely talked about a sense that their colleagues shared concerns for these skills. I cannot determine from my data whether they sense an absence of shared concern or an absence of conversation about shared concerns, but from personal experience teaching I believe there is a combination of the two issues. Professors might be more likely to risk teachable moments that require and foster long-term academic skill development if they are aware of how broad the goals are shared in their departments and in the university. Faculty development opportunities are one way to enhance the communication among concerned faculty and to enhance the ability to recognize and capitalize on teachable moments when they occur.
The fact that the professors in this study expressed a deliberate use of teaching strategies despite their primary academic training having been in a field of study other than teaching speaks to efforts to help faculty and graduate teaching assistants think about their teaching. Some of my participants have worked with the Center for Teaching Enhancement, both as participants and as faculty facilitators. Several are also involved in the training of the graduate teaching assistants in their departments. Some spoke explicitly of selecting teaching assistants who were skilled at engaging their students. Having opportunities for graduate assistants and new faculty to learn about teaching as a compliment to their disciplinary training seems to be an important step toward incorporating more deliberate conversations about handling difficult and unplanned moments in college classrooms, which can then have a positive impact on teachers’ decision-making in response to teachable moments by allowing them to think beyond the limits of class meeting specific content.

This study suggests that the teachable moment could be the central concept in a comprehensive program of faculty development sessions and training sessions for graduate teaching assistants. The descriptions and definitions of teachable moments reveal that faculty learn to frame a wide variety of moments as exceptional teaching opportunities. Some of those frames have emerged from experience, some people pursue them more easily than others, but it is probable that faculty and teaching assistants can, with exposure to the concept of teachable moments, learn to frame more moments in their classes as teachable.
I propose a sequence of faculty development programs to be offered over a semester or more, titled “Planning for Surprises” that begins with self assessment about teaching style preferences and their implications, (e.g. Myers, McCaulley, Quenk, & Hammer, 1998; Pratt and Collins, 2001) connecting that to fundamental active learning principles. Since active learning covers a range of strategies, faculty can initially learn to generate teachable moments (calculated and foreseeable) within their “comfort zones,” as one of my participants suggested. Subsequent faculty development sessions would address goal setting conceptualizations. Participants would explore their own conceptualizations of their courses (. Entwistle and Walker, 2000) and connect these to their understanding of their teaching preferences. In order for faculty to learn how to communicate those goals so students understand them as well, a workshop can also introduce an instrument such as Stark, Lowther, Shaw and Sossen’s (1991) Student Goals Exploration. There are two versions of the survey, one for students and one for professors. The intent is to provide a common language to talk about the goals of the course form both perspectives, so that the students and the professors are aware of potential conflicts and can examine them before the conflict can impede the pursuit of the goal. Having this kind of discussion at the outset of a course, and revisiting it periodically can expand both the professors’ and the students’ awareness of potential learning throughout a course. Along with an understanding of their own learning preferences and intentions, participants in the development opportunity would learn about some of the developmental theories that outline college student cognitive developmental theories as they relate to professors’ classroom expectations.
This understanding would then be incorporated into training on classroom climate, with an emphasis on encouraging constructive student participation. Videos of teachable moments in various forms and professors who learned to pursue them could be incorporated into later sessions that address managing large or small group discussions and provide concrete assistance in how to discuss difficult or controversial topics in the spirit of the marketplace of ideas. As the series of sessions progresses, participants should be encouraged to talk about moments that they encounter and perhaps to build a discussion group around teaching. The participants can then use this training in working with departmental teaching assistants. Such a sequence would require commitment on the part of the faculty members involved, and should be designed with the understanding that the comfort with spontaneity may develop at different rates for different people, but exposure to multiple opportunities and perspectives can help to expand professors’ comfort zone.

*Use of Technology*

When we look at the comments participants make about using technology, Power Point, clickers and the internet emerge as factors that either foster or impede the emergence and pursuit of teachable moments depending on how they are viewed. In large classes, clickers can provide a means of generating interaction and engagement as one professor reports having students talk about their answers before clicking in and another reports being able to do mini-polls of students in the class thereby generating data from the students that they can discuss and use to analyze course concepts, generating personal connections to the material. In the data about generating moments, professors
report being concerned that Power Point may be too passive if it is done poorly. But if it is done correctly, Power Point allows enhanced engagement by allowing professors to easily combine transmission of information with multi-media materials. The trick some explained is to give students some of the Power Point, but to include surprises, other media, and chances to interact in class.

