

THE RELATIONSHIP BETWEEN COLLEGE LEVEL ACCOUNTING TEACHING
METHODS AND STUDENTS' SELF-REPORTED COURSE GRADE OUTCOMES

by

Andrea Simone Jones

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METHODS AND STUDENTS' SELF-REPORTED COURSE GRADE OUTCOMES

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ABSTRACT

The purpose of this quantitative descriptive study was to identify if a relationship existed between the main teaching method attribute used in accounting courses and the students' self-reported course grade outcomes. Specifically, does teaching methods correlate with students' grades? The research considered the teaching method attributes (traditional/ chalkboard lecture, collaborative/ group learning, and case studies) to be a factor in the course grade of accounting students. A survey was conducted on 85 accounting students attending a community college in the spring semester of 2017. The findings of the research revealed a small statistically significant relationship between teaching methods used in the accounting courses and the students' self-reported course grade outcome. The data analysis statistically presents the relationship. A weak positive relationship exists between the teaching method attributes (traditional chalkboard lectures, collaborative/ group learning, and case studies) and course grade outcome. Course grades were slightly higher for students learning by collaborative/ group learning and case studies than students learning by traditional/chalkboard lectures. Statistically significant difference between the mean scores of the three groups existed (group 1= traditional/chalkboard lectures and collaborative/group learning, group 2= traditional/chalkboard lectures and case studies, group 3= collaborative/group learning and case studies). Findings suggest that students taught using traditional/ chalkboard lectures receive lower grades than students learning by collaborative/ group learning and case studies. The results suggest teaching methods do relate to the course grades. Understanding the relationship can aid college administration and educators to choose the right course material and teach students using the recommended methods.

DEDICATION

This dissertation and all my academic achievements is dedicated to my children, Malyk, Marcus, and Ariana, and my husband, Alende. They are the reason I never gave up on this goal and why I always strive to be an excellent example to them. Thank you all for coping with my long hours away from home and dealing with my frustrations. This has been a long road, but I was determined to see it until the end. A special thanks to my mom, sister, brother and the rest of my family who has stood on the sidelines cheering me on. Love you all!

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Chapter 1

Introduction

The importance of the roles of micro-businesses (small businesses) contribute to social and economic stability in community environments (Samujh, 2011). Micro-businesses support and help the building of social, cultural, environmental, and economic development of communities (Samujh, 2011). Accountants help guide micro-business owners, with little to no business experience, in sustaining in changing economies. Small business owners hire accountants as advisors.

A myriad of research studies on the advisory relationship between accountants and small businesses depicted accountants as a solution to small business (SB) failure and financial mismanagement (Rae, Price, Bosworth, & Parkinson, 2012). Small business owners-managers (SBOMs) seeking to grow into larger businesses use accountants' business advisory services on a regular basis (Thompson & Downing, 2007). Small businesses recommend accountants as sources for business advice and support (Samujh, 2011; Stone, 2015). Selecting and establishing a relationship with advisors continue to challenge small businesses (Carey & Tanewski, 2016; Gooderham, Tobiassen, Doving, & Nordhaug, 2004; Stone, 2015). Researchers believe accountants expert and legitimate power explains important reasons for regular use and influence as small business advisors (Stone, 2015). Competent accountants possess distinct knowledge and skills to prepare different accounting, tax, and financial reports. Small businesses do not regularly possess the same knowledge and skills as accountants' due to resource constraints (Gooderham et al., 2004; Samujh, 2011; Stone, 2015). External advisors fill the gap for small

businesses. Small business owners rely on the competence of advisors for survival and growth.

Businesses hire external professionals for advice. The service of accountants is among the hired professionals. Small and medium-sized enterprises (SME) rely on accounting advisors' competency, to provide business advice (Carey & Tanewski, 2016; Rae, Price, Bosworth, & Parkinson, 2012). SMEs verify the competence of accountants, over time, after nurturing a relationship. Businesses will likely not rehire incompetent accountants (Carey & Tanewski, 2016; Rae, Price, Bosworth, & Parkinson, 2012). Accountants rely on educational programs and business professors to ensure competency in the real world.

Accountants gain information through higher education business programs and professors are educationally qualified to teach students. Undergraduate business professors are challenged to educate students with skills to reason and think critically, while solving real global and diverse problems, in a constantly changing environment (Burch, Burch, Heller, & Batchelor, 2015; Wilson, & Thomas, 2012). In 2005, business schools were criticized for producing students without the useful skills needed to succeed in the business world and the problem is relevant today (Burch et al., 2015). Correcting the problem for business schools require curriculum supported by innovative learning approaches with the preferred learning outcome. The learning approaches must challenge students to achieve a global mindset and higher order thinking (Burch et al., 2015; Wilson, & Thomas, 2012).

The instructors using innovative learning approaches must take into consideration the different learning methods students use to retain information. Students learn using

different methods. Students may learn by using the VAK learning model of reading (the visual learner); listening to others (the auditory learner); or reviewing diagrams, models, or pictures (the kinesthetic learner) (Andreou, & Vlachos, 2013; Gholami, & Bagheri, 2013; Ocepek, Bosnić, Šerbec, & Rugelj, 2013; Surjono, 2014). Seeing the same information in different ways helps to emphasize or reinforces the concepts learned (Lamarche-Bisson, 2002). The accounting subjects taught at traditional colleges and universities use multiple learning methods. Traditional college accounting subjects are vital for an accounting program to be successful. Programs are inadequate if they fail to emphasize different interactive group learning methods rather than simple lectures to the students (Wally-Dime, 2011).

Chapter 1 provides an overview of the descriptive qualitative research study design with an explanation of the background, problem, purpose, and significance of the research. The reasoning behind the study, research questions, conceptual framework, definitions, assumptions, scope, limitations, and delimitations will also be discussed.

Background of the Problem

The Security and Exchange Commission (SEC) increased accountability for people in the business world for financial practices since the Enron and WorldCom crisis (Hove, Muropa, Taruwona, Maseko, Denga, Mudzura, Zivanai, & Chipfere, 2011; The Importance of Accounting, 2014). In 2001, Arthur Anderson, an auditing firm, failed to report illegal accounting practices of Enron and WorldCom. Avoiding misstatements unintentionally occurring, companies now require basic knowledge of accounting (Hove et al., 2011; The Importance of Accounting, 2014).

Accounting is vital to everyone, not just businesses and students. People utilize accounting daily to calculate the interest rates of car payments, make investment decisions, and considering interest rates to pay off home mortgages. The basic framework of a business is accounting. Students are unprepared for the real world without proper business and accounting education (Al-Twajjry, 2010; De Araujo & Slomski, 2013; The Importance of Accounting, 2014).

Over the last decades, several researchers and organizations called for accounting education regeneration by incorporating business developments and innovative technology changes in accounting curriculum (Kotb & Roberts, 2011). Employers deemed colleges and universities as a valid source of well-educated potential recruits, awaiting to satisfy the need of prospective students and businesses to generate graduates with work-related skills and knowledge (Gammie & Kirkham, 2008; Kotb & Roberts, 2011). Large professional groups depend on colleges' natural source of knowledge and claim the right to regulate a service against other opposing professional groups (Gammie & Kirkham, 2008; Humphrey, 2005; Kotb & Roberts, 2011). Despite researchers and organizations call for accounting education adjustment, innovative technology, and business development, college accounting curriculum is outdated and fail to prepare future business professionals for the modern business arena (Humphrey, 2005; Kotb & Roberts, 2011)

Researchers criticize accounting programs for teaching technical accounting instead of skill development (Wally-Dime, 2011). The foundation of student learning is professors understanding of how the students learn. Professors need to understand how students learn and improve on the delivery of education to influence the learning process

(Byrne, Flood, & Willis, 2002; Wally-Dime, 2011). Traditional accounting subjects are important for a relevant accounting program, but the program is inadequate if it fails to emphasize other learning activities considered necessary for the development of an accountant (Byrne et al., 2002).

Most accounting faculties, in higher education, lack the skill set for teaching, learning from trial and error (Minter, 2011; Zheng & Zhang, 2011). The qualifications to become a faculty member are more strenuous than K-12 educator requirements. Higher education faculty must hold, at the minimum, a Master's degree, doctoral preferred, to teach full-time (Minter, 2011). When comparing the state mandated requirements for college faculty and K-12 educators, there is a large difference. College and university faculty lack or partially lack knowledge about theories related to pedagogy and andragogy (Minter, 2011). Faculty may also lack knowledge about student learning theories, motivating students, and teaching methodologies (Minter, 2011).

K-12 teacher requirements are rigorous compared to higher education instructors (Minter, 2011; Zheng & Zhang, 2011). An acceptable grade point average, teacher certification, teacher internship, and a Bachelor's degree are required for an entry-level position as a K-12 teacher (Minter, 2011). Continuing education is a requirement to maintain teacher certification license. K-12 teachers learn teaching methodologies, learning models, pedagogical theories, and possess skills for instructional application (Minter, 2011). Most accounting professors in higher education are recent graduates with textbook knowledge. College educators that are recent graduates lack the knowledge of accounting that comes from experience in the field (Zheng & Zhang, 2011). Recent

graduates lack the knowledge to apply accounting in business and only teach students the basics integrated with theory and deep understanding (Zheng & Zhang, 2011).

Adults consider education vital to becoming successful in life (Wall & Sarver, 2014). Adults are starting to blame educators for failures in life (Wall & Sarver, 2014). Education malpractice, as a tort, is not recognized by the courts, so issues in education are handled at the state and local level (Wall & Sarver, 2014). Educators are concerned with students' academic performance and the reason why 90% of accounting students fail to perform well (Al-Twaijry, 2010; Almunais, Alfraih, & Alharbi, 2014). Accounting educators teach basic theoretical knowledge, to keep students engaged; accounting educators do not teach information to retain for years (Zheng & Zhang, 2011). Teaching more accounting information will lead to students forgetting previous approaches (Zheng & Zhang, 2011).

A student learning is dependent upon how he or she identifies or relates to the learning culture. Students can identify with one circumstance or situation in one way and another circumstance in another way (Wagner & Huang, 2011). How students relate to a situation is not as important as the content of the learning (Byrne et al., 2002). The concepts and theories of accounting are learned in introductory accounting courses. Teaching theory, in accounting, is better than years ago, but failed to rise to where it could be (Kerrigan, 1952). Schools should offer two sets of accounting courses, one for students in business programs and professional accounting courses for accounting majors (Kerrigan, 1952). Introductory accounting is the best starting point to solve this problem (Carrithers, 1951). Some students are fortunate enough to learn accounting from

seasoned instructors (Carrithers, 1951). Seasoned educators are the best salespeople for the accounting profession (Carrithers, 1951).

Statement of Problem

The general problem is that approximately 90% of students do not perform well in the accounting courses, receiving low grades (“C” or “D”), might lack the knowledge needed to make sound business decisions, in the real world (Al-Twajjry, 2010).

Businesses are seeking competent accounting graduates. Instructors are responsible for instructional choices and are pressured for clear statements of instructional goals including student achievement. Stimulating faculty to find efficient teaching methods is the goal. General formulas to create an ideal teaching method is nonexistent. The most common method involves fixed instructional time resulting in variable achievement (Kropp, 1973).

The specific problem is the method of instructional strategies used in college accounting courses, used to build skills in the work world, could be related to students’ performance level or course grade outcome. According to Al- Twajjry (2010), “During the 15-year period from 1990 to 2005, the number of accounting students whose overall GPA was 4.0 or more out of 5.0 was fewer than 100 students (less than 10%)” (p. 311).

The failures and the reasons why the students failed are unidentified, lack understanding, and solutions (Al-Twajjry, 2010). The quantitative descriptive research study assisted in developing a better understanding of the education-performance gap, of accounting students. The study also made a comparison between the attributes of the main teaching methods used in accounting courses and the numerical self-reported course grade outcome. The population includes college students enrolled in a 16-week

accounting course in the spring semester of 2017. The data derives from a 2-year community college in the Chicago area.

Purpose of the Study

The purpose of the quantitative descriptive research study was to determine, using statistical comparison, any significant relationship between the main teaching method attribute used in accounting courses and the students' self-reported course grade outcome. The study was conducted with a sample of accounting students at a community college using a questionnaire survey instrument, utilizing close-ended questions. The quantitative descriptive research study was appropriate to identify a possible relationship between the variable teaching method attributes used and self-reported course grade outcome of the accounting students at the college. Research evidence suggests an association between teaching methods and course grade outcomes may exist (Lamarche-Bisson, 2002; Satha & Phapruk, 2011). The purpose was to identify if the main teaching method attribute used in accounting course are related to the students' self-reported course grade outcome. According to De Araujo and Slomski (2013), "Accounting professionals are responsible for creating structured analysis, suggestion and decision conditions for problem-solving in the companies they are working in" (p.21). Accountants' profile aligning with market and corporate changes is ideal. The role of the accounting instructors is to prepare the students for real-world situations, using various teaching methods. The success in the accounting course is measured by the students' course grade outcome. The focus of this research was the main teaching method attributes; traditional chalkboard lectures, collaborative/ group learning, and case studies used in accounting courses at the community college, from the students' perspective.

The purpose of the study was to identify a possible relationship between the attributes of teaching methods and students' self-reported course grade outcome.

Significance of the Study

Employability is important and beneficial to higher education institutions, employers, students, governments, and professional bodies (O'Leary, 2012). Higher education institutions strive to remain competitive by setting new performance measures on a regular basis (Minter, 2011; Zheng & Zhang, 2011). Employers seek competent applicants with skills and knowledge to remain competitive. Students expect a return on the investment in education. Government relies on the employability of students for economic growth and competitiveness. Professional bodies rely on employability to enhance members and reinforce influenced policies (O'Leary, 2012). Some researchers do not believe students develop employability skills in the classroom alone. Colleges and universities started implementing strategies for employability (O'Leary, 2012). Stakeholders rely on education facilities to produce competent and employable students with innovative skills and knowledge to improve existing businesses and establish new ones (O'Leary, 2012).

A high percentage (average 35–50%) of students fail or receive an “F” in accounting courses. Ninety percent receive letter grades of “C” or “D” and can still pass the courses and go on to become accountants (Al-Twajry, 2010). Developing a thorough understanding of accounting information can help students excel in the business world (Al-Twajry, 2010). This study matters to the field of accounting and business because it helps higher education instructors determine the best method to aid in the learning

process for accounting students. Higher education instructors are responsible for educating potential accounting advisors and business professionals.

This study revealed an explanation of the relationship between teaching method attributes and self-reported course grade outcomes. Accounting education literature lacks controlled testing of various teaching method attributes and the relation to the course grade outcome (Lamarche-Bisson, 2002; Satha & Phapruk, 2011). Descriptive research in accounting education is scarce. Accounting academics must begin methodically incorporating various teaching method attributes in controlled settings and documenting the results. Results of this study provided more genuine findings than other research approaches (Benke & Street, 1992).

This study will aid instructors, college and university leaders, and hiring managers understand the teaching method attributes that is most effective to teach accounting courses to promote higher grades. This study will also help to bridge the gap for colleges and universities, responsible for producing potential business professional, between knowing and not knowing, what methods are best for educating students in accounting for the best grade outcome. Educators are concerned with the reasons behind students' problems passing accounting courses (Buckhaults & Fisher, 2011). Achieving conceptual understanding is a widely researched topic (Lucas & Mladenovic 2009). The research focuses on learning as understanding instead of learning as replication.

The significance of this study to the field of leadership adds to leadership knowledge and literature by determining which of the popular teaching method attributes has the greatest effect on self-reported course grade outcomes, in accounting courses. The university goal is to produce leaders in the world. Academic performance of

students is a concern for educational facilities, educators, and potential employers (Almunais et al., 2014). The employers are the end users of the university products.

Accounting courses is comprised of accounting majors and non-accounting majors. Non-accounting majors will still need some degree of skillset in accounting to aid in the business world. Entrepreneurs need accounting background to help understand the financial aspect of running a business. This study aided educational leaders in determining the best method to teach all accounting students. This study is significant to business because accountants are vital to the success of businesses and businesses rely on their expert advice.

According to Win and Miller (2005)

“Students’ academic performance can be attributed to two sets of influential factors: the first set originating with the individual, the student’s unique combination of abilities and socioeconomic background, and the second set relating to the educational system and its patterns of imparting knowledge to university students.” (p. 1)

Nature of Study

Method and design. The purpose of this quantitative, descriptive study was to identify any possible relationship between the main teaching method attribute used in accounting courses, and students’ numerical self-reported course grade outcome, using survey research. The researcher described a relationship that existed between the main teaching method (chalkboard lecture, collaborative/group learning, and case studies) used in the accounting courses and the students’ numerical self-reported course grade outcome. Obtaining an analysis of measurable data, in the quantitative method, is the

priority of the researcher (Borg & Gall, 1989). All accounting students attending four-credit hour, 16-week courses, in the spring 2017 semester, was the purposeful, convenient, cluster sample. The study relied on a data set generated from the results of an administered survey.

The researcher chose popular teaching methods used in accounting courses and was aware of a possibility of an instructor using more than one attribute to teach a course. The researcher was aware of other possible methods, not included in the research, which could be used to teach accounting. The students were asked to identify the main teaching method used in the course. The researcher chose three teaching method attributes (traditional chalkboard lectures, collaborative/ group learning, and case studies) suggested by researchers, commonly used in accounting but are not widely researched. Traditional chalkboard lectures were considered a traditional teaching method requiring instructors to master content transferred to students to ease frustration (De Araujo & Slomski, 2013). Researchers believe lectures provide benefits in the classroom (Davies, Cotton, & Korte, 2016; Phillips, 2015). Collaborative learning is the most researched method with little research in higher education or accounting (Goodsell, Maher, & Tinto, 1992; Moore & Buxeda, 2000; Ravenscroft & Buckless, 1995; Slavin, 1992; Rebele, Stout, & Hassell, 1991). Collaborative/ group learning aids in team building skills needed in today's market (Lindquist, 1995). Researchers suggested case studies to prepare students for real business practices (Wines, Carnegie, Boyce, & Gibson, 1994). The researcher found little to no research comparing the teaching method attributes to course grade outcomes. The literature review provided the researcher with suggested teaching methods for accounting courses.

Due to the different levels of accounting courses offered at the community college, the researcher expected an adequate amount of variability between methods of teaching. Extraneous variables could have a bearing on the results of this study. The education level of the instructor, grading practices, experience level of instructor, former knowledge of students, student motivation, and the age of the instructor are a few extraneous variables that aided in the generalizability of the results of this study. Classrooms serving as the laboratory limits physical control (Benke & Street, 1992). The researchers lose the power of generalizability when subjects are selected from a range with multiple restrictions. Random assignment was not feasible in this study.

The Teaching Method Survey instrument (Appendix B) in this study provided data for the variables related to the main teaching method attribute used in accounting courses and course grade of the students. This study used a paper questionnaire survey to provide data needed to determine any significant relationship between teaching method attributes and an accounting students' self-reported course grade outcome. Open format questions were not acceptable for this study because open-ended questions are based on opinion and have no predetermined set of responses. Open-ended questions may obscure the topic of interest due to differences in the verbal ability of the subjects (Leedy & Ormrod, 2010).

Research Questions and Hypothesis

Inferences drawn from the literature review suggested an association between teaching methods and course grade outcomes might exist (Lamarche-Bisson, 2002; Satha & Phapruk, 2011). An individual's performance is dependent upon the amount of effort, individual abilities, and individual role perception (Porter & Lawler, 1968). A

quantitative research study collects numerical data to answer a research question (Dobrovolny, & Fuentes, 2008; Leedy & Ormrod, 2010; Sale et al., 2002). Research questions are a starting point for the researcher to explore (Leedy & Ormrod, 2010). The questions can also be a checkpoint to test what is found (Leedy & Ormrod, 2010). The research question guiding this study was:

RQ1: What is the relationship between the main teaching method attribute (traditional chalkboard lectures, collaborative/ group learning, and case studies) used in accounting courses and the numerical self-reported course grade outcome of the students?

Hypotheses signify guesses of the relationship between the variables or solutions to the problem (Christensen, Johnson, & Turner, 2010). Research questions do not offer any hypothetical answers related to the research problem (Leedy & Ormrod, 2010).

Hypotheses and research questions both provide direction for the researcher so that s/he may know what type of data to collect. Research hypotheses and questions come from the sub problems. There is a relationship between the sub problems and the hypotheses or question. The sub problems are increased proportionately to the research questions (Leedy & Ormrod, 2010). Two hypotheses supported the research question:

H1₀: There is no relationship between the main attribute of the teaching method used in accounting courses and students' numerical self-reported course grade outcome.

H1_a: There is a relationship between the main attribute of the teaching method used in accounting courses and students' numerical self-reported course grade outcome.

Conceptual Framework

The literature review is based on a broad area of study: teaching methods in accounting and the course outcomes. The information collected on the topics of teaching

methods in education and course outcomes led to the development of a theoretical orientation for framing the study. Accounting education as a language is widespread with talk about teaching higher order thinking skills. Educators frequently take the easy way out by having students memorize accounting information (Ivie, 1998).

Resource Dependence Theory. Five theoretical perspectives framed this study. The first perspective was Resource Dependence Theory originating in the 1970s by Jeffrey Pfeffer and Gerald R. Salancik. Resource Dependence Theory is an organizations' dependence on external resources, influencing the actions of the organization (Nienhuser, 2008). Organizations depend on outside resources when the environment is unsure. The key to an organization success is what Resource Dependence Theory is grounded upon. Pfeffer and Salancik believe external resources is important to the tactical and strategic management of a company (Mwai, Kiplang'at, & Gichoya, 2014). Accountants are important outside resources for businesses. Businesses use accountants for advice and basic accounting services (Gooderham et al., 2004). Research results suggest SMEs use external accountants for business advice to control resource constraints. Nonexistent skills and expertise in SMEs are common. Businesses rely on education facilities to produce viable accounting candidates to help with business decisions (Gooderham et al., 2004).

Constructivist Learning Theory. The second theoretical perspective was Constructivist Learning Theory developed by Jerome Bruner in 1966. The theory is based on Constructivist Teaching Theory, a belief that learners learn by active participation (Harrington & Enochs, 2009). Independent and motivated learners are created through constructivist teaching by nurturing critical thinking. The three

components of constructivism are learning is dependent on prior knowledge, cognition is aimed at visibility and language is weak, to co-construct meaning (Harrington & Enochs, 2009). Bruner's interpretation suggests teachers can be facilitators by helping students gather ideas from real world situations (case studies). Students can continually build upon what is learned in an organized curriculum (Harrington & Enochs, 2009). A case study is an example of the Constructivist Learning Theory (Asal & Kratoville, 2013; Coupal, 2004). A case study is an interpretation of one or more real-world business problems (Hassler, 1950). Case studies require active participation and aid in the development of personal skills, independent learning, critical thinking, and powers analyzed (Asal & Kratoville, 2013; Hassler, 1950). The Accounting Education Change Commission (AECC) encouraged colleges and universities to integrate Constructivist Learning Theory in accounting curriculum, as well as, case studies and group learning (Mostyn, 2012).

Theory of Meaningful Learning. The third theory was Ausubel's Theory of Meaningful Learning introduced by David Ausubel in 1963. The main idea of Ausubel's theory is meaningful learning (Novak, 2010). In Ausubel believes the mechanism by which new material is presented, in academic settings (lectures), is integrated into existing mental structures (Ivie, 1998). The human mind organizes information into categories following logical rules: comparative thinking structure, symbolic representation structures, and logical reasoning structures (Garner, 2007). Cognitive structures absorb new information through subsumption. Cognitive structures that are brought to life aid in teaching and learning new information (Ivie, 1998).

Reaching a level of expertise requires a continuous process of meaningful learning (Novak, 2010). Educational strategies promoting meaningful learning is important to aid in the transfer of knowledge from the classroom to the real world (Novak, 2010). Meaningful learning occurs when students transfer or connect new information to previous knowledge in a form that makes sense to him or her (Getha-Eby, Beery, Xu, & O'Brien, 2014).

Information is retained for the future by placing it in the proper box. Larger boxes, in our cognitive structure, subsume smaller boxes. Forgetting information occurs when larger boxes incorporate smaller boxes, causing the small boxes to fall apart (Ivie, 1998). Ausubel believes retaining new information is influenced by knowledge of the learner, organization, and stability. Ideas are organized like pyramids, with the apex forming the general ideas, and specific ideas subsumed under them (Ivie, 1998). Meaningful learning takes place when the concept or idea of material presented is understood. The student must also be able to relate the information to other stored facts in the brain (Ivie, 1998). All teaching method attributes in this study promotes meaningful learning.

Model of Work. The fourth theory was Kolb's Model of Work drawing on the experiential learning theories of Lewin, Dewey, and Piaget. Kolb defined learning as the process where knowledge is created through the transformation of experience (Siegel, Omer, & Agrawal, 1997). Experiential learning theory is influential in adult learning. The three components of Kolb's model are the theory of experiential learning, the learning cycle graphical model, the Learning Styles Inventory (Kolb, Rubin & McIntyre 1971; Kolb 1984). The theory proposed learning as a cognitive process constantly

adapting and engaging the environment (Bergsteiner, Avery, & Neumann, 2010).

Knowledge and differences derive from the experience of learners. The different styles of learning change with situations and preferences. More comprehensive student learning can be achieved if hands-on activities for virtual computer laboratories are designed based on Kolb's Experiential Learning Cycle (Konak, Clark, & Nasereddin, 2014).

Kolb's model is related to active learning methods discussed in Chapter 2.

Groups of students work on scripted activities, encouraging construction of knowledge, instead of using traditional chalkboard lectures, is a feature of both (Konak, Clark, & Nasereddin, 2014). Students learn from others' experiences (Deaton, 2015).

Collaborative/ group learning requires an interactive environment and exchange of knowledge among students. Teams work together for a common goal (Opdecam, Everaert, Van Keer, & Buysschaert, 2014).

Cognitive Load Theory. The fifth theory is Cognitive Load Theory (CLT).

John Sweller developed the theory as a byproduct of a problem-solving experiment in the mid-1980s. The objective of the CLT is the improvement of learning difficult tasks by methodically using the relationship between the working memory and the unlimited long-term memory. CLT support students in acquiring complex knowledge and dealing with complex problems (Mostyn, 2012; Paas & Ayres, 2014). The efficiency of learning is affected by complex information held in working memory. The effort needed to hold the information is referred to as "cognitive load" (Mostyn, 2012). Additional research on CLT suggests the instructional design can optimize cognitive load and improve learning efficiency (Mostyn, 2012; Paas & Ayres, 2014).

CLT is classified into three types. The first type intrinsic load is the cognitive effort required as a result of the inherent complexity of the material to be learned. The second type extraneous load is the unnecessary load imposed on working memory as a result of the instructional delivery method. The third type germane load is the effort that working memory use to comprehend material and develop schema is called germane load (Mostyn, 2012). Depending on the circumstance and goals of the course, the accounting instructor's ability to expand, fine tune, and rethink teaching methods improve with CLT.

The interpretation of the five theories provided the theoretical basis of the study. The theories provided a system of concepts, definitions, and propositions for studying the association between teaching methods used and students' self-reported course grade outcome. Applied concurrently, all theories provided the optimal opportunity to accomplish the objectives of the study.

Definition of Terms

Active learning methods - techniques used in learning to achieve student participation in the process (De Araujo & Slomski, 2013).

AECC (Accounting Education Change Commission) – an organization that stimulates change in accounting education (Sundem & Williams, 1992).

AICPA (American Institute of Certified Public Accountants) - The largest accounting association in the world responsible for setting ethical and auditing standards. AICPA is responsible for the development and grading of the Uniform CPA Examination (About the AICPA, 2016).

Auditory learner - a learning style where the learner learns through listening (Lamarche-Bisson, 2002).

Bean counters – a stereotype used to describe accountants.

Blended approach - incorporates some of the traditional teaching approach perspective and shifts emphasis away from accounting mechanics (Diller-Haas, 2004).

Case studies - a real situation that can be looked at or studied to learn about something (Case study, 2016)

Cognitive structure - the basic mental processes people use to make sense of information (Garner, 2007).

Collaborative/ group learning - an educational approach to teaching and learning that involves groups of students working together to solve a problem, complete a task, or create a product (What is collaborative learning, 1997). A small group to complete a task, solve a problem, analyze a scenario, complete a project, or take a test (Opdecam, et al., 2014). A teaching method where students learn in small teams using a variety of learning activities to improve understanding of a subject (Cooper, Prescott, Cook, Smith, Mueck, & Cuseo, 1990).

Comparative thinking structures - process information by identifying how bits of data are alike and different (Garner, 2007).

Conventional teaching methods - teaching methods that are ordinary and usually do not inspire or foster greater thinking for students (e.g., watching videos, short-answer tests, question and answer, deskwork from a textbook, etc.) (Thornton, 2001).

Course grade outcome - a number or letter that indicates how a student performed in a class or on a test (Grade, 2016).

CPA (Certified Public Accountant) - the title of qualified accountants who has passed the Uniform Certified Public Accountant Examination and has met additional

state education and experience requirements for membership in their respective professional accounting bodies and certification as a CPA (Langenderfer, 1996).

Department of Health, Education, and Welfare (DHEW) - a former department of the U.S. government (1953–79) that administered federal programs dealing with health, education, welfare, and income security (Department of Health, 2016).

Drivers - people, knowledge, and conditions (such as market forces) that initiate and support activities for which the business was designed (Byrne & Pierce, 2007).

Extraneous variable - refers to any variables that you are not intentionally studying (or cannot study, perhaps because of reasons of cost or difficulty) (Extraneous and Confounding Variable, 2012).

Generation Y – the generation born between the years of 1980-1990 (Nga & Mum, 2013).

Instructor-centered - instructor or teacher controls the learning environment (Hosal-Akman & Simga-Mugan, 2010).

Institutional Review Board (IRB) - a committee established to review and approve research involving human subjects. The purpose of the IRB is to ensure that all human subject research be conducted in accordance with all federal, institutional, and ethical guidelines (Institutional Review Board, 2016).

Interactive classroom approach – a hands-on, real-world approach to education (What is Interactive Learning, 2016).

Kinesthetic learner- a learning style in which learning takes place by the student doing physical activities, rather than listening to a lecture or watching a demonstration (Lamarche-Bisson, 2002).

Learning method/ style - an individual's mode of gaining knowledge (Learning Style, 2016).

Learner-centered – the methods of teaching that shift the focus of instruction from the teacher to the student (Moore & Buxeda, 2000).

Learner-controlled – the amount of control a student has over some if not most of what and how fast they learn (Moore & Buxeda, 2000).

Legal environment approach - curriculum focusing on the role of law in business and understanding how the legal system operates (McCourt, Low, & Tappin, 2013).

Logical reasoning structures – the use of abstract thinking strategies to systematically process and generate information (Garner, 2007).

Management accounting - the process of identifying, measuring, analyzing, interpreting and communicating information for the pursuit of an organization's goals (Langenderfer, 1996).

Meaningful learning - information learned by grasping a thorough understanding of concepts and how the information can relate to other information (Ivie, 1998).

Micro-Businesses or firms – a business with five or less employees (Gooderham et al., 2004).

Modes of mediation – the importance of the material mediation of different artefacts, entities and technologies, while extending it to include the importance of spatial settings and rearrangements (El-Sayed & Youssef, 2015).

NASBA (National Association of State Board of Accountancy) - an organization responsible for setting policies and requirements to sit for the uniform CPA examination (Breux, Chiasson, Mauldin, & Whitney, 2010).

Nontraditional teaching methods – teaching methods emphasizing critical thinking skills, used applications, and interactive classroom approaches (Chiang, Nouri, & Samanta, 2014).

OPRR (Office of Protection from Research Risks) - a branch of the Department of Health and Human Services who sets regulations and policies to protect human research subjects in educational research. The branch was dissolved in June of 2000 (Christensen et al., 2010).

Performance assessment tools - exams used by instructors to measure information learned or already known by the student (Hosal-Akman & Simga-Mugan, 2010).

Personal characteristics - a type of presage factor (personality, prior knowledge, academic ability) (Lizzio, Wilson, & Simons, 2002).

Presage factors - factors existing prior to the time of learning (Lizzio et al., 2002).

Rote learning - memorizing information based on repetition (Ivie, 1998).

Security and exchange Commission (SEC) - government organization protecting investors; maintain fair, orderly, and efficient markets; and facilitate capital formation (About the SEC, 2016).

Situational characteristics - a type of presage factor (e.g. workload, teaching method, course structure) (Lizzio et al., 2002).

Small and medium size enterprises (SMEs) – business organizations with 250 or fewer employees (Carey & Tanewski, 2016).

Small business (SB) - business organizations with 250 or fewer employees (Carey & Tanewski, 2016).

Small business owner-managers (SBOMs) - the manager and owner of a small business responsible for managing every aspect of the business (Thompson & Downing, 2007).

Student-centered methods - a wide variety of educational programs, learning experiences, instructional approaches, and academic-support strategies that are intended to address the distinct learning needs, interests, aspirations, or cultural backgrounds of individual students and groups of students (Student-Centered Learning, 2014).

Subsumption Theory - a mechanism by which new material presented in academic settings (lectures) can be integrated into existing mental structures. For subsumption to occur, “advance organizers” precede the presentation of new knowledge (Ivie, 1998).

Symbolic representation structures - transform information into culturally acceptable coding systems (Garner, 2007).

Teaching method – the principles and methods of instruction (Teaching Method, 2016)

Traditional chalkboard lectures – delivery method of educational information by writing on a chalkboard with chalk and talking to an audience (Smigla, 1995).

Traditional law approach - curriculum focusing on contracts and traditional legal topics (McCourt, Low, & Tappin, 2013).

Traditional teaching methods - teacher controls the learning environment involving problem solving and lectures by the instructor (Hosal-Akman & Simga-Mugan, 2010).

Uniform CPA examination - an examination designed to protect the public interest by helping to ensure that only qualified individuals become licensed as U.S. Certified Public Accountants (The Uniform CPA Examination, 2016).

User approach - subjects taught from the user perspective (Diller-Haas, 2004).

Visual learner - a teaching and learning style in which ideas, concepts, data, and other information are associated with images and techniques (Lamarche-Bisson, 2002).

Assumptions

The researcher made several assumptions about this study. This study assumed a significant amount of accounting students would respond to the quantitative questions within the survey to provide insight on teaching methods for accounting students. The researcher's knowledge of education, teaching, and the expectation of the business environment provided understanding to help moderate and identify the effects of bias through the progression of the study. The researcher assumed students are not experts in the field of accounting, education, or business and possessed the ability to identify the main attribute used in the course. The researcher assumed the participants will answer all questions with honesty. The researcher assumed enough students were enrolled, near midterm exams, to produce viable results. The researcher assumed the sample identified teaching method attributes related to the students' self-reported course grade outcome and the students were able to identify the main teaching method attribute used in the course. The researcher also assumed each student was given the same amount of information during the class time. The researcher assumed the instructor taught the entire duration of course time and students were not released from class early, on a regular basis. The researcher assumed the instructor presented sufficient information and

assigned an adequate amount of assignments, at or near midterm exams, to produce viable research results.

Scope, Limitations, and Delimitations

The scope of the study was limited to students currently registered in a four-credit hour, 16-week accounting course, at a community college, in the spring 2017 semester. To produce viable results, the researcher needed 81 samples and an additional 18 samples for the pilot study. Students were not allowed to participate in both studies. Participants consisted of male and female students with different educational/ professional backgrounds. The sample of the population was extracted near the time of midterm exams. The community college has a deadline for students planning to drop courses. Students not performing well in accounting courses make decisions to drop the course after midterm, depending on the score. To maximize data collection, the researcher gathered information from students, before dropping from the course, along with the current grade in the course. Students dropping the course do not receive a letter or numerical grade from the college. The instructors were asked to give each student the current grade earned in the course, prior to the administered survey. The researcher chose a community college because of the smaller class sizes and the ease of gathering data compared to a 4-year university.

Limitations of this research were unrelated factors (i.e. illness, family issues) related to students' course grades. The unrelated factors created limitations. The study was constrained to one public community college, in the state of Illinois, where the study subjects are mainly freshman and sophomore students. Limitation of the study includes honest responses by the participants. This study, data collection method, was limited by

the number of students enrolled in a four-credit hour, 16-week accounting course, in the spring 2017 academic semester, near midterm. Participation in the survey was voluntary. Data collected relied on the number of students willing to participate, the number of students enrolled near midterm, and the number of students present on the day the survey is administered. The reliability of the survey instrument does not imply validity of said instrument.

Delimitations are characteristics that define the boundary and limits the scope of the study (Simon, 2011). The research results were restricted by the parameters of descriptive research. Factors of delimitations include the research questions, objectives, variables, the adopted theoretical perspective, and the chosen population (Simon, 2011). The study participants were restricted to students in an accounting course at the community college of study. The focus of the study was the main teaching method attributes related to traditional chalkboard lectures, collaborative/ group learning, and case studies, used in the accounting course. A delimitation to this study was not choosing to include professional or educational background, gender, age, attitude towards the subject, or ethnic background of the participants. Focusing on popular teaching methods in accounting courses was a delimitation to the study. Students outside of accounting courses were not included and the researcher did not include other higher education facilities. Using the students as participants, without considering the opinions of the instructors, was a delimitation to the study. A delimitation to this study was not considering the education level of the instructors teaching the accounting courses.

Summary

Qualifications is a portion of employability. Employability is comprised of behavior, cognitive capabilities, the right attitude, and required competencies for the job and environment. Numerous studies suggest a lack of competency as a reason for non-employability and lack of performance in the workplace (Rout, 2015). Focusing on a makeover of the education system to a competence-based learning model helps educators strengthen employability of accounting and business students (Panigrahi, Das, & Tripathy, 2015). Studies reported accounting graduates lack skills needed in the modern business environment without focusing on causes of the shortage (Abayadeera, & Watty, 2014). Studying teaching methods for accounting students can aid in a solution to a real-world business problem.

The study of teaching methods is a widely researched topic. Understanding the associations between the variables will help instructors establish lessons that cater to student learning and promoting higher grades, leading to the production of competent business professionals. Students absorb, learn, and store information differently. All knowledge areas have a debate to improve education practices, which is no different in the business area. The role of accounting professionals include problem solving and creating structured analysis (De Araujo & Slomski, 2013). Accountants' profiles aligning with market and corporate changes is ideal.

The development of specific skills is social and professional demands accountants must demonstrate as well as technical preparation. The educational aspect of future accounting professionals requires skill development, problem-solving abilities, and critical-reflexive thinking. Today's students benefit from speed and quality of

information (De Araujo & Slomski, 2013). Using the benefit of speedy and quality information, created a distinctive characteristic, compared to former professional. Students are no longer interested in how things work but how to make things work while interacting with reality. The internet and newer technology can represent a challenge for traditional lectures despite support from audiovisual resources. Students may face difficulties integrating the lectures (De Araujo & Slomski, 2013).

The purpose of this quantitative descriptive research study was to determine, using statistical comparison, any significant relationship on how teaching method attributes relates to an accounting students' self-reported course grade outcome. This study was conducted with a sample of accounting students at a community college using a questionnaire survey instrument. This study will aid instructors, college and university leaders, and hiring managers in understanding the teaching method attribute most effective to teach accounting courses to promote higher grades. The study will also help to bridge the gap for colleges and universities, responsible for producing potential business professional, between knowing and not knowing, what attribute is best for educating students in accounting for the best grade outcome. Educational institutions, educators, and students' researchers should discuss alternatives to improve the efficiency and efficacy of the teaching-learning process, to aid in closing gaps created by traditional teaching (De Araujo & Slomski, 2013).

The subsequent Chapter 2 provided the basis for the research by reviewing relevant literature. The literature review outlines a more detailed assessment of teaching method attributes, course grade outcomes, and the connection of accounting education to

the business world. The literature review aided in the selection of the teaching method attributes used in this study.

Chapter 2

Review of Literature

The literature review is an expression of the researchers' findings. The researcher can benefit from someone else efforts. The author identified blind alleys in the research and suggested hypotheses for reproduction (Neuman, 2006). The researcher can focus on the hypothesis and gain a new vision by making a review to disclose procedures, techniques, and research designs (Neuman, 2006). Although the research problem serves as the starting point for research, the literature review serves as the foundation (Levy & Ellis, 2006).

The purpose of this quantitative research study was to determine if a relationship existed between the main teaching method attribute used in the course and the students' numerical self-reported course grade outcomes. The researcher used numerous studies conducted on teaching methods. The effort to improve learning outcomes in higher education is continually improving (Soni, 1998). The design of the study was to determine whether the teaching methods were successful in creating better working professionals.

The chapter originates with the identification of documentation sources. A recap of research variables and research questions is provided. Chapter 2 presents historical overviews of the variables. Evidence of gaps in literature, pertaining to the importance of accounting in the business world, business and accounting education, and teaching methods, in accounting courses, is discussed. The literature review provided an overview of the history of accounting and challenges faced by educators when teaching accounting at the collegiate level. The literature details the importance of knowledgeable

accountants for business success. Chapter 2 concludes with an analysis of the literature review, a summary of key points, and a synopsis of the content of the chapter.

Documentation

Literature to support the study was based on current and historical research. The researcher examined teaching methods in accounting education and the importance of the methods to producing competent accountants to the business world. The researcher evaluated the literature for key discussions related to producing viable accountants for business purposes, higher education in accounting, teaching methods in accounting, and factors for poor grades in accounting. Studies, websites, dissertations, journals, books, and newspapers, used in the study, were gathered from online databases, including EBSCOhost®, ProQuest®, Gale Power Search®, and Google Scholar®. The University of Phoenix online library was the initial selection for peer reviewed journals and publications associated with business and accounting education. Specifically, targeted were the Journal of Education for Business, Accounting Education, Issues in Accounting Education, and Accounting Review.

The literature review included a balance of information between historical, germinal, and current sources. The research study included an analysis and evaluation of 115 peer-reviewed journal articles obtained from online resources. The literature review included 17 books to obtain theoretical, historical, and germinal perceptions for application to the study. Research studies and dissertations are included as topical and historical references to related teaching methods and the importance of accounting education to the business world, for conducting this study. The literature review included title searches with combinations and variations of the following terms: *business*

education, university education, teaching accounting, accounting, higher education accounting, education to employment gap, accounting education to employment gap, higher education, importance of accounting to business, accountant role important to business, accounting education important to business, history of accounting, accounting education, quantitative studies, reasons students fail accounting, accounting students, college faculty requirements, K-12 teaching requirements, college faculty, teaching methods, teaching methods for higher education, and educational studies.

Research Questions

Historically teachings in accounting courses used traditional teaching methods. Traditional teaching methods are instructor-centered involving problem solving and traditional chalkboard lectures by the instructor (Hosal-Akman & Simga-Mugan, 2010). The instructor determines the performance assessment tools used during the course and transmits it to the students through lectures. Teaching is the process of transferring knowledge to students' notebook (Cottel and Millis, 1993). Changes prompted in teaching are due to the new developmental methods in accounting (Hosal-Akman & Simga-Mugan, 2010). Changes in the role accountants play in organizations, complex accounting practices, and increased use of technology are the new developments (Hosal-Akman & Simga-Mugan, 2010; Williams, 1993). The variables consist of the main teaching method attribute, used in accounting courses, at a community college and the students' self-reported course grade outcome. The research question was:

RQ1: What is the relationship between the main teaching method attribute (traditional chalkboard lectures, collaborative/ group learning, and case studies) used in accounting courses and the numerical self-reported course grade outcome of the students?

Historical Overview of Accounting Education

Accounting started as a subject in higher education where the approach was debatable. The debate was whether the approach has a practical orientation or a liberal arts orientation. The debate was valid due to students, majoring in business, attending business only schools (Langenderfer, 1996). In 1883, Wharton School of the University of Pennsylvania offered the first accounting courses as a conceptual theory course. The design of the course pleased the liberal arts faculty (Langenderfer, 1996). New York was the first state to create a certification known as the CPA certification. To obtain the certification, one must pass an exam. More states began to pass CPA laws that became a measurement for instruction (Langenderfer, 1996).

By 1931, business schools' strongest field was accounting. As corporations formed, the accounting profession grew (Langenderfer, 1996). Management accounting became indispensable to modern society and prompted colleges to add it to liberal arts education (Langenderfer, 1996). The demand for accountants in organizations grew as large as the demand for lawyers and engineers. Budgeting, cost analysis, management accounting, writing, and human relations became more important than the CPA exam. The demand for public accountants also grew as the demand for consultants increased (Langenderfer, 1996).

By the mid-1950s, due to the debate of accounting education focusing heavily on mechanics and technique, organizations and education facilities discussed the following needs:

- a qualifying exam;
- new accreditation processes;

- the extent of descriptive vocational material; and
- the balance between management accounting education and public accounting education.

In 1961, organizations were forced to hire non-accounting graduates and train them. Accounting was not recognized as a learned profession, requiring practical training and four years of college (Langenderfer, 1996). The AICPA created a board to produce accounting standards justifying the professional accounting curriculum, in 1974. By 1993, The Uniform CPA Examination requirement was passed, by 32 states. The Uniform CPA Exam is currently used across the United States and abroad (Langenderfer, 1996).

Historical Overview of Teaching Methods

The idealized method of teaching provides a detailed and clear statement of learning objectives. The objectives are defined in terms of the student expectations, behaviors, and references to assess student progress (Kropp, 1973). The objectives will aid in the instructor staying focused. Entry tests and pretests are included in the idealized teaching method. The entry tests place students according to the skillset. Students who achieved objectives, students who partially achieved, and students lacking prerequisite skills are placed properly (Kropp, 1973).

Material for instructional setup in self-instructional format is ideal. Students can complete the assignments at their leisure. Each instructional package contains unit tests that are completed before moving to the next section (Kropp, 1973). The instructional material is presented through slides, tapes, films, and videocassette. Students with different levels of aptitude and different backgrounds are accommodated with alternative

sets of instructional material. The progress of students is monitored and problems are resolved (Kropp, 1973).

Historical teaching methods are straightforward; undergraduate courses are lectures (traditional chalkboard lectures) and graduate course are a mix between discussion (collaborative/ group) and lectures (traditional chalkboard lectures). The era of the useless methods has ended, and new dimensions emerged (Kropp, 1973). In 1969, Nérici (as cited in De Araujo & Slomski, 2013) stated, “teaching methods are the set of logically coordinated moments and techniques, with a view to driving the student's learning towards certain objectives” (p. 21). The route towards an objective is the teaching method. The adequate means to accomplish objectives are the methods. The methods of different knowledge areas are independently developed, such as mathematical methods, sociological methods, pedagogical methods, etc. An analysis is due to reflect on the teaching methods used to prepare professionals (De Araujo & Slomski, 2013).

Historically, educators have disagreed, when teaching, whether the concentration is placed on the psychological or logical aspect of a subject. Psychological refers to the student using personal experiences to learn. Logical compares the subject matter to the author’s finished product of thought.

According to Hilda Taba (1962), “psychological aspects do not obscure or falsify the basic ideas and relationships of the discipline” (p. 301-302). John Dewey (1938) scolded mentees who applauded student-centered methods that disregarded the progressive aspect of a subject matter. Dewey also expressed that students learn gradually when using the psychologizing approach. The ideal method is for educators to

use discretion when deciding which method to use, depending on the educational needs of the students (Thornton, 2001).

Current Findings on Accounting Education

The Accounting Education Change Commission (AECC), developed in 1989, is an organization in the United States appointed to stimulate change in accounting education (Sundem & Williams, 1992). In the early 1990s, the AECC called for a change in introductory accounting courses. Accounting programs, at some colleges, have changed introductory courses from the traditional teaching approach to a nontraditional teaching approach (Chiang, Nouri, & Samanta, 2014). Traditional teaching approach emphasizes technical material and blackboard lectures allowing students to gain an understanding of financial statement preparation. Students with thorough knowledge of financial statement preparation will excel in business classes but lack critical thinking skills needed to perform in the real world. Nontraditional teaching (active teaching methods e.g., case studies, collaborative/ group learning) approach emphasized critical thinking skills, used applications, and interactive classroom approaches (Chiang, Nouri, & Samanta, 2014). Nontraditional teaching methods (e.g., traditional chalkboard lectures) helps students develop abilities and skills necessary for the accounting profession but fail to provide a thorough understanding of vital financial statement preparation.

Most business programs require students to learn, at least, basic accounting. Researchers suggest the use of active learning methods that incorporate activities to engage students instead of listening to lectures (Coram, 2005). Collaborative/ group learning and case studies are categorized as active learning methods. Active learning

methods are beneficial to all accounting students (Coram, 2005). The disadvantages to using active learning methods are the time constraints, material covered in class, grading difficulty, lack of individual accountability, and designing activities to fit the course (Chakraborty, 2016).

Educators focus on technology to aid students in preparation for the working world. Some schools have adopted Albrecht and Sack recommendations to update the curriculum (Force, 2002). Students need skills to become self-regulated learners and be successful in the field. AECC in conjunction with the AICPA urged introductory accounting educators to incorporate technology into the curriculum (Fratto, 2011). Popular modern technology used in accounting education, in 2004, was email (90.2%), internet (90%), word processing (88%), spreadsheets (86%), presentation software (71%), and data analysis programs (54%) (Fratto, 2011). The newer generation of students is no longer visual or verbal learners. New technology-savvy learners prefer a creative use of technologies when learning (Fratto, 2011; Proserpio & Gioia, 2007; Ueltschy, 2001). Technology changes interactions between student and teacher in a way that is beneficial to the learning process (Fratto, 2011). Faculty resistance to advance teaching and learning strategies is a disadvantage and the recommendations by AECC and AICPA failed to set out how educators can meet the initiatives.

Demand for faculty with professional experience and background increased for undergraduate business courses in accounting. Experienced faculty add relevant information to students. Course subjects with strong physical and operating structure, alone, are inadequate (De Araujo & Slomski, 2013). Future accounting professionals expect content and knowledge comparable to real world situations.

Current Findings on Teaching Methods

A lever for the learning process is the teaching method. A more effective teaching method is appropriate, for improvement. Teaching methods require rethinking (Thornton, 2001). The United States teaching methods are different from most other countries (Soni, 1998). Understanding basic concepts are key in the United States compared to other countries emphasis on memorizing. The differences could play a role in why US children become adults and outperform the rest of the world (Soni, 1998).

Active learning methods are techniques used in teaching to achieve student participation in the process (De Araujo & Slomski, 2013). Collaborative/ group learning and case studies are examples of active learning techniques. Years of investigational psychology shows, the development of approaches emphasizing applications and interpersonal collaborations promote learning. The social nature of learning is well documented and traced to theories of social interdependence, behavioral learning, and cognitive development. Student-faculty and student-student interactions influence educational outcomes using collaborative learning (Moore & Buxeda, 2000). Collaborative/ group learning is a teaching strategy promoting active learning in groups. Collaborative learning is the most researched method of all teaching methods (Moore & Buxeda, 2000).

Current instructors in accounting courses utilize a variety of methods to ensure every learner is taught. Practicing accounting while learning is considered active learning. Strategies that support active learning are:

- the use of visual materials during lectures (video, multi-media, slides);

- the use of learning strategies that encourage writing (i.e. note-taking, abstract preparation, writing memos on the problems);
- encouraging students to solve problems using case studies;
- computerized teaching in the classroom;
- collaborative learning; and
- using simulations, games and animations (Bonwell & Eison, 1991).

Collaborative learning is students working together in a small fixed group on a structured task (Cooper et al., 1990). Collaborative learning is a teaching method where the structure and content is determined by the instructor and the students play an important part of the structure (Ravenscroft, Buckless, & Hassal, 1999).

Studies conducted on teaching accounting courses. In 1995, Friedlan used survey research to study introductory accounting students in a traditional and nontraditional course. Non-traditional introductory financial accounting courses are case-based and stresses technical material needed to develop skills and abilities in the accounting profession, more than traditional courses (DeBoskey, 2009; Liu, Yao, & Hu, 2012). Traditional courses are lecture-based and do not aid in the development of critical thinking, teamwork skills, and communication (Friedlan, 1995; Opdecam et al., 2014). Traditional courses do have advantages. Traditional chalkboard lecture courses help in understanding vital financial statement preparation and analyses that aids performance in other business courses (Smigla, 1995). The study survey instrument was used to investigate the teaching approaches used to teach the introductory accounting courses and the effect on students' perceptions and attitudes about accounting courses and accounting practitioners. The skills and abilities examined were recognized by exploring journal

articles and professional comments. The survey population was students enrolled in introductory financial accounting courses, in two of the several business programs offered by York University. Different teaching approaches were used for each course but similar content. The nontraditional course encouraged students to use collaborative/groups learning. Several methods to teach the course was used but the most distinct was case studies from newspaper and magazine articles. The traditional course used chalkboard lecture format with little discussion. Assignments were exercises and problems. The results are not consistent with the AECC objective and indicates student perception of the skills needed for success in accounting courses is dependent upon the teaching approach used in the course (Friedlan, 1995). Students in nontraditional courses have realistic perceptions compared to traditional. Conducting the study on accounting courses in two separate programs with uncontrolled variances in student body and faculty is a disadvantage to Friedlan's study. It is impossible for the same instructor to use both teaching methods in the same program. The instructor could be responsible for the results of the survey. The teaching approach producing trained and skillful accountants is not addressed. The study considers only one nontraditional approach.

Initial research on collaborative learning, in accounting, was introduced toward the end of the twentieth century. Researchers Ravenscroft and Buckless (1995) studied collaborative learning on the academic performance of students by exploring the effects of different grading schemes. The study compared individual and group incentive affects in collaborative learning. The control group was graded on individual performance only. The experimental group of students was graded on individual and group performance (Ravenscroft & Buckless, 1995). Two sections of accounting principles taught by the

same instructor was used in the study. The classes were taught in the same manner but the grading system was different. Thirty-six students served as the sample for the study. The researcher used analysis of covariance to analyze the data. The independent variable was the grading systems (collaborative or traditional) and the dependent variable was the sum of each student's individual score. The students in the experimental group outperformed the traditional group except on exam one where collaborative grading was not used. The study provided reliable data and added to accounting educational research. Educators could benefit from the findings in the research. Most of the current research is on general education and not accounting. The researcher studied one five-week semester at one university with small sample sizes. To draw generalizability, the researcher needs repeated studies or extensions of this study. Collaborative incentives in upper level classes would have to be different to reflect the commitment and maturity of the students. Ravenscroft and Buckless extended the 1995 study in 1997. The new study covered five different courses. The new study compared exam results of students with different group incentives and different teamwork schemes to indicate the variables cause no significant effect on the exam results (Ravenscroft & Buckless, 1997).

A case study conducted by Lindquist (1995), gathered groups of students to study various auditing reporting issues. The sample for the study was one class, of 49 students, in advanced reporting issues at a medium sized university. All students were seniors and most was planning to sit for the CPA examination. The students were assigned to study auditing reporting issues requiring the subjects to reading over 1,000 pages of material in 5 weeks. Sixteen groups were formed and a lottery matched groups to assignments. Students researched, taught material, and presented the findings to the class. Students

showed a preference for the collaborative learning style by the end of the study. The students perceived greater achievement and attitudes (Lindquist, 1995). The perceptions of students toward accounting courses was studied in 1996 by a group of researchers. Students in collaborative learning groups tend to maintain a positive attitude towards accounting courses, compared to students in the traditional teaching group. Ciccotello and D'Amico (as cited in (Hosal-Akman & Simga-Mugan, 2010; Opdecam et al., 2014) studied collaborative learning and the effects on student performance. The results showed collaborative learning student exam scores were significantly higher compared to traditional learning students (Hosal-Akman & Simga-Mugan, 2010; Opdecam et al., 2014). Kunkel and Shafer (1997) studied the effect of team learning on exam scores and found that the traditional learning environment significantly outperformed students in collaborative learning environments (Hosal-Akman & Simga-Mugan, 2010). Studies show no consensus on the effects of collaborative learning in accounting education due to the mixed results. Lindquist study used one course at one medium sized university and the study might fail to draw generalizability. Accounting is comprised of many issues and auditing is just on section. Study subjects were all seniors and other accounting students were not included in the study.

Al-Twaijry (2010) attempted to recognize factors that affect accounting performance in students. Al-Twaijry study used three management-accounting courses: Managerial Accounting (MA), Cost Accounting (CA), and Advanced Managerial Accounting (AMA) in Saudi Arabia (Al-Twaijry, 2010). The random sample was 312 students registered in 2000, 2001, and 2002 who completed the three management accounting courses. The researcher gathered information about the student from the

permanent files at a university. The files included high school and college transcripts, registered courses, passed courses, GPA, college major, date of birth, addresses, and special needs. The MA course is a second-year class and all students must pass the course. Thirty percent did not receive a grade in the course and left the university. The CA course is a third-year course for business and accounting students. Forty percent did not receive a grade in the course. The AMA course is a fourth-year course for accounting students. Ninety students graduated out of the 312 enrolled. Most of the students graduated with a low GPA and 18% was at risk of being dismissed. The researcher examined the relationship between the variables. The samples were divided into two groups of students who took accounting in high school and students with no prior accounting. The researcher used correlation and mean comparison to analyze the data. Thirty-five to fifty percent of the students failed the courses. There are consequences for academic failure that can cause both emotional and financial problems (Al-Twajjry, 2010). The specific failures and the reasons why the students failed were not identified or understood (Al-Twajjry, 2010). The study suggested decreasing hours per semester, for students, but failed to include a method to show instructors how to teach students and gain success from the accounting knowledge presented. Researchers suggest the educators' anxiety as a reason for the failure in delivery (Buckhaults & Fisher, 2011).

Descriptive Studies Related to Teaching Methods

De Araujo and Slomski (2013) used descriptive and exploratory research methods to describe active learning methods used to improve teaching and learning in accounting. The researcher used numerous studies conducted in accounting and business, related to

teaching and learning methods used in accounting as the sample. The research concluded that active teaching/ learning methods could be used to improve learning for future accounting professionals. Active learning methods are superior to traditional teaching methods (De Araujo & Slomski, 2013). The researcher found little research on active learning methods. Research was limited to research journals published in the last five years, in Brazil. The research lists active learning methods but fail to research with method is best for accounting students.

Duchac and Amoruso (2012) conducted a descriptive study of the characteristics of introductory accounting courses. The researchers collected data on seven aspects of the course, suggested by AECC, and trends in college education. The seven aspects researched by Duchac and Amoruso (2012) are course size and staffing, pedagogical orientation/teaching approach, standardization of course elements across instructors, the textbook selection process, use of technology-based course management tools, off-site course delivery, and transfer credit acceptance. Data were collected by survey drawn from department or area chairs in accounting at 241 four-year institutions. The response rate was low and could provide a distorted view of characteristics. Research shows, most colleges, in the study, required two semesters of introductory accounting courses. The data results show a point of reference for educational professionals to create curriculum, further research, and teaching plans (Duchac & Amoruso, 2012). The results provide education professional with insight on the delivery and structure of introductory accounting courses.

Kebritchi (2014) identified preferred teaching methods for online learners. The relationship between instructors' interactivity and perceived productivity of the online

teaching, the relationship between instructors' teaching methods and perceived productivity of the online teaching, and the relationship between learners preferred online teaching methods and the characteristics of the learners was explored using a descriptive correlational survey design. The sample was 30 graduate students in a program offering a combination of face-to-face and online courses. Spearman's correlation test was used to analyze the data. Survey results suggest a moderate relationship with the degree of instructors' activity and involvement in online discussion. The narrative method was identified as the preferred teaching method (Kebritchi, 2014). The study small sample size is not sufficient to provide generalization. The study was limited to graduate students and did not consider undergraduate accounting students.

Traditional Chalkboard Lectures

In the 19th century, the chalkboard was a teaching necessity. Teaching a population of students inspired the development of the chalkboard for large group learning. The chalkboard is visible to the entire class and reusable space, unlike a book. The chalkboard aided in shaping classroom practices by saving time. The chalkboard eliminated the challenges of instructing one student at a time. The versatility of the chalkboard shaped students and instructors' actions and experiences in an education setting (Wylie, 2012).

Today the chalkboard continues to be an important feature in the classroom, outlasting educational technologies and innovations. Instructors used the surface for drawing and writings making explanations and corrections clear and concise for the entire class (Phillips, 2015; Wylie, 2012). The chalkboard is recognized as a way of disciplining the minds and bodies of students (Phillips, 2015).

Traditional chalkboard lectures continue to be the leading teaching method for delivering material to large groups (Perrin & Laing, 2014). Instructors used the surface of the chalkboard for drawing and writings making explanations and corrections clear and concise for the entire class (Phillips, 2015; Wylie, 2012). Examples are usually given to help students relate concepts to real world situations (Davies et al., 2016). Problems with lectures as a teaching method continue to surface (Jaijairam, 2012; Perrin & Laing, 2014). According to Jaijairam (2012),

Students have long struggled with the basic concepts of accounting primarily due to their lack of engagement inside the classroom. For the duration of most classes, students are listening and taking notes while instructors lecture from textbooks and illustrate key points using only chalk and a chalkboard. Educators can no longer rely on these types of traditional teaching methods and expect accounting students, particularly those with no work experience, to stay engaged and involved. (p. 75)

Live lectures aid most students in classes with “difficult to learn” material. Students are less/ incline to attend live lectures if the material is easily understood from textbooks and attendance is not a factor in the final grade in the course (Davies, Cotton, & Korte, 2016). Live lectures provide a learning environment for students needing to ask questions about the material. Examples are usually given to help students relate concepts to real world situations (Davies et al., 2016).

The use of lectures is a historical means of instruction. Instructors use supplemental material to aid lectures. Lectures are considered a cost-effective method to teach large groups of students (Puttee, 2008). Researchers describe lectures as a shallow

learning tool and instructors can only deliver a small amount of instruction. Accounting instructors introduce proactive teaching strategies to facilitate student learning and become familiar with larger groups of students (Puttee, 2008).

Lectures and solving problems on the board promote passive learning because the students are only required to take notes and listen. Memorization is promoted, and critical thinking skills lack development (Young & Warren, 2011). Critical thinking skills are beneficial to understanding concepts and ideas in accounting curriculum.

Collaborative/ Group Learning

Supporters of collaborative learning emphasize the capabilities to improve student learning, communication, and interpersonal skills (Ravenscroft & Buckless, 1995).

Group learning is a small group completing a task, solving a problem, analyzing a scenario, completing a project, or taking a test (Opdecam et al., 2014). Group learning promotes social skills, decision-making skills, teamwork, and team management skills while increasing learning (Bonwell & Eison, 1991; Hosal-Akman & Simga-Mugan, 2010). Collaborative learning extends the learning environment of accounting students (Lancaster & Strand, 2001; Lindquist, 1995; Peek, Winking, & Peek, 1995). The environment and increased interaction, improves learning of basic accounting concepts and develops skills for professional success (Peek et al., 1995). Team members collaborating and students taking responsibility for academic performances are important characteristics of collaborative learning (Cottel & Millis, 1993). Group learning recommendations by the AECC state group learning increases communication skills, students' cognitive skills, and interpersonal skills (Kunkel & Shafer, 1997).

Like the Social Learning Theory, group learning requires an interactive environment and an exchange of knowledge between students (Deaton, 2015). Students learn from others experiences (Deaton, 2015), and teams work together for a common goal in collaborative learning (Opdecam et al., 2014). Accounting classes are starting to use collaborative learning despite researchers' criticism. Researchers believe students' time is not allocated fairly, reducing the knowledge learned by students and leaving students with an uneasy feeling. Grades are given as a group despite work allocation and effort. Collaborative learning is a new concept to accounting and instructors fail to invest time in learning the new strategy (Edmond & Tiggeman, 2009).

There are strategies to overcome the back draws of collaborative learning (Edmond & Tiggeman, 2009). Giving students specific group management roles can help alleviate problems with students working together. Each team works on a different group assignment, and the instructor chose the teams. Groups of four to six students are suggested. Students should receive an individual grade based on performance in the group (Edmond & Tiggeman, 2009).

Case Studies

Accounting education should be learned by case studies (Hassler, 1950). A case study is an interpretation of one or more business problems (Hassler, 1950). Part of teaching using case studies is the instructor never voices an opinion (Hassler, 1950). Case studies aid in the development of personal skills and powers analyzed. Students learn by picking through problems and finding their way to the end (Hassall, & Milne, 2004; Hassler, 1950).

Researchers believe (Hassall, & Milne, 2004; Hassler, 1950; Wines et al., 1994) accounting is better learned through case studies to help aid in the development of personal skills. Case studies are designed so students learn by picking through problems and finding solutions (Hassler, 1950).

Researchers suggest case studies to prepare students for real business practices (Wines et al., 1994). Skills in interpreting, analyzing, and applying financial accounting knowledge is developed using case studies (DeBoskey, 2009). A thorough understanding and development of skills are demonstrated in case studies. Case studies aid the students in understanding real problems (Wines et al., 1994). Educating by case studies require educational and administrative changes and most facilities are unwilling. Faculty at most higher education facilities lack pedagogic training. Most instructors come from graduate programs with little to no teaching practice or theory (Ribeiro, 2011).

Learning Environment and Academic Outcomes

In 1995, Barr and Tagg (as cited in Moore & Buxeda, 2000) proposed a transformation of the higher education process. The proposal suggests faculty become creators of learning environments and step back from being solely lecturers. The created learning environments are learner centered, learner controlled, and collaborative. According to Moore and Buxeda (2000), “too many graduates go out into the workforce ill-prepared to solve problems in a collaborative way, lacking the skills and motivation to continue learning” (p. 2).

Numerous studies conducted on the relationship between the learning environment and academic outcomes shows a clear relationship. The relationship between the students’ perception, approaches and outcomes vary depending on the

workload and academic environment. Historically, Scholastic Achievement Tests predict achievement at a university. Researchers suggest looking at the previous patterns of success and the current learning environment of the instructors to clarify the relative contribution of the students (Lizzio et al., 2002).

Research efforts aim to establish if effective course design and good teaching positively influence academic outcomes. According to Li-Fang (2000),

J. B. Biggs' theory on student learning approaches defined by the 3P model, conceptualize the process of learning as an interacting system of the following three variables: the learning environment and student characteristics (presage), students' approach to learning (process), and learning outcomes (product). (p. 39)

Factors existing, prior to the time of learning, are presage factors. Presage factors are broken down into two broad types: situational characteristics (e.g. workload, teaching method, course structure) and the enduring personal characteristics of the student (e.g. personality, prior knowledge, academic ability) (Lizzio et al., 2002). The perception of the learning environment is the most important element in applying the 3P model (Lizzio et al., 2002). The factors determine how situational factors effect approaches to learning and the learning outcome (Lizzio et al., 2002).

The way students approach learning is process factors. Students adopt two different approaches. Motivating students to improve the understanding of course material by applying and comparing ideas is the deep approach to learning. Reproductive strategies, with little to no effort to integrate information, is the surface approach to learning (Lizzio et al., 2002).

Learning outcomes derived from the learning process are product factors. Traditionally, scores or grade point averages assessed learning. Educators are discussing student evaluations of education. The two types of evaluations discussed are global evaluations of accomplishment or expressed satisfaction with a course, and specific perceptions of certain skill development (e.g. key or transferable skills) (Lizzio et al., 2002).

Alternative Views of Learning Styles

The definition of learning styles is not clear due to the multiple different models of learning styles (Santo, 2006). Learning styles, in general, is a student's preferred way of learning (Grasha, 1996). There are multiple researchers who has studied learning styles providing alternative views on the subject.

The history of learning styles has been traced back to the Myers-Briggs assessment (Pashler, McDaniel, Rohrer, & Bjork, 2009). Myers-Briggs is not supported by research but is used to make occupational decisions, by businesses and educational facilities (Cuevas, 2015). The most common learning style used in research is Kolb's inventories (Cuevas, 2015). The most common learning style in practice is the VAK model (discussed in the previous chapter).

Multiple researchers have questioned the validity of the various learning style instruments (Cuevas, 2015; Leite, Svinicki, & Shi, 2010; Riener & Willingham, 2010; Rohrer & Pashler, 2012). Fridley and Fridley (2010) believes that the VAK model lacks a predictive value and an increase in student learning would occur if students are matched to their learning preference. Leite et al. (2010) believes VARK has poor item selection and construction. Scott (2010) believes Kolb's learning style inventories are unreliable

due to a factor analysis. Dweck (2006) believes learning is influenced by internal drives. Researchers are concerned with the research of learning styles lacking credible psychological concepts with research designs that do not follow the basic and widely accepted psychological principles (Allcock & Hulme, 2010; Pham, 2012). Rohrer and Pashler (2012) believes that tailored instruction is a waste of resources. Norman (2009) do not believe learning styles improve learning and it is obsolete.

Riener and Willingham (2010) believes learning styles is a myth because no strong evidence is present to prove that learning styles exist. These researchers believe educational facilities are doing students an injustice by implementing methods that has been proven to not be effective (Riener & Willingham, 2010). When studied empirically with controlled conditions, student's preferences has no ramifications on the learning pace or the amount of material retained. The researchers also believe certain subjects should be taught using certain formats without regard to learning style (i.e. teaching math using visual means) (Riener & Willingham, 2010). Learning-styles theory is used to incorporate digital media in the classroom when media should not be tailored to different learning styles but used as a tool to aid in the learning process (Riener & Willingham, 2010).

Massa and Mayer (2006) studied learning styles with three sets of experiments. The created a computer-based lesson with two help screens, one for verbal learners and one for visual learners, with diagrams, illustrations, and printed text. The study utilized 20 measures with three proposed sides of verbal and visual learning styles. Preference and ability-based measures were given to distinguish the visual from the verbal learners.

The results showed no inclination for better performance with help screens matching their preference.

To date there is little evidence supporting that learning styles improve learning for students. Researchers believe educational resources are more effective when the institution adopt evidence based methods (Pashler et al., 2009). There is also belief that students do not differ in learning styles, but they do differ in interests, background knowledge, and abilities (Dweck, 2006; Riener & Willingham, 2010). The opposing views can aid in improving the learning field (Ali, Bakar, & Akhtar, 2014).

Importance of Accounting Education to the Business World

The stereotype of accountants as meticulous bean counters, producing historical financial reports and little to no relevance in business decision making, marks the profession as negative, dull, boring, and lacking imagination (Goretzki, Strauss, & Weber, 2013). Accounting students perceive the profession as rules based. The accounting profession sub-prime disaster of 2008, financial scandals, and irregularities helped to tarnish the reputation and question the integrity of the accounting profession (Nga, & Mun, 2013).

Relevance and integrity are the typical mindset, for accountants, in a dynamic business environment. Businesses coerce accountants to change mindsets and prepare for roles as partners and leaders in organizations. Accountants help firms by realigning the focus to societal legitimacy and growth (Nga & Mum, 2013).

Nga and Mum (2013) researched the perception of undergraduate students towards accountants and the role of accountants in driving organizational change in Malaysia. The sample used 279 undergraduate students majoring in accounting. The

focus of the sample was on Generation Y. Generation Y opinion of accountants and the role in driving change in organizations provide insight on restoring the image of accountants, on campus, through the curriculum (Nga & Mum, 2013). Generation Y business students form organizational leaders of tomorrow. Generation Y students surveyed have potential to embrace responsible stewardship towards stakeholders with above average ethical values, leadership skills, and professionalism (Nga & Mum, 2013). Generation Y credits the current trend of high turnover rates in public accounting. The research results show the negative stereotypical role accountants play in recruitment and retaining Generation Y but are beginning to change. The researcher believes the accounting profession aid in dispelling the negative views and encourage accounting careers by implementing post-internship mentoring programs. The programs teach social responsibility and possible recognition for continuing professional development credits (Nga & Mum, 2013). The study was limited to undergraduate students at one private institution and did not consider demographics.

Business advisory services are critical to survival and competitiveness for small businesses. The knowledge needed to survive and remain competitive is internally developed and consulted with agencies or professionals (Gooderham et al., 2004; Stone, 2015). Small businesses lack resources for research and development making business advice from outside sources critical to survival. Gooderham et al. (2004) researched the advisory relationship between accountants and small businesses (1-19 employees) in Norway. Ninety-five percent of Norwegian firms are small businesses, and 80% are micro-firms (five or fewer employees). The research study analyzed variations in services, from accountants, excluding basic or financial services. Two-thirds of small

firms utilize authorized accountant's due to the government-mandated law to produce annual financial reports. The results of the study reveal information and expert power diminish at significant levels in the relationship with the accountant. The relationship is significant to both parties (Gooderham et al., 2004).

In 2015, El-Sayed and Youssef studied accountants at an Egyptian manufacturing company. The accountants at the manufacturing company make decisions and plan operations. During the four-year study, the data collected techniques were observations, interviews, and ethnographic techniques (El-Sayed & Youssef, 2015).

“Modes of mediation,” are useful in studying accountants' roles (El-Sayed & Youssef, 2015). “Modes of mediation” broadens the understanding of accountants' involvements in business decision making beyond deliberate interventions and drivers of the role change. In recent years, the changing in management accounting roles attracted academic and professional accounting literature (Albrecht, 2014; Butler & Ghosh, 2015; Costantin, & Gornea, 2012; Moorthy, Voon, Samsuri, Gopalan, & Yew, 2012; Nielsen, Mitchell, & Norreklit, 2015). Multiple studies discussed the evolving business-oriented roles management accountants execute. Accountants progressed from providers of information to an advisory capacity, essential to managerial decision making. Stereotype roles of accountants as “bean-counters,” data entry, and financial reporting is replaced by business partner roles. The roles add value to the control of business and the decision-making processes (Goretzki et al., 2013). New terms as “business partner,” “internal advisor,” and “business consultant,” represent the role management accountants play (El-Sayed & Youssef, 2015).

Numerous studies (Baldvinsdottir, Burns, Norreklit, & Scapens, 2010; Byrne & Pierce, 2007; Granlund, & Lukka, 1998; Jarvenpaa, 2007) discussed the drivers for change in accountants' roles, including market and/or business changes, globalization, organizational restructuring, new managerial philosophies, new management and accounting techniques, business complexity, competition (domestic and globally), and innovations (El-Sayed & Youssef, 2015). El-Sayed and Youssef, (2015) states "the mediation of accountants' work and the critical implications of specific "modes of mediation," in enacting and framing accountants' role, have remained under-explored in the literature on role change" (p. 203). Accountants' ability to serve several purposes is a developing effect of different modes of mediation (El-Sayed & Youssef, 2015).

Business law education is important for chartered accountant's due to a required commercial law topic (McCourt et al., 2013). A gap exists between the legal education offered at colleges and universities and the legal knowledge of graduate accountants. McCourt et al. (2013) studied the law curriculum at two New Zealand Universities accounting programs to determine if it is adequate, and equip accounting students with the multiple legal issues exposed in the accounting field. Using questionnaires, the researchers gained perceptions from students on the adequacy of the business law education. The research found gaps in the information students want to learn and what instructor is teaching. Trust law, taxation law, and employment law produced the largest gap (McCourt et al., 2013). Students suggested a curriculum change from the traditional law approach, focusing on contracts and traditional legal topics, to the legal environment approach, focusing on the role of law in business and understanding how the legal system operates. Researchers suggest business schools continue reviewing curriculum to certify

proper education, in law, is administered, to accounting students' due to law changes and technology advancements (McCourt et al., 2013).

Breaux et al. (2010) researched the importance of ethics in accounting programs for recruiting entry-level accountants. Research results revealed, ethical coverage is not important in recruiting decisions. A student planning to sit for the uniform CPA exam must satisfy the ethics requirement, depending on the National Association of State Board of Accountancy. Evaluation of ethics coursework benefits the students and college reputation (Breaux et al., 2010; Ferguson, Collison, Power, & Stevenson, 2011). In 2002, The National Association of State Boards of Accountancy (NASBA) created a movement to incorporate ethics into accounting programs. Unethical behavior, by accountants, causes disasters for corporations and shareholders (i.e., WorldCom, Enron, and Arthur Andersen). Professional accounting organizations produce ethical rules and regulations to avoid the business disasters (Breaux et al., 2010).

Gaps in Literature

Results of the literature review indicate the lack of literature on the reality of small businesses, from the operators' perspective (Samujh, 2011). Gaps also exist in business and accounting education and the preparation for students to enter the business world. Few studies exist investigating the divide between relevant academic research and the relationship to practice in management accounting (Tucker, 2016). Major gaps exist between employers and the professionals responsible for education policy (Panigrahi et al., 2015). The researcher found little to no studies involving instructional strategies, in accounting education, optimizing learning. The identification of learning styles improve

instruction and close the gaps in teaching practices and identifying learning styles (Chaffee, 2010).

Mainstream accounting research has stagnated because most of the published work still caters to a limited group of topics, using the same theories and methods (Moser, 2012). Current accounting studies do not suggest many implications for practice, test limited interest research questions, test what will be confirmed (without a doubt), and are minor extensions of prior work (Moser, 2012).

The results of the literature review indicated the lack of recent literature with usable substance relating to successful accounting teaching methods. Gaps exist between college accounting education and the demand in accounting and business practices (Wally-Dima, 2011). The limited topics, research methods, and theories, published in the top journals, proves research stagnation (Rebele & St. Pierre, 2015). Empirical studies in accounting is suggested by researchers because the knowledge is derived from experience rather than belief or theory (Rebele & St Pierre, 2015).

Conclusion

Accounting courses set the stage for students majoring in accounting or interested in majoring in accounting (Friedlan, 1995). An outlook of the profession, attitudes and skills, and the nature of career opportunities is formed in introductory courses. The outlook helps determine if the quantity of talent is adequate for the profession to flourish (Friedlan, 1995).

Accounting faculty is not mindful of the problems in accounting education today. Colleges and universities need to recognize the need for change and the benefits to students by changing the accounting programs (Friedlan, 1995). Empirical studies can

facilitate awareness of accounting faculty regarding the need for change in accounting education. Introductory accounting courses benefit from adequate learning material and desirable teaching approaches (Friedlan, 1995).

Talented accounting educators with developing knowledge and instruction are more successful. All levels of educators taking advantage of educational opportunities increase the value and skill set for educational programs (“Matching Teaching to Learning,” 1999). The methodologies utilized in prior education process contribute to the effectiveness of learning for the educators, also known as the scholarship of teaching and learning (“Matching Teaching to Learning,” 1999).

Summary

Historical accounting curricula fail to provide students with the skills needed for today’s environment. Emphasizing the mechanics of recording transactions and memorization of accounting pronouncements leaves students with distorted views that could discourage potential accounting majors (Diller-Haus, 2004). Since the late 1800s, when accounting was first present, debates about the mechanics and techniques, used to teach, have slowly gained attention from colleges and universities. In the 1950s, colleges and universities began to hold instructors accountable for instructional choices, goals, and student achievement. The goal was to motivate faculty to find effective and efficient teaching methods. In 1969, Nérici believed teaching methods are best when individually developed, depending on the major. Unfortunately, there is still debate today (Araujo & Slomski, 2013).

In 1989, the AECC was appointed to change accounting education starting with introductory accounting courses. The AECC believed programs would benefit more from

the user approach. User approach is subjects taught from the user perspective (Diller-Haas, 2004). Institutions believed the non-traditional preparer approach would “shortchange” accounting majors. While maintaining that accounting programs follow the traditional preparer approach, most accounting programs claim that non-accounting majors benefit more from the user approach (Diller-Haas, 2004). Many students attracted to the accounting major may not be fit for the demands of the field. Developing skills are neglected when the focus is on memorizing.

Many of the researchers believe group learning is ideal for accounting. Group learning recommendations by the AECC states: group learning increase communication skills, students’ cognitive skills, and interpersonal skills (Kunkel & Shafer, 1997). Findings from the literature review indicated accounting be taught and learned using a variety of methods based on the topic and the learning style of the student. Ethics is an integral part of accounting courses due to current fraud and deceptive financial statements, unnoticed by firms whose duty is to provide certainty, have further eroded public confidence. Professionalism declined due to the neglect of attest services by large accounting firms and increased emphasis on consulting services (Diller-Haus, 2004). The integration of ethics and updated curricula is vital to a healthy profession (Diller-Haus, 2004). A conclusion is drawn from the literature review that further study of accounting teaching methods is necessary (Al-Twajjry, 2010; Diller-Haus, 2004; Friedlan, 1995; Moser, 2012; Rebele & St Pierre, 2015).

Researchers suggest the use of active learning methods that incorporate activities to engage students instead of listening to lectures (Bonwell & Eison, 1991; Coram, 2005; De Araujo & Slomski, 2013; Moore & Buxeda, 2000). Non-traditional (active learning

methods) introductory financial accounting courses are case-based, encouraging students to use collaborative/ groups learning, and stresses technical material needed to develop skills and abilities in the accounting profession, more than traditional courses (DeBoskey, 2009; Friedlan, 1995; Liu, Yao, & Hu, 2012). Ravenscroft and Buckless (1995) found that students in collaborative learning environments out performed students working individually, and students in collaborative learning groups tend to maintain a positive attitude towards accounting courses, compared to students in the traditional teaching group (Hosal-Akman & Simga-Mugan, 2010; Lindquist, 1995; Opdecam et al., 2014). Traditional chalkboard lecture courses help in understanding vital financial statement preparation and analyses that aids performance in other business courses (Smigla, 1995). The versatility of the chalkboard shaped students and instructors' actions and experiences in an education setting (Wylie, 2012). Instructors used the surface for drawing and writings making explanations and corrections clear and concise for the entire class (Phillips, 2015; Wylie, 2012). Examples are usually given to help students relate concepts to real world situations (Davies et al., 2016). Chapter 3 contains the study methodology, theoretical framework, sampling strategies, and rationale for the present study. Instrumentation, instrument reliability and validity, data collection procedures, and data analysis procedures are also discussed. Chapter 3 contains a discussion on the measures the researcher plans to take to provide consideration for and confidentiality of subjects of the study.

Chapter 3

Research Methodology

The purpose of this quantitative descriptive study was to determine through statistical comparison, if a possible relationship existed between the main teaching method attribute used in the course and students' numerical self-reported course grade outcome. The study was conducted with a sample of accounting students at a community college using a close-ended questionnaire survey instrument. Chapter 3 elaborates on the research design and methodology to induce significant responses to the research questions. Population, sampling, data collection, and rationale are included. Most higher education students decide upon an academic major within the first year or two of higher education, depending on interests and abilities. Accounting students, in the spring 2017 semester, are the subject of the study.

Research Method and Design Appropriateness

This quantitative descriptive research study aimed to identify a relationship between the main teaching method attribute used in an accounting course and self-reported course grade outcomes, of accounting students. The conceptual framework of the study involved literature review on teaching methods in accounting and learning outcomes. Accounting instructors are having issues educating potential accounting majors (Al-Twajry, 2010; Diller-Haus, 2004; Friedlan, 1995; Moser, 2012; Rebele & St Pierre 2015). Numerous innovative teaching methods can aid in improving the educational aspect of the accounting discipline (Dimitrios, Labros, Nikolaos, Maria, & Athanasios, 2013). The skills required by the industry and the general market should be the driving forces behind the redesign of the traditional curriculum (Dimitrios et al.,

2013). Implementing new teaching methods, aimed to facilitate the development of skills needed to handle real business world accounting problems should be the focus (Dimitrios et al., 2013).

According to Simon and Francis (2001) “Quantitative research design predict, control, confirm, and test theory, while qualitative research understands, describe, and generate theory” (p. 41). Qualitative research shows what a population looks like and do not predict. Quantitative design requires inferential statistics that predicts. Qualitative research is not effective in identifying relationships between variables using statistical analysis. Claydon (2015) states, “qualitative research is exploratory and inductive, with narrative data being collected to generate themes that may be used to develop a theory” (p. 1). Qualitative researchers make substantial use of inductive reasoning. Researchers make detailed observations and draw interpretations about greater and broader phenomena. The data analysis is more subjective in nature (Leedy & Ormrod, 2010). Qualitative researchers would like to be consistent but the problem lies in the process being unstable. Qualitative researchers have faith in the subject matter and a researcher’s connection to it, being a growing process (Neuman, 2005). Qualitative research studies individual cases or groups ignoring a larger whole (Dobrovolny, & Fuentes, 2008). Qualitative method would have been appropriate if the goal of the research was to explore and understand a small group of students. This study aimed to analyze the data for relationships and verify the measurements (Watson, 2015). This study measured the main teaching method attribute used in accounting courses and the student’s self-reported course grade outcome at a community college. The dependent variable was the students’ self-reported course grade outcome based on the independent students’ perception of the

teaching methods used in the course in terms of the traditional chalkboard lectures, collaborative/ group learning, and case studies. Quasi-experimental design was not appropriate for this study because quasi-experiment is used to estimate a causal impact of an intervention on the target population. The requirements for a conclusion from a quasi-experiment are the same for any causal relationship. Three conditions must be met for a causal relationship; cause and effect must co-vary (i.e., relationship between the independent and dependent variables), the cause must precede the effect (independent variable changes must come before dependent variable changes), and rival hypotheses must be unlikely (Christensen et al., 2010).

The design of the research must be appropriate for the conceptual framework, the study purpose, and the research problem. One of the goals of research is to have a strong design that is possible, ethical, and feasible for the research question chosen (Christensen et al., 2010). A descriptive design was chosen for this study because it met the requirements of the study and does not manipulate the independent variables. Statistical analysis allowed generalizations to be made about the teaching method used in accounting courses and the relation to students' course grades. A descriptive design focused on relationships between variables with no concern for cause (Cooper & Schindler, 2003). In this study, potential relationships were measured and assessed without regard to cause and effect relationships.

According to Claydon (2015), "Quantitative research is explanatory and deductive with numerical data being collected to test a theory" (p. 1). The quantitative descriptive research study was appropriate for answering the research problem. The research problem addressed a specific problem and the effect of the problem on society. The

specific problem was the attributes of the teaching method used in college accounting courses may be related to students' performance level or course grade outcome as stated in chapter 1. Quantitative researchers established philosophies and specific measures to help in the process of generating operational definitions that are reliable and valid measures and produce numerical data for variable theories (Dobrovolny, & Fuentes, 2008; Neuman, 2005; Sale et al., 2002). Lakshman, Sinha, Biswas, Charles, and Arora (2000) believes things that can be measure or counted gain scientific credibility over the unmeasurable, using quantitative methods.

Quantitative research studies are scientific investigations that include systematic methods and experiments. A quantitative research method was appropriate to this study because it explains relationships between variables (Hoy, 2010). Using statistical data and analysis, to sequence the research, helps to provide variable relationships and trends, accentuating the priority (Watson, 2015). Using variables, the researcher described relationships existing between teaching method attributes and the students' self-reported course grade outcome in accounting courses. Quantitative research sets out to explain a factor or situation using numerical data (Claydon, 2015). Quantitative research depends greatly on deductive reasoning and begins with a hypothesis or theory to form a conclusion (Claydon, 2015; Dobrovolny, & Fuentes, 2008; Leedy & Ormrod, 2010; Sale, Lohfeld, & Brazil, 2002). Quantitative research also tries to be impartial in the analysis of data by conducting fixed statistical processes and using impartial measures to assess the results of those procedures (Leedy & Ormrod, 2010; Sale et al., 2002). In contrast, qualitative research does not provide for the exploration of variables, explores human behavior, and use induction to analyze data (Dobrovolny, & Fuentes, 2008; Leedy &

Ormrod, 2010; Sale et al., 2002). Qualitative research uses interviews, case studies, and focus groups to collect narrative data (Claydon, 2015; Sale et al., 2002). In qualitative research, multiple truths or realities is the philosophical concept (Claydon, 2015). The purpose of this study was to describe possible relationships that exist between teaching method attributes and the students' self-reported course grade outcome in accounting courses. The design of the research study was uniform with the projected analysis of the data for impartiality in the results.

A descriptive design was chosen for this study because it meets the requirements of the study and does not manipulate the independent variables. Statistical analysis allowed generalizations to be made about the teaching method used in accounting courses and the relation to students' course grades. In this study, potential relationships were measured and assessed without regard to cause and effect relationships. The researcher began with a definite subject in a descriptive research and described the subject accurately. Descriptive focuses on how and who questions. Discovering issues or clarifying why something happens is not as much of a problem for descriptive researchers as recounting how things are (Neuman, 2006). Descriptive research includes a description of the existing distribution of variables, without regard to causal or other hypotheses (Cooper & Schindler, 2003; Schulz & Grimes, 2002). There is not always a need for a hypothesis in descriptive research. Descriptive studies tend to use research questions rather than hypotheses (Picciano, 2004).

An effective analytical outcome depends on a proper data collection process and an appropriate sample size. Researchers lists several factors influencing a proper sample size study: power, effect size (ES), and significance level (Duffy, 2006). According to

Survey Monkey Sample Size Calculator (2016), the sample size needed for an effective quantitative study is 81 students enrolled in accounting courses and an additional 20 students were needed for the pilot study. This research used 85 research participants. The students participating in the pilot study were not allowed to participate in the full study. Data collection assisted in explaining variables. Data were collected utilizing a questionnaire survey. Information was gathered from the college website and the Vice President of Planning and Institutional Effectiveness, to determine the number of accounting classes offered and the approximate number of instructors used to teach per semester. Sixteen different instructors taught 26 different sections of four-credit hour, 16 weeks, accounting courses in the spring 2017 semester. There were approximately 10-20 students in each class. The total population for the full study was approximately 102 research participants. Using Survey Monkey Sample Size Calculator (2016), the valid statistical analysis on a survey population of 102 research participants and a 95% confidence level was 81 survey participants needed for a valid statistical analysis. An additional 20 students were used for the pilot study. Students were not allowed to participate in both the pilot and the full study. The instructors were asked to give each student their current grade in the course, prior to the administered survey. All the participants in the research were attending the college and enrolled in a four-credit hour, 16-week accounting course, during the spring 2017 semester. Sample sizes should be optimal and if the sample is too large, the researcher can waste money and time (Noordzij, Dekker, Zoccali, & Jager, 2011). If the sample is too small, an important effect may not be detected.

The researcher validated the survey by use of a Teaching Method Pilot Study Survey (Appendix A). The researcher observed the pilot study participants for willingness to answer questions and determined if any questions produce a hesitant response, resulting in loss of data. The participants in the pilot study analyzed the Teaching Method Survey (Appendix B), providing suggestions and feedback for instrument refinement prior to conducting the full study. After the pilot study, adjustments were made for validation. The students involved in the validation of the instrument were excluded from the data collection process. The survey instrument used a close-ended questionnaire. The survey collected quantitative data to describe relationships that existed between main teaching method attribute used in the course and the students' self-reported course grade outcome in accounting courses. The instrument was a survey with characteristics related to traditional chalkboard lectures, collaborative/group learning, and case studies. The student had direct knowledge of the main attribute used in the course. The researcher analyzes collected data using SPSS statistical software version 24, capable of carrying out an Analysis of Variance (ANOVA). A one-way ANOVA test was conducted with each variable.

Recapitulation of Research Questions and Hypotheses

Research questions are needed to clarify the direction of the research and provide greater focus (Leedy & Ormrod, 2005). The literature review suggested a relationship between teaching method attributes and students' success in accounting courses. The research question was:

RQ1: What is the relationship between the main teaching method attribute (traditional chalkboard lectures, collaborative/ group learning, and case studies) used in accounting courses and the numerical self-reported course grade outcome of the students?

Two hypotheses supported the research question:

H1₀: There is no relationship between the main attribute of the teaching method used in accounting courses and students' numerical self-reported course grade outcome.

H1_a: There is a relationship between the main attribute of the teaching method used in accounting courses and students' numerical self-reported course grade outcome.

Geographic Location, Population, and Sampling

This study was limited to one community college in a suburban area outside of Chicago, Illinois. The school is approximately 25 miles west of downtown Chicago in Glen Ellyn, Illinois. The community college district has one major campus handling 51 communities and more than one million residents, in District 502. The community of study is the largest publicly funded community college in Illinois and the second largest provider of undergraduate education in Illinois. The college has an enrollment of more than 27,000 students each semester offering over 180 degree and certificate programs. There are more than 280 full-time faculties and over 1100 part-time, many holding a Ph.D. The college accounting department is housed under The School of Business and Technology.

Population. In this research study, 81 participants were surveyed, and an additional 18 participants were needed for the pilot study. The research participants were not allowed to participate in both studies. The research participants were all students enrolled in a 4-credit hour, 16-week accounting course, in the spring 2017 semester.

Students were accounting majors and non-accounting majors. The study subjects were all students, voluntarily agreeing to complete this study Teaching Method Survey (Appendix B). The students receive accounting information from the instructors in various forms. The students are aware of the methods that work best for the courses taken. Accounting is one of the top ten most popular college majors (Stockwell, 2014). This study measured the main teaching method attribute used in the course and the students' course grade. The dependent variable was the students' self-reported course grade outcome and was based on the independent teaching method, used the most, in the course in terms of traditional chalkboard lectures, collaborative/ group learning, and case studies. The 3P model suggests situational, and personal issues have an influence on the student adopting a learning approach and in turn influence the outcome. The students' perception of the learning environment (presage factors) can also influence the learning outcome (Lizzio et al., 2002).

Sampling.

An important consideration when determining an appropriate data analysis approach is the sample size. According to Neuman (2005), "It depends on the kind of data analysis the researcher plans, on how accurate the sample must be for the researcher's purposes, and on population characteristics (p. 240-241)". Information was gathered from the community college website to determine the number of accounting classes offered and instructors used to teach in the spring 2017 semester. Sixteen different instructors taught 26 four-credit hour accounting courses, in the spring 2017 semester. Most of the courses had a maximum capacity of 35 students but only one course was filled. The college offered two-credit hour, three-credit hour, and four-credit

hour courses consisting of 8-week, 12-week, 16-week, and custom courses. Only the four-credit hour, 16-week courses were used for this study. The researcher chose to use the 16-week courses so participants start and end dates correspond. The 16-week courses also met the same number of hours each week and aided in reliability of the data. The researcher needed 81 participants in the target population. Using Survey Monkey Sample Size Calculator (2016), the valid statistical analysis on a survey population was approximately 101 participants, and a 95% confidence level would be 81 survey participants. An additional 18 students were used for the pilot study. The sampling for this study was the spring 2017 semester accounting students. Visiting accounting classes prior to class start time and emailing instructors helped in the recruitment of study subjects, with the approval of the department deans.

Quantitative researchers calculate the statistical power of a study before the collection of data (Price, Dake, Murnan, Dimmig, & Akpanudo, 2005; Sale et al., 2002). The statistical power assessments tell the researcher if a significant difference exists between two or more groups. The researcher used SPSS statistical software version 24, capable of carrying out an Analysis of Variance (ANOVA), in this study as the statistical significance test. A one-way ANOVA test was conducted with each group (traditional chalkboard lectures, collaborative/ group learning, and case studies). The researcher used the power assessment to reject the null hypothesis of a difference or association between the various samples or to avoid a Type II error (Price et al., 2005). If the null hypothesis is rejected, a difference or association is concluded from the sample to the population. If the researcher's sample size increases, so does the power (Wolske, Higgs, & Zint, 2010).

Four factors influence statistical power: the level of importance, the degree of

difference between the two sample groups, the size of the sample, and the variance of the responses to the outcome variable (Price et al., 2005). The most important of the four, is the sample size to confirm suitable statistical power for the analysis of data.

Generalization to the population can be a concern to the researcher. Equal numbers in each group of teaching method is not feasible. Forcing equal group sizes diminish unpredictability and creates bias.

Consent and Confidentiality

All research subjects (students) was asked to sign an informed consent (Appendix C) form prior to completing the survey questionnaire, Teaching Method Survey (Appendix B). The possible subject in the research has a right to choose to participate in the study. Lack of respect is shown when a subject is denied this. This can be solved by obtaining informed consent. Informed consent includes giving the subject relevant information about the study so that he or she can decide to participate (Christensen et al., 2010). The subjects in this study cannot have limited or diminished capacity to understand the consent agreement. This study was not considered valid if not all procedures were taken. The welfare of the subjects was represented properly and assured they were not at risk. Acquiring a proxy is one way to provide assurance (Christensen et al., 2010).

Institutions with research programs are required to have all human research reviewed by an IRB (Internal Review Board). This goes as far back as 1966 and came about because of the concern for the way research was conducted, and subjects were treated. This resulted in a review requirement, initiated by the Department of Health, Education, and Welfare (DHEW). The policy was extended to all research that involved

human subjects. The DHEW regulations governing human research implemented a requirement that all institutions receiving public funds must have research reviewed by an IRB. The policy pushed institutions of higher education to establish an IRB and file an assurance policy with the Office of Protection from Research Risks (OPRR) of the Department of Health and Human Services (Christensen et al., 2010).

Informed consent is critical to research because individuals have rights to determine what is done to their mind and body. When a person provides information, researchers assume the information can be used for whatever decision they see fit. Subjects can avoid experimental procedures if considered objectionable. The basic principle of “respect for persons and their autonomy,” is achieved (Christensen et al., 2010). The APA code of ethics recognizes times when an informed consent be disposed of even though the ideal procedure is to inform research subjects of all features of the study that might affect their willingness to participate. The integrity of the data may be compromised, in some studies, if the informed consent is not obtained (Christensen et al., 2010).

Regulations are created to abolish unfair treatment of study subjects (Larkin, 2011). Research ethics is a set of principles used to assist the community of researchers in deciding how to conduct ethical research. Ethical issues are important to research development proposals and the conduct of research. Difficult topics are investigated, such as child abuse. Deciding on conducting the research or violating certain rights are factors that create ethical dilemmas. Ethical principles are important to the research initiative because they support the scientist in avoiding abuses that might otherwise occur and outline the responsibilities of the investigator (Christensen et al., 2010).

Informed consents guarantee legal risk management (Kapp, 2007). One way to overcome consent issues is to use participants over 18 and require a signed consent form, to participate. FERPA prohibits improper disclosure of personal identifiable information derived from education records to third parties without written consent (FERPA General Guidance, 2016). De-identified information, from education records, is not personal identifiable information and is not subject to any destruction requirements (Herald & Davis, 2015). A University of Phoenix-Informed Consent form was included with each survey (Appendix C). The data collected was coded, scored, and analyzed only by the researcher. Data are kept in a locked file cabinet and will be stored for three years before shredding.

Data Collection

A paper Teaching Method Survey (Appendix B) was administered to each accounting student willing to participate. The objectives of this study dictate the use of data collection techniques yielding quantifiable data. There are two approaches to collecting data. One is the paper and pencil approach, and the other is a computerized approach. The paper and pencil approach is for a researcher with limited computer skills; depending on the research, paper and pencil may hinder one from taking accurate and timely notes. The computerized approach facilitates data collection, depending on the software; retrieving archived data can be simpler than paper and pencil (Leedy & Ormrod, 2010). The researcher chose a pen and paper approach to speed up the collection process due to lack of computer access for all accounting courses. Most accounting classes in the college were not equipped with computers for each student.

Permission to conduct research was obtained from the business department dean and the instructors for all accounting courses willing to participate, prior to collecting data. All subjects, apart from informed consent documents, were asked not to use any personal information on the actual survey. All subjects required a time commitment to complete the survey. Prior to beginning the survey, the purpose of this study along with data collection procedures, consent for subjects, and confidentiality of shared information was reviewed with the subject in detail. The instruments needed to complete the survey were a pen or pencil and the actual survey.

Technology increases validity and reliability of data rather than relying wholly on handwritten transcriptions of surveys except where technology is not readily available for the subjects (Creswell, 2005). The fieldwork of research is collecting the data. Data were collected by means of a two-question survey from approximately 81 students and an additional 18 students for the pilot study. The researcher planned to use, at least, 99 participants. The students were not allowed to survey more than once. The research participants answered two questions about teaching methods used in the courses and the current numerical grade in the course. The survey presents impartial questions about the course and responses are anonymous. No insinuations about the cause were included in the questions. Course grades were coded to avoid direct identifiers. The collection of data using the teaching method survey aids in the analysis and interpretation of a descriptive explanation and identify a possible relationship between variables.

Instruments

Data for this study was an administered Teaching Method Survey (Appendix B) to describe if a possible relationship existed between the main teaching method attribute

used in the course and students' self-reported course grade outcomes. Clearly defined measurements is the key to a good survey (Dolnicar, 2013). Survey research is dominant for national planning and program evaluations (Lakshman et al., 2000). The data from surveys were reliable, comparable, and precise (Lakshman et al., 2000). Surveys measure opinions, beliefs, attitudes, and activities of individuals (Christensen et al., 2010). The goal of the questionnaire was to provide data appropriate for statistical analysis and examination of any relationship between variables. The hypothesis that supported the research questions included two variables. Quantitative descriptive research with an administered survey was the appropriate combination to accomplish the study.

An instrument measure and obtains quantitative data (Creswell, 2005).

Measurement instruments provide a basis on which the entire research effort rests. The researcher provided evidence that the instruments used had a reasonable degree of validity and reliability for research purposes. Researchers should use developed instruments previously tested for validity and reliability (Creswell, 2005).

According to Neuman,

There are three types of reliability. Measurement, stability, and representative reliability. Measurement reliability refers to a dependent measure of a variable; stability reliability refers to a measure of a variable that yields that same response no matter when a sample is taken, and representative reliability gets the same results in different social groups. (p. 189)

Researchers also suggests the four ways to increase the reliability of measures: clearly, conceptualize constructs, use a precise level of measurement, use multiple indicators, and use pilot tests (Neuman, 2005).

Pilot study. A pilot study was conducted prior to the study. The participants for the pilot survey were students enrolled in a four-credit hour, 16-week accounting course at the community college, in the spring 2017 semester. The pilot study participants were required to sign a consent form prior to the administered survey. There were no incentives/rewards offered for participants and administrators/faculty. According to Survey Monkey Sample Size Calculator (2016), the sample size needed for an effective quantitative study was 81 students, enrolled in accounting courses, and an additional 18 students are needed for the pilot study. The 18 students were not chosen at random. The researcher chose students in different accounting courses. The participants completed the Teaching Method Pilot Study Survey (Appendix A) under the same conditions as the study participants. The researcher analyzed data using statistical control techniques used to adjust for pretest differences on the measured variables. The researcher analyzed collected data using SPSS statistical software capable of carrying out an Analysis of Variance (ANOVA). A one-way ANOVA test was conducted with each variable.

The researcher used the Teaching Method Pilot Study Survey (Appendix A) results to validate the Teaching Method Survey (Appendix B). The pilot survey was identical to the survey in the full study. The researcher observed the