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Utilizing contextualized reading in career and technical education to enhance reading skills

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Utilizing Contextualized Reading in Career and Technical Education to

Enhance Reading Skills

by

Alan Duane Darr

A thesis submitted in partial fulfillment of the requirements for the degree of Education Specialist Department of Educational Leadership College of Education University of South Florida

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This research is dedicated to a group of instructors that brought their educational expertise, experience and caring to help me develop a new appreciation for learning. This learning and a belief in myself that has been substantiated in my learning through these very wonderful professors I have encountered. I have long believed all students can and will learn but only if their particular learning styles were addressed. An effort to understand those styles was made to help me understand and facilitate a more productive learning environment. Thus my development of my constructivist behaviors and learning was made aware to myself.

A special thank you to Major Professor, Arthur Shapiro, Ph.D. for his efforts and support during my degree work. Dr. Shapiro and his wife Sue helped me to further understand my educational philosophy.
# Table of Contents

Abstract ......................................................................................................................................................... iii  
Preface .......................................................................................................................................................... v  
CHAPTER ONE: SCHOOL REFORM IN AMERICA .................................................................................. 1  
   UNITED STATES REFORM .................................................................................................................. 1  
   FLORIDA REFORM .............................................................................................................................. 4  
CHAPTER TWO: THE NEED TO IMPROVE HIGH SCHOOLS IN AMERICA .................. 6  
CHAPTER THREE: IMPROVING READING ...................................................................................... 8  
CHAPTER FOUR: CTE’S ROLE IN SCHOOL REFORM ........................................................................ 11  
   HISTORY OF CAREER AND TECHNICAL EDUCATION .................................................................. 11  
   CTE ADDRESSES THE DROPOUT STUDENT ............................................................................... 13  
   HIGH SCHOOL’S NEW DIRECTION FOR THE FUTURE .................................................................. 15  
CHAPTER FIVE: THE CONTENT AREA TECHNICAL EDUCATION READING PROGRAM .............. 18  
CHAPTER SIX: CATER PROGRAM AT KATHLEEN HIGH SCHOOL: A CASE STUDY ..................... 20  
CHAPTER SEVEN: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS ................................. 22  
References .................................................................................................................................................. 24  
Appendices .............................................................................................................................................. 26  
   Appendix A: Content Area Technical Education Reading Program (CATER), Reading First, FLDOE ................................................................................................................................. 27
Appendix B: Content Area Technical Education Reading Program (CATER), Reading First, FLDOE, Case Study ............................29
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ABSTRACT

The traditional education system in the United States developed a goal of sending a high number of students to post secondary schools. The expectation of going to college starts at elementary school and continues through high school and is pushed by the school district’s hierarchy. Schools annually publish numbers through the Department of Education at state and national levels of students moving to college. College progression has become such a priority that many students feel they have failed if not college bound.

Students not considered academic often move toward vocational education with the intent of post-secondary education to support a chosen career field. Students with lower grades and abilities are routed to vocational classes utilizing a shop model.

The education system identifies and educates students at expected age and grade level requirements. High stakes testing has been established to determine if students meet those educational requirements considered necessary for success.

Students not meeting established math, English and reading requirements are given remediation to bring academic skills to appropriate age and grade levels.

My thesis described a contextual reading program for building reading skills. Content area material is used to teach academic skills in writing, reading and math to levels supporting high stakes testing needed for success.
Contextual reading has improved reading competencies for vocational education students in the CATER program at Kathleen High School in the Polk County School System as well as in the other statewide settings. This has the potential to improve career and technical education (CTE) in other systems.

A contextual approach also has potential to improve teaching and learning in so-called academic areas, and improving scores in high stakes tests. Recommendations for further study include following this line of action for younger and adult students.
PREFACE

Education is currently under fire this 2010 election year. The evaluation of the No Child Left Behind (NCLB) of 2001 is being challenged as non-effective with regards to the successes that were expected. (Ravitch, 2010).

Former Florida Commissioner of Education Betty Castor, in The Blue Print for Career Preparation (1991), stated that America is losing its competitive edge in a global economy and if current trends continue, up to three quarters of new employees in the year 2010 will have insufficient verbal and writing skills. The statement includes a warning of a need for schools to integrate academic and vocational education to enhance student competency in academic skills. Castor’s promise that “applied curricula” will make academic concepts relevant to the workplace, especially in communication, mathematics and science, is beginning to take shape and may show validity when used in the CTE programs that are currently used. She stated, “We must change the way we do business in education. Our entire economic survival is depending on it.”

Methods to assist the student to succeed are being introduced in a rigorous curriculum in Career and Technical Education programs (CTE). Student curriculum is being enhanced to meet higher levels of academic requirements. These requirements meet the entry level job skills of the career field and the rigorous requirements necessitated by today’s challenges.

This paper identifies the content area immersion using the Content Area Technical Education Reading (CATER) program classroom methodology that has proven to be a viable method of educating students in content reading area strategies. The
program helps to facilitate student abilities to increase learning by utilizing their career content area materials areas tested by state high stakes testing.
CHAPTER ONE

SCHOOL REFORM IN AMERICA

UNITED STATES REFORM

The state of education in the United States is under scrutiny to ensure that students today are prepared for the world in an ever changing technological society. The evaluation of schools has presented our education systems an awakening educators were aware of but was being addressed at a slower rate than needed to facilitate student success. Current federal legislation is being recommended that will affect classrooms and is changing the educational process hoping to facilitate higher learning levels from the students.

The No Child Left Behind Act of 2001 (NCLB) was designed along the foundations of Standards-Based Education, developing assessments in basic academic skills for students in various grades to show increased academic proficiency. Initially students tested were in grades three, eight and ten to evaluate student proficiency in the areas of math, reading, and writing. Science was then added to allow testing levels for eleventh grade students similar in design to the other high stakes tests being used in math, English and reading (U.S. Department of Education, 2001).

Continual evaluation of mandated programs is deemed useful in maintaining levels of educational excellence. The National Assessment of Educational Progress (NAEP) is the only national representative test used to monitor and make recommendations in the areas being tested.
In **Aligning High School Graduation Requirements with the Real World: A Road Map for States** in Achieve Policy Brief, (1997), more advanced classes with higher rigor were identified to increase student success. Fifteen states have passed legislation to align their public schools at this time. The need to move students forward at higher levels and at a faster rate was being promoted to push students toward higher education with higher success rates. Questions addressed included: What courses would be needed to be prepared for college and career attainment? Do courses meet the college and career-ready expectations? Are college career tracks mandatory for all students or will an opt-out provision be available. How will rigor be tracked? Can credit be obtained through demonstration of proficiency? Will the state establish an honors and/or technical honors diploma? And, how will requirements be phased in to ensure equitable access and participation?

These questions set the stage for change regardless of desires to have college as a post-secondary option. This policy brief discusses phenomena identified as student obstacles when trying to attain academic skills in coursework for advancement toward college or career options. Obstacles include lack of relevance to post high school higher mathematics need it not progressing in a college track. More extensive science requirements for non-college preparation have been considered excessive for students not in college tracks. Additional requirements were added for history, civics/U.S. government. Electives can be the building blocks for career identification and expectations for the future. Few states have defined educational levels of learning necessary in electives which include Career and Technical Education (CTE) options. CTE courses discourage old style vocational courses to now focus on career skills.
required for current job market expectations. Rigor must be attached to the CTE programs in both classroom and applied portion of coursework showing equal emphasis on academics required for the CTE course. The intensity must be equivalent to the college prep courses in all respects (Ferger, 2001).

The American Diploma Project (ADP) has been accepted in thirty states to align high school standards with what it takes to succeed in a post-secondary environment and the workplace (National Education Summit on High Schools, 2006). ADP requires math in all four years of high school, including statistics, and advanced reasoning and problem solving. Educators in high school, post secondary, and members of the business world have defined new standards for the end of high school testing. The test would show the student has met the criteria to continue on to his/her post-secondary choice. Currently, end of program tests evaluate student progress. End of program tests are being considered and placed in many career fields by professional organizations to promote higher rigor. Many career fields contain testing used for current professionals. (Southeast Region Education Board, 2010) Examples would include the Automotive Service Excellence (ASE) tests used to certify automotive career trade technicians. Tests are individualized to the specific area of expertise for the technician. The initial test in the certification area defines general and specific knowledge in the career area with a five year recertification that establishes knowledge of the technology and skills that have been upgraded since the previous test.

Educators have known for years that all students will not continue to college directly out of high school. Other options were made in the schools to provide students with an alternate path during their high school experience. Opt-out provisions were
provided to students who may choose not to be college directed while in high school. An alternative curriculum is provided for students allowing career diploma versus college diplomas provided with the college class option. The opt-out provision is provided for students during high school when planning to identify college prep or career prep options. Opting out of the college track would not stop students from moving to a college. Opt-out would require a default curriculum for students choosing not to move in a college direction while in high school. This opt-out provision is currently being challenged. The opportunity to opt-out gives parents and students a default curriculum in support of the career choice of the student. For a student to receive the opt-out privilege, an agreement between the parents and school administration would be made. By written agreement, the principal and the parents may approve the change of curriculum.

Opt-out provisions create an opportunity for the student, parents, and principal when approving curriculum for career track, instead of the college track. A current proposal on the program is removal of the Opt-out choice. Program developers concur that without the opt-out provision, students will stay more focused on success for their choice of career or college progression with a rigorous academically challenging program.

FLORIDA REFORM

States have adopted methods of assessment in line with federal mandates. Florida has adopted three programs that meet the needs of mandated testing. The programs include the A+, A++, and the Florida Comprehensive Assessment Test (FCAT).

Florida’s A+ program allows the use of vouchers to any student in a school that receives two F grades in high stakes testing performance in a four year period. The school
grade is based on student performance results from the scores derived from FCAT assessments. The vouchers can be utilized to attend a private school or a better performing public school.

Florida’s A++ program (HB 7087), establishes guiding principles requiring school boards to adopt policies based on the principles that address placing and promoting students from out of state or country, and alternative methods for students to demonstrate competency in required courses and credits. All students must have a personal education plan with tools for parents to monitor student progress and communicate with teachers.

The Florida Comprehensive Assessment Test (FCAT) was established following the passing of the No Child Left Behind act of 2001. Annual assessment in math, English and reading were developed and mandated as a graduation requirements for Florida students in the third, eighth, and tenth grade. Retaining students who do not meet the necessary levels at achievement began at this time. Records suggest the first year of FCAT testing in Florida, almost 30,000 third grade students were retained in the public school systems across the state.
CHAPTER TWO

DROP OUT CRISIS: THE AMERICAN DILEMMA

The issue is addition of high stakes testing to the requirements for graduation. Improvement within our schools has focused on requirements bringing students academic skills essential for future success in post-secondary setting but has tended to overlook the possibility of other post-high school options. President Obama has declared the need to produce more college graduates and to reduce the number of dropouts. Every school day about 7,000 students decide to drop out of school – a total of 1.2 million students each year and only about 70% of entering high school freshman will graduate each year (Obama, 2010). Without a high school diploma, young people are less likely to succeed in the workforce. Each year, our nation loses $319 billion in potential earnings associated with the dropout crisis (Obama, 2010).

Retired General Colin Powell in his article: USA’s Dropout Rate is a Moral Catastrophe (2010) states that every year the United States has about 1.3 million dropouts from high school. According to General Powell, the drop out issue can be classified as a moral catastrophe and is accompanied by associated economic and security problems as well. Two goals stated in General Powell’s message were: to ensure that 90% of today’s fourth-graders graduate from high school on time and help America become the world leader in proportion of college graduates by 2020. Today, 70% of fourth graders are expected to graduate on time. The new program “Grad Nation campaign” focuses on the twelve percent (2,000) of the nation’s high schools that produce half of the USA’s dropouts.
Current drop-out rates as given by the U.S. Department of Education fact sheet show almost 6.2 million students in the United States, students between ages of 16 and 24 who dropped out of high school receive the nomenclature of “a persistent high school dropout crisis”. The total represents 1 out of 6.25 (16%) people in that age range in 2007. Most dropouts were Latino or African-American descent according to a report by the Center for Labor Market Studies at Northeastern University in Boston, Massachusetts (2009).

The Presidential focus for change in education encompasses many areas including a national effort to help turn around America’s schools that are persistently low-performing. School change strategies include: keeping students engaged and on-track to graduation; personalized and individualized instruction and support multiple pathways and credit recovery programs; and better use of data and information (U.S. Department of Education, 2006). These avenues have provided guidance to educational institutions for a path designed for high risk students to help in developing success in the essential learning elements. These issues include inadequate achievement by low income socio-economic students in such areas as mathematics, reading and writing. Current high stakes testing focuses on bringing students to appropriate levels of learning based on age. Expectations for the students are that they will develop the necessary level of skills over an established time. Expectations suggest for each year in school, a student should be expected educational growth of a year.
CHAPTER THREE

IMPROVING READING

Levels of success of students are identified in the State of Florida by the levels of competency a student achieves on the Florida Comprehensive Assessment Test (FCAT). FCAT testing criteria shows growth and establishes required performance levels for reading, math and writing. Annually, grades three, eight, and ten are tested to show grade level proficiency. Proficiency is proof that a student has achieved one year growth for each year of school education. The established corrective guideline used for students in Florida is to retain them in third grade, twice until appropriate test achievement occurs. The student can then be promoted to the next grade level. Student numbers retained at current grade level according to the Florida Department of Education (FLDOE.org) are shown to be decreasing. The effort to get full concurrency of academic competency in 100% of students to grade level of the students to grade level by 2013-2014 is viewed as unrealistic.

Third grade is the phase one of development of appropriate student education based on the FCAT student responsibilities. Elementary school grades K-5, are designing Student Learning Activities (SLAs) that have been proven successful in elevating student test scores. There will be a Phonics Screening, Academic Vocabulary Inventory, Lexiled Text Passages, and Instructional Level Passages with Question/Response Templates provided for student and teacher use. These activities will provide a guide for building activities for the grades 7-12 reading groups.

Continued assessments will show learning levels with the use of the Response to Intervention (RTI) techniques being presented by the Just Read Program of Florida. The
Just Read program was established in 2001 by order of Governor Jeb Bush Executive Order Number 01-260. The goal of the Just Read Program is to promote a comprehensive, coordinated reading initiative aimed at helping every student become a successful, independent reader.

Goals recommended by Executive Order #01-260 include: The Florida Department of Education is hereby requested to address and to make recommendations, in consultation with the Florida Board of Education, regarding at least the following areas:

- early-reading instruction strategies and reading screenings or assessments for K-2 students;
- reading intervention strategies for students who read below grade level;
- reading course requirements for middle school and high school students who are not reading at grade level;
- reading activities in teacher preparation and professional development programs;
- leveraging technology to improve reading proficiency and integrating online professional development with existing and traditional training;
- utilizing teacher reading academies and/or schools within schools to teach effective reading strategies;
- planning for integration, coordination and effective investment of anticipated federal funds from President Bush's Reading First Initiative, and for the 21st Century Community Learning Centers;
- developing ongoing public-private partnerships aimed at increasing reading proficiency and providing supplemental books to students;
• recognizing outstanding reading teachers and schools at which students are making significant progress in reading;
• increasing parental and family involvement in teaching and encouraging reading;
• encouraging family literacy practices and programs through innovative integration of adult literacy and elementary and secondary school programs;
utilizing, supporting, and training mentors and volunteers to help children and adults learn to read.

Governor Bush’s Executive Order 01-260 noted that forty percent of elementary, middle, and less than forty percent of high school students were able to read at grade level. Executive Order 01-260 is directed for all Florida students permitting immediate program changes to facilitate higher reading proficiencies in all grades. EO 01-260 directs evaluation of the reading programs in Florida with regular reports to the governor’s office.
CHAPTER FOUR
CAREER AND TECHNICAL EDUCATION’S ROLE IN SCHOOL REFORM

Career and Technical Education (CTE) is experiencing a renewal of importance in the education. CTE supports student education by practical application of career skills and supporting an academic knowledge identified for student achievement needed for graduation. The practical applied methodology requires students to utilize academic skills in CTE areas which may enhance academic skills necessary to improve performance on high stakes testing like the FCAT utilized in the Florida Education system as a graduation requirement for today’s students.

HISTORY OF CAREER AND TECHNICAL EDUCATION-A PERSPECTIVE

The use of the internship as a method of training has been part of education for generations. The indentured servant was provided as a youth to various skilled journeymen to work and to learn a trade. Once the debt was worked off, the youth would have the skills to succeed in the field of endeavor. This was by all counts the first vocational training available to youth.

Public school focus centers on the use of vocational education as a means of developing skills useful for students’ futures. Little career skills identification and practice could be seen in these early Industrial Education classes.

The School-To-Work Act of 1994 (STW) was established to support educational reform initiatives. Legislation came from research showing an absence of systems connecting school and work. All states received STW funds and each showed varying degrees of success. Four reports look back at the School-To-Work Movement. (Ferger, 2001)
• *The Intermediary Guidebook: Making and Managing Community Connections for Youth.* Designed to promote youth self-confidence about abilities, opportunities and connections and helped foster academic and work-related competencies needed for success (Ferger, 2001)

• *School-to-Work: Making a Difference in Education.* Released in 2001, provided a synthesis of lessons learned since the implementation of STW (Ferger, 2001). Accomplishments noted include students with improved attendance and goals being less likely to drop out. Employers and teachers are generally enthusiastic about STW and believe it beneficial to all concerned. Career Academies help link corporate involvement to secondary school education and fostering small learning communities. STW funds have stimulated new systems creation. Needing improvement: STW effects on standardized test scores evidence STW has positive effect on college enrollment and completion and labor market success. Only a small group of students take advantage of STW rigorous applied academics, intensive work-based learning and comprehensive career development (Ferger, 2001).

• *Looking Forward: School-to-Work Principles and Strategies for Sustainability.* American Youth Policy Forum and the Center for Workforce Development, Institute for Educational Leadership and supported by the STW Opportunities Act (STWOA), revealed essential principles and elements used in the field including: promoting high standards of academic learning and performance for all young people;
incorporate industry-values standards that help inform curricula and lead to respected and portable credentials; and connects young people with supportive adults, mentors and other role models (Ferger, 2001).

- **Career Academies: Impacts on Students Engagement and Performance in High School.** A report from the Manpower Demonstration Research Corporation of 2000 stated a promising approach to a high school restructuring and the School To Work (STW) transition. The methodology noted increased levels of interpersonal support students experience during high school and career awareness participation and work-based learning activities. Also noted were higher levels of outcomes for at-risk students in academic courses. STW participation had many positive results, although Career Academies did not improve standardized math and reading achievement test scores (Manpower Demonstration Research Corporation (MDRC), 2009).

Viable vocational education has been available for students for many years by means of internships and work study programs. Today, a new focus on the Career and Technical Education programs (CTE) is being promoted in the school systems. CTE is a method of helping bring skills and abilities to students in efforts to help improve student test scores and to lessen the drop-out rate.

**CTE ADDRESSES THE DROP-OUT PROBLEM**

The past 50 years have seen the importance of high school completion and continuing into post-secondary education. The Manhattan Institute and the Educational Testing Service estimate that national high school completion rate averages around
seventy percent. This equates to about 3.8 million of the 35.2 million youth who will be ill equipped for the 21st Century (Green, 2002).

Research shows a worse picture for minorities in the U.S. In the project Losing Our Future by the Harvard Civil Rights Project (2004) shows that graduation rates are substantially lower for most minority groups particularly males (Orfield, 2004). This report notes a dropout rate of 50% in Native American, Latino, and African-American students who enter ninth grade and fail to move on to graduation in four years.

Additional identifiers of students who drop out prior to graduation shows higher dropout rates among low socioeconomic status students, those eligible for free or reduced price lunches, poor academic performance, repeating a grade, speaking English as a second language, pregnancy, large number of absences, and being physically or mentally impaired (Orfield, 2004).

The dropout rate brings added concerns in the economy with additional costs for these ex-students. Most students who drop out are less likely to be employable and when employment is found will get less income. Statistics from 2004 show a non-high school graduate student will make about $16,500 per year, while a high school graduate student will receive just over $26,000. The figures show a difference of about $9500 that will be a loss in income of over $260,000 (Alliance for Excellent Education, 2007).

The Alliance for Excellent Education estimates at current dropout rates, considering all dropouts age 16-67, the total loss of over $3 trillion in the next decade to our economy will occur. Increased graduation rates would lessen the impact of this loss and add to our economy (Alliance for Excellent Education, Issue Brief, 2010).
CTE is a proven strategy that educates students in the context area of careers and prepares students to succeed in postsecondary education and the workforce. It is also a critical strategy to addressing the nation’s high school graduation crisis.

HIGH SCHOOL’S NEW DIRECTION FOR THE FUTURE

Studies have been conducted to show a direction for high schools for meeting the needs of the 21st Century (Lynch, 2000). The consensus for a new direction for high schools career and technical education as we move forward to the 21st Century indicates that four themes have emerged as a possible framework for career and technical education (Lynch, 2000). Needed reform recommendations to help schools adapt and develop into the 21st century indicates that the focus of discussions allowing a framework for a new direction for vocational education. These recommendations or themes from educators, business persons and policy groups were:

1. A need to infuse career planning throughout the entire curriculum, from Pre-K through life-long learning. This theme is that all teachers (and parents) should be cognizant of applications of knowledge to real-world environments, especially in workplaces.

2. Need to ground career and technical career programs in high school reform. Consistently, respondents spoke of the need for changing the models by which high schools are organized, programs and curriculums are delivered, and students are taught.

3. Improve the image and upgrade vocational education into a new and improved career and technical education model.
4. Increase the perspective of the career and technical education model to the public. Increase expectations for educators and students. Advance the skills and abilities of the student in preparation for post-secondary and work-force needs. The study showed a recommendation for additional two years minimum of education as a benchmark for the next generation of students.

These recommendations brought about a direction for charting movement in the educational systems and a new direction for career and technical education. The four identified education components that came from these recommendations were used to direct reform related to student learning and student achievement (Lynch, 2000):

1. Organize programs, curriculum, and instruction around major fields of study, similar to college programs.
2. Promote more contextual teaching and learning in high schools curriculum.
3. Install more work-based learning models, ensuring that work-based activities are more solidly grounded in curriculum and contribute to mastery of standards.
4. Assess authentically student progress toward meeting education standards.

Two components relate to systems and organization of the high school:

5. Increase the use of Career Academies.
6. Adapt successful models of tech prep.

The importance of a new direction in career and technical education has been identified to help direct state and local education groups promote rigorous and relevant educational learning experiences. Promoting a new direction in career planning and
development beginning at elementary school levels and high school reform supports the concepts of the 21st century with higher levels of technical education expertise. All components of educational systems must learn to work together with career and technical education. Career and technical education must also change to become more symbiotic in relationship with all facets of the educational community such as high school system curriculum and instruction. The need to upgrade older vocational education programs to career and technical education levels appropriate for future industry and career opportunities. CTE program development to increase rigor in programs may make the program more acceptable to higher education. Currently, only “core” classes are considered as favorable in determining applicant qualities and abilities. Additionally, most employers do not consider vocational programs at this time adequately preparing students for entry to their businesses.

The final consideration is the acceptance of post-secondary education to be on the radar for all high school students. This includes those enrolled in career and technical programs already. The concept of the K-14 model is recommended with the additional two years of education above high school being a part of the extended free education for all students. Hopefully, the extended voluntary attendance through at least 13 and 14 years of education will be government funded (Lynch, 2000).

In this thinking, the high school diploma is not a terminal degree and advanced education above the high school level is essential to preparation for the 21st century for all students regardless of choice of career.
CHAPTER FIVE
THE CONTENT AREA TECHNICAL EDUCATION READING

The Content Area and Career Education Reading Program (CATER) in the State of Florida is showing promise of success in the early stages of classroom utilization. The CATER program places students in a reading program utilizing content area materials for the students to use in enhancing their reading skills. (Florida Department of Education, 2010) The Florida education system has students in middle school identifying an “area of interest” in a possible career field in preparation for entering high school. Using content area materials from career area of interest choices will help maintain a positive outlook on reading and skills building. The reading program begins Phase one with teacher preparation for the program requires completion of the Florida On-line Reading Professional Development program (FORPD). FORPD is a fourteen week computer-based training course which brings reading strategies to teachers. These strategies have been shown valuable to reading success in students. (Florida Department of Education, 2010) Phase two is the Content Area Reading Professional Development program (CARPD). CARPD is a reading immersion class assisting teachers in developing and assimilating the reading skills essential in career education programs (Appendices A and B). The Content Area Technical Education Reading (CATER) program is the final stage of the teacher reading development program allowing teachers the opportunity to build curriculum to support teaching students through use of the reading skills necessary for success in the career education programs. (Appendix A) These programs promote continual effort by the student and teacher to read a variety of materials designed for each student’s growth and is at a level commensurate with the student’s reading skills. (Florida
A student has a tested reading of level 4 will be assigned reading material in the career area that has been identified at an appropriate level above the student’s measured reading to help bring reading growth. Materials tested at lower reading levels are still available but will not result in credit. Materials with levels considered too high are not provided to the reading challenged student. The challenged reader has been found unsuccessful when too high a reading level is attempted and may become discouraged. Success is the key with controlled higher level challenged reading for students. Student reading levels with this type of format have seen some success (Appendix A) (Florida Department of Education, 2010).

The first year using the developmental strategies of the CATER program in Florida high schools has shown some success with teachers using their career field as the focus to enhanced reading skills (appendix A) (Florida Department of Education, 2010) Immersion of students using career related reading materials has had an increase in the reading and writing levels of students assigned to their CTE classes (appendix A). The students assigned Levels 1 and 2 in their tested levels of reading prior to the program beginning were the focus of the reading program. The CTE efforts are designed to increase reading proficiency in the students. (Florida Department of Education, 2010) When testing occurred following student training, student reading after a semester in the Content Area Technical Education Reading program show positive success although not statistically significant results were noted (Florida Department of Education, 2010).
CHAPTER SIX

CATER PROGRAM AT KATHLEEN HIGH SCHOOL: A CASE STUDY

Information provided on two cases was derived from the Computer Aided Drafting (CAD) program and Criminal Justice program in a high school setting in Polk County School System (Appendix B).

The Content Area Technical Education Reading program (CATER) was designed with the idea that immersing the student in reading career materials that have been identified for student career education will assist successful reading growth. Florida students in eighth grade are required to identify a career option of interest to allow the appropriate reading material to be identified for the student use in the CATER reading program. The student identifying the CTE option of high interest is expected to have more focus in that area. Two case study examples were the Criminal Justice Academy and the Computer Aided Drafting (CAD) program at the identified high school used the associated curriculum materials in their efforts to bring higher level reading skills to the students.

The program is designed to move students in a rotating scheme into three areas to avoid boredom and loss of concentration. The three areas used in the rotation including modeling or demonstration, student repetitive process, and content area training associated with the assigned reading. Movement of students through three phases of training allows each to move through and to maintain an interest and focus relevant to each student’s specific learning style.

Following this type of concentrated program, students were tested with the regular student population and scores compared with school, district and state success rates.
(Appendix B). Scoring of the student tests was based on a 60 point scale that established a base line allowing identification of growth when tested. Growth patterns for students when retested at the end of the semester were established. The state scores of the post-baseline reading test were 23 on average across the state in the reading program. The district reading test score of 26 for students during baseline testing showed scores slightly above state average for other students assigned to the CATER program. Content area technical education reading classes with students placed in their student career choice classes showed scores of 36 in the Criminal Justice, and Computer Assisted Drafting was at 39 after the first retest for skill development.

The results from the CATER students in Polk County School District showed an increase in all students above state average which allowed continued consideration and use of the training philosophy and methodology established in the CATER Program. Although the CATER case study used was a small sampling, classes identified showed promising results at the local level and throughout the state (appendix B).
CHAPTER SEVEN

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The need to develop alternative teaching methods to allow students in today’s world to be more competitive in the global economy is essential to student success. In addition, a paradigm shift must be made by students and parents alike to change the belief that a high school diploma is a terminal degree.

European countries have identified the need to give direction to students at an early age. In German, for example, middle school students are tested to qualify them for either the Gymnasium (University) or Technical Education. If selected to technical education, the students could still work their way toward a college track but each student is expected to make career path determination. Government supported technical schools are assigned students, to allow a start toward career progression.

In the United States, students will be challenged to become more competitive through the use of rigor and relevance in the application of selected reading coursework. Two choices of college track or career and technical education are available for students. Many students choose a path for themselves, but then are unable to maintain that path due to substandard academic abilities, which are being challenged in the classroom to pass the Florida Comprehensive Assessment Test (FCAT).

The development of Career and Technical Education (CTE) group to develop further and enhance our student’s abilities is the start of preparation of students for the 21st century. Vocational education training has transformed into today’s higher level CTE programs with focus on rigor and relevance the student must master as they move toward a successful future.
In conclusion, contextual reading has shown improved reading scores for some career education students in the CATER program at Kathleen High School in the Polk County School System as well as in the other statewide settings. Growth in the CAD program was promising. CATER may have the potential to improve career and technical education (CTE) in other systems (appendix B).

A contextual approach also has potential to improve teaching and learning in so-called academic areas, and improving scores in high stakes tests. Recommendations for further study include following this line of action for younger and adult students.
References


12. Southeast Region Education Board, . (2010). Improving career/technical education. SREB ,


15. USA’s Dropout Rate is a Moral Catastrophe, General Colin Powell, 2007.
APPENDICES
Appendix A

A Comparison of 9th and 11th Grade Students in CATER compared with Propensity Matched Students

Reported: 12 October 2009

By: Kevin Smith; Kevin.Smith@fldoe.org
Florida Department of Education
Evaluation Research

A Comparison of 9th and 11th Grade Students in CATER compared with Propensity Matched Students

Yaacov Petscher, Ph.D.

Barbara R. Foorman, Ph.D.

This report summarizes the findings of a quasi-experimental comparison of students enrolled in the CATER program during the 2008-2009 academic years. These analyses reflect comparisons for students who had the GRADE fall and spring scores, as well as FCAT 2008 and 2009 data available. In order to ascertain any type of relationship between enrollment in CATER and gains in outcomes, it must be compared to a group of individuals who did not receive the CATER intervention. This way it is possible to theoretically examine how students who received CATER may have performed if they had not been in the intervention group. Although this design was not a randomized control, we can employ a rigorous quasi-experimental deign that attempts to best approximate what would be found under randomized conditions.

In this study, students in CATER were matched to non-CATER students who had similar FCAT 2008 scores, minority status, ELL status, and free/reduced lunch eligibility. Very few students in 10th and 12th grades had available, complete data for FCAT and GRADE (i.e., < 25). Thus it would not be appropriate to make comparisons about the relationship between CATER and outcomes since there are too few students to meaningfully generalize results. Using the matched data on students, two comparisons were made: 1)
analysis of pre-post gains in the GRADE from fall to spring, and 2) analysis of group differences on FCAT 2009. Both of these analyses were necessary since a significant finding on the first one cannot generalize to the population because there were not students who took the GRADE not enrolled in CATER.

The second analysis was important to extend findings of the first analysis to determine if differences in FCAT between matched students could be observed when accounting for initial FCAT and demographics.

The first analysis was a paired t-test to examine if significant gains were made from fall to spring on the GRADE for 9th and 11th grade students. Results from this analysis (Table 1) indicated that students in 9th grade made significant gains on the GRADE ($t(27) = 3.72, p < 0.001$); however, 11th grade students did not ($t(37) = 0.88, p = 0.384$).

Table 1: Means and Standard Deviations On GRADE for Paired-samples t-test results

<table>
<thead>
<tr>
<th>Grade</th>
<th>N</th>
<th>M</th>
<th>S.D.</th>
<th>M</th>
<th>S.D.</th>
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<tbody>
<tr>
<td>9th</td>
<td>25</td>
<td>19.46</td>
<td>5.8</td>
<td>24.25</td>
<td>8.11</td>
</tr>
<tr>
<td>11th</td>
<td>38</td>
<td>21.12</td>
<td>3.83</td>
<td>22.02</td>
<td>7.40</td>
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The second analysis was a one-way analysis of variance (ANOVA) to compare the matched students in each grade on the 2009 FCAT. Results from this analysis (Table 2) indicated that CATER and non-CATER matched students did not significantly differ on the FCAT in either 9th or 11th grade. Although CATER students in both grades show a mean developmental scale score FCAT that is larger than the non-CATER students, this difference is not of statistical merit, and can largely be attributed to the individual differences in the mean FCAT scores. Similarly, when analyzing the gain scores (i.e., FCAT 2009 – FCAT 2008) there were also no statistically significant differences, even though non-CATER students in 11th grade decrease in FCAT performance. In both of these cases, there is a large degree of error, but also very small samples, which preclude a meaningful analysis of the relationship between CATER and outcomes.

Table 2: Means/SDs for 2009 FCAT DSS Reading Scores for Matched Students
Appendix B

CATER READING PROGRAM 2008-2009 RESULTS

Kathleen High School
2600 Crutchfield Road
Lakeland, Florida 33805

May 14, 2009

Cecil McClelland, Jr.,
Principal

Mechelle Daughtery,
Reading Specialist

Subj: CATER READING PROGRAM 2008-2009 RESULTS

Debriefing Schedule Post-testing

Today’s Schedule:
- 8:11-9:51: 3rd period.
  - Doug Harwell - Drafting
- 10:00-11:30:
  - Interview Richard Dobson – Criminal Justice
  - Debriefing with Cater Teachers and Administration

<table>
<thead>
<tr>
<th>FCAT Reading Scores 08-09</th>
<th>Fall</th>
<th>Spring</th>
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</thead>
<tbody>
<tr>
<td>(Average Passed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>District</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>State</td>
<td>26</td>
<td>20</td>
</tr>
<tr>
<td>Harwell</td>
<td>34</td>
<td>39</td>
</tr>
<tr>
<td>Dobson</td>
<td>35</td>
<td>28</td>
</tr>
</tbody>
</table>

Harwell’s numbers for the year: (Polk County Reading Teacher of the Year!!)

**3rd Period**
50% of the class passed the FCAT
66% passed the FCAT/ACT
83% will receive a diploma (some ESE)

**6th Period**
64% Passed the FCAT
None took the ACT, No known ESE

**Total for the 2 classes**
54% passed the FCAT
66% passed the FCAT/ACT
And 72 Percent will receive a diploma!