In discussing their concerns with the use of class time, however, several participants comment that the number of Power Point slides is a primary indication of how much is left to cover. They feel pressure if there are too many slides left or if they have not explained everything on a slide. The number of Power Point slides has come to represent the pace and scope of a class, reinforcing what one calls “tyranny of the content” over time. One suggestion is to build active learning moments, questions, clicker activities or discussion topics into the slideshows, so the interactive moments become a part of the technological content.

On the other hand, in the decision-making process many people report being able to follow up on questions and moments more readily because easy access to the internet streamlined the research process. The ease of looking things up on the internet makes it less onerous for students to follow up on teachable moments, or makes it easier for professors to do so. Some even comment on the students already looking things up on wireless connections during class. Whether students or professors do the research, learning systems like Blackboard are mentioned as facilitating the dissemination of the new information to the class, even at “2:00 a.m.,” as one person described. Related to this, another person talked about being able to put up a “Books We Mentioned” section,
so students could pursue the lines that they were interested. So, in that sense technology allows the professor to follow up on what might have been an individual teachable moment, making materials available to those who wish to take advantage of them.

Technology extends the ability to work with the differing needs and interests of the class. Within traditional classes, technology seems to be most effectively used as one of many tools, expanding opportunities or limiting them depending on how it is used and how it is perceived. Having “smart rooms” equipped with computers, projectors and wireless internet has put multi-media and research capabilities at the disposal of more faculty and students. What used to be time-consuming research can now be done on-the-spot. This is useful but it can also lead to what one participant worried about—confusing engagement with learning. As technology is more and more integrated into the classroom it can be used to pursue unexpected lines of inquiry more quickly, but professors need to balance the potential “wow” effect of multi-media classrooms against the possibility of student passivity and expectations for entertainment.

Technology can generate involvement in the entertainment aspects of a moment, but for the moment to be called a teachable moment, the professor has to do more to insure interaction and not simply let the electronics take over. Technology that allows both engagement and interaction will allow more moments to emerge and will allow them to have more of an impact.

On-line classes have the potential to yield different kinds of moments. While the synchronous nature of the in-class moment and its related decision-making may be less of an issue in an on-line class, time constraints can play out very differently. Since class sessions are not limited to 50 minute or three hour segments, but can be conducted asynchronously, a professor can interact with one or a few students without having the others sit by wondering when the rest of the planned material will be covered. With on-line classes, or components like chat, professors and students can engage in detailed interactions about a subject of interest without
concern about losing the interest and cooperation of the entire class. Students can join in on their own time, and others can watch or disengage without feeling deprived of other content and without sending non-verbal signals that discourage interaction. The recognition of on-line teachable moments might be based on different signals. The on-line teachable moment has been written about very little and is a possible topic for future research.

Suggestions for Further Research

There are several implications for future research that stem from my data and reflections on my research method. The method of collecting data, the timing of the interviews, the retrospective nature of the study, and the selection of participants and disciplines could all be varied to yield a more detailed and perhaps more context specific definitions of teachable moments and professors’ decisions to pursue them.

Flexibility and Teaching Style Preferences

In the interviews about teachable moments several of the participants spoke about enjoying the improvisational nature of teaching, or teaching by digression or by tangent and of planning in order to be flexible. Not all of the faculty in this study reported comparable comfort with the potential tangential nature of teachable moments, even while admitting the value of pursuing teachable moments some admitted it is hard to give up control, or to let the students influence the direction of the class. Just as we recognize students have different preferred learning styles, there is literature concerning preferred teaching styles as well. A potential line of research then would be to look at professors’ preferred teaching styles via an instrument like the Teaching Perspectives Inventory (Pratt & Collins, 2002), or the Myers-Briggs Type Indicator (Myers, McCauley, Quenk, & Hammer, 1998), and explore how these preferences might impact the recognition and
pursuit of different types of teachable moment. If professors can learn to understand their teaching style preferences and develop strategies to work initially within their comfort zones while responding to teachable moments perhaps their ability to capitalize on the opportunities provided by teachable moments.

Method

Since my method was retrospective in nature faculty had to re-construct from memory and frame their experiences in hindsight. Our conversations and my questions prompted their selection of events to discuss. As a result, the data is highly retrospective and subject to even more retrospective sensemaking than might be the case if the research involved direct observations and video-stimulated recall of critical incidents (Gass and Mackey, 2000). With direct observations and video more of the verbal and non-verbal details of spontaneous interactions could be included. Being able to focus on identified moments, watch them play out, and having participants be able to watch them again could enhance the descriptions of moments and of faculty’s decision-making processes. This research would involve the researcher and the professor agreeing on particular moments to analyze with more detailed and targeted interviewing concerning those agreed upon video recorded moments. The method would necessarily take more time, since it would target surprise moments, making it necessary to video record classes extensively in order to capture surprises when they occur. The benefits of doing so would be capture moments to stimulate recall and perhaps to share with other faculty who are learning to recognize and pursue teachable moments. Even if someone conducted
similar, two-part active interviews, the data in different settings might yield different context-specific dimensions to teachable moments.

Level of Courses.

My research was focused on faculty teaching undergraduate level students, many of whom will not be majors in or practitioners of the disciplines being taught. Those instructors teaching general education classes work with students who may never take another course in their field. In my interviews professors spoke of moments and their decision to engage in them largely in terms of teaching issues such as time, academic skills or concepts, rather than addressing skills specific to the practice of a discipline. Is it possible that graduate classes or even upper division major classes, might yield insights as to how professors consciously model their discipline when they believe their students will be practicing it or at least have the experience of previous courses to build upon.

Disciplines Involved.

This study was limited to people teaching in the social sciences and humanities. These types of courses address social concepts that yield connections and questions fairly easily within the confines disciplines. Race, gender, class, and current events emerge and connect to the content of these courses without requiring complete digression from their stated course objectives. This allows more teachable moments to emerge naturally at the least foreseeable end of the predictability spectrum. In my pilot study, I did speak with professors in math and the physical sciences who reported that teachable moments in general had to relate more directly to course content, particularly in the sequential classes where one day’s class laid the foundation for the next. A study of the emergence and
pursuit of teachable moments within the confines of sequential science, math or engineering courses might yield a very different description of the teachable moment and a different decision-making process altogether.

*Size of Classes and Institutions*

I conducted this study at a large research university where class sizes can range from under 12 to over 300. My participants taught classes of undergraduates that ranged from 16 to 400. While they reported that it was helpful to know their students and their concerns, they acknowledged that this was not always possible. Research that examines teachable moments in smaller vs. larger classes or in smaller institutions more focused on the liberal arts may suggest additional elements of the moment. In smaller settings, professors may know more about their students and be better able to help generate personal connections. In liberal arts focused institutions, especially where general education is a primary concern, the thread of values may be different. The broad academic goals of participation, discussion and critical thinking, may be more central institutional concerns so pursuing them may be less of a risk. Doing studies in different academic settings to see if there are elements of the context that facilitate or impede the emergence and pursuit of teachable moments can enhance our understanding of them.

*Experience of Participants.*

The faculty members in this study had at least six years of college teaching experience, not counting teaching assistantships in graduate school. I did not analyze the data for variations in the definitions or decisions of participants based on level of experience. Another possible research study could examine the perceptions of professors
at different stages of their careers to see if there is a development sequence of conceptualization what is a teachable moment.

Tenure and Evaluations.

Most, but not all of my participants had tenure at the time of the interview. I did not observe major differences between those who had tenure and those who did not. The issue of tenure was not raised in the interviews. Everyone who spoke about student evaluations as a concern was tenured, while both tenured and untenured spoke of getting feedback about their teaching. A study examining the pressures on untenured faculty, especially in terms of their pursuing more abstract instructional goals and exploring spontaneous and controversial classroom moments might yield insights into impediments to their pursuit and possible rewards. Furthermore, since tenured faculty expressed concern about the content of student evaluations of instruction, contrary to stereotype of tenured professors just proceeding in old habits without considering student input, it would be interesting to learn more about how faculty use student feedback to influence subsequent teaching, what the relationship is between student evaluations of instruction and reflexivity in class, and whether faculty concern stems from institutional practices of individual approaches to teaching.

Timing of the Research

In designing my study I planned to interview participants twice when possible. The assumption was that the initial interview would probably be shorter but would lay the ground work for a second more detailed conversation once the participants had had the opportunity to reflect on the initial conversation and use that insight to increase their
awareness of teachable moments in their classes. This design, however, did not allow for variations in the energy level that occur in the course of a semester. Most of my initial interviews were longer than the follow-ups. Many faculty were more pressed for time when I tried to schedule second appointments, but were still willing to meet with me. Participants did not report being aware of many more moments than in the first interviews, though most did have ideas to add or more details about the moments they described originally. There were however low energy points in the course of the semester that seemed to affect what participants reported, times when moments were passed over or when students did not pick up on what they were trying to do. As exams neared, there was more concern for content and for getting to end of the material. Perhaps it is natural that people would be more willing to digress when they see more time ahead of them to catch up. As the semester nears its end professors and students are concerned about accomplishing everything laid out in the syllabus. A research design that somehow accommodates these rhythms might yield different insights. Perhaps interviews prior to the start of the semester and again before midterm, or interviews and observations over more than one semester would give us a different picture of the role of teachable moments.

Conclusion

The participants in my study contributed significantly to the understanding of teachable moments in college classrooms. As with any exploration of a complex idea, each point that was clarified opened the door to new questions and new possible explorations, some of which are outlined above. The dimensions of teachable moments
and the decision to pursue them reveals a great deal about teaching, its processes, its values, its goals and its requirements.

From the interviews I have built a description of many kinds of teachable moments, calculated and surprising, significant and small, simple and complex, rewarding and discouraging, and easy and challenging. They all have in common a topic of interest, interaction, and engagement that give the professor a sense that the learning potential of the moment is somehow enhanced. Using the descriptions provided here, I hope more people will learn to recognize teachable moments and the opportunities they provide. This is only the first step, however. While some of these moments are easy to incorporate into a class, others require complex and deliberate decision making.

By examining the elements participants considered when deciding whether to pursue unplanned teachable moments, we see a complex set of interacting elements. For a new, or even an experienced professor, juggling all of these concerns can be overwhelming, especially if one is standing in front of a classroom of students while weighing them. In looking at the elements of the decision, we see reflected many of the dilemmas of classroom management encountered by faculty—balancing the need for coverage of material with opportunities to pursue new ideas, setting a range of goals for the class and the course, managing classroom discussions so they remain constructive, encouraging participation but not over-participation, demonstrating disciplinary relevance, meeting students’ expectations for instruction and demonstrating currency in the field. The more comfortable professors are with these elements, and the more they feel able to weigh and manage them, the more likely they are to pursue a moment. In
addition to clarifying what to look for in teachable moments, I hope this study also helps professors think about what they want to have happen in their classes. Opportunities to think and talk about teachable moments and the elements of the decision outside of class should allow professors to feel more ready once they are in class and facing a decision.

Even in a large research-oriented university, full time experienced faculty are engaged in teaching undergraduate students. Participants in this study expressed an appreciation for the opportunity to talk about teaching and regretted not having more opportunities to do so. Several of my participants had, over the years, worked with the Center for Teaching Enhancement, and several also were involved in the training of the teaching assistants for their departments. We need to continue to have conversations about teaching, its goals, trials and opportunities, in order to foster this involvement. Too often the emphasis of the institution and its reward system is research-focused, but the data in this study suggest that there are still people who are highly committed to undergraduate teaching as well as their research agendas. Teachable moments can be fostered when professors know how to frame them as opportunities and when professors and students feel like the opportunities and rewards will outweigh the risks and the costs. Whether we call them teachable moments, learnable moments, learning moments or something else, I hope that this study can contribute to the conversation and help new professors and teachers recognize and have the confidence to pursue such moments.
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APPENDICES
Informed Consent to Participate in Research

Information to Consider Before Taking Part in this Research Study

Researchers at the University of South Florida (USF) study many topics. To do this, we need the help of people who agree to take part in a research study. This form tells you about this research study.

We are asking you to take part in a research study that is called:
An Exploration of the Teachable Moment

The person who is in charge of this research study is Nancy F. Mills

The research will be done at the University of South Florida, Tampa campus.

Purpose of the study:

The purpose of the study is to explore the meaning of the concept “teachable moment”. This project is being done as research for a dissertation for a Ph.D. in College Teaching. The objective is to develop a description of "teachable moments" and the conditions which facilitate or impede their incorporation into teaching. This study can benefit college teaching if it begins to help us capitalize on the teachable moment and make the classroom experience more meaningful. If we tend to notice that which we look for, and my research can help faculty know what to look for, perhaps we can improve our capability to fully take advantage of the moments that do arise. You have been invited to participate in this study because of your experience and expertise in teaching undergraduates in your field of expertise.

Study Procedures

If you take part in this study, you will be asked to participate in two interviews over the fall semester, totaling 1.5 to 2 hours. The first interview, approximately forty five minutes long, is intended to discuss in general your experiences and thoughts about teachable moments in the undergraduate college classroom. After the midpoint in the semester I will contact you to schedule a second interview in which we will talk in more detail about your perceptions of teachable moments and any more recent experiences you may have had. This interview may be about 45 minutes to an hour in length. The
Appendix A. (Continued)

interviews are scheduled at your convenience, in a location of your choice. For accuracy
interviews will be digitally recorded and transcribed.

Alternatives
You have the alternative to choose not to participate in this research study.

Benefits
The potential benefits to you are the opportunity to further explore a phenomenon in
college teaching and develop even more strategies for meaningful classroom interactions.
When the study is complete I will be glad to share the results with you, providing the
possibility of sharing ideas with other experts on a subject you may not have had other
opportunities to explore.

Risks or Discomfort
There are no known risks to those who take part in this study.

Compensation
We will not pay you for the time you volunteer while being in this study.

Confidentiality
We must keep your study records confidential. Recordings and transcriptions will
be electronically stored under password. All identifying information will be
removed and stored separately. Once the dissertation is complete and approved
and the results disseminated, the materials will be deleted or shredded.
Transcripts of recordings may be shared with dissertation advisors to ensure
appropriate coding of responses, but identifying information will be removed.
However, certain people may need to see your study records. By law, anyone
who looks at your records must keep them completely confidential. The only
people who will be allowed to see these records are:

- The research team, including the Principal Investigator, study coordinator,
  research nurses, and all other research staff.
- Certain government and university people who need to know more about
  the study. For example, individuals who provide oversight on this study
  may need to look at your records. This is done to make sure that we are
doing the study in the right way. They also need to make sure that we are
protecting your rights and your safety.) These include:
  - the University of South Florida Institutional Review Board (IRB) and
    the staff that work for the IRB. Other individuals who work for USF
    that provide other kinds of oversight may also need to look at your
    records.
Appendix A. (Continued)

We may publish what we learn from this study. If we do, we will not let anyone know your name. We will not publish anything else that would let people know who you are.

Voluntary Participation / Withdrawal
You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study, to please the investigator or the research staff. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

Questions, concerns, or complaints
If you have any questions, concerns or complaints about this study, call Nancy F. Mills at 974-0580 or 994-7506.

If you have questions about your rights, general questions, complaints, or issues as a person taking part in this study, call the Division of Research Integrity and Compliance of the University of South Florida at (813) 974-9343.

If you experience an adverse event or unanticipated problem call Nancy F. Mills at 974-0580 or 994-7506.

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
Appendix A. (Continued)

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 taking drugs that may cloud their judgment or make it hard to understand what is being explained and can, therefore, give informed consent.

________________________________________________________________________  

Signature of Person Obtaining Informed Consent   Date

Printed Name of Person Obtaining Informed Consent
Appendix B

Interview Protocol 1

An exploration of the teachable moment

1. Describe your idea of a teachable moment? Do you have an example?
   Possible follow up questions: When does one occur? How do you recognize teachable moments? Does the teachable moment necessarily fall within your instructional plans? Curriculum? Discipline?

2. What is the source of a teachable moment?
   Possible follow up: Do you intentionally set out to create teachable moments? Are they student generated only?

3. How do you decide whether or not to pursue a teachable moment?
   Possible follow up: If one student asks a question, how do you determine if this is a teachable moment for the entire class? What might limit or prevent your pursuit of a teachable moment?

4. How often do you think teachable moments occur in your classes?
Appendix C

Proposed Interview Protocol 2

An exploration of the teachable moment

1. Would you like me to recap some of what we discussed at our first interview?
   Possible follow up: I would like to make sure I understood what you meant last time when you said…

2. Have you had any new experiences in your classroom this semester that relate to teachable moments? Would you describe them for me?
   Possible follow up: How did you decide to follow (or not follow) up on this? Tell me about how you think that went?

3. Please tell me about any additional ideas you have had about teachable moments since our last conversation.

4. Have you been aware of changes in your thinking about such moments since our last conversation? If so, please tell me about them.

5. One theme that has emerged from the first interviews has to do with having to say you don’t know. Do you have any thoughts on if and how you go about doing that?
ABOUT THE AUTHOR

Nancy Mills has an A.B. from Centre College and a Master’s Degree in Reading and Language from Boston University. She has taught college reading and study skills in community colleges and in four-year institutions since the mid 1980s and is currently teaching in the Department of Academic Support at St. Cloud State University. Over the years, conversations with colleagues about teaching and learning have sustained her interest the dynamics of college classrooms. Her courses of study, in higher education and in communication dovetailed with this interest and led to this study.

This study is the result of that combination of interests and experience. She hopes that these interviews with college faculty will open many new conversations about teachable moments, college teaching and the social interactions they entail, and that this will, in turn, shed some light on teachable moments, and on ways to maximize their impact in college classes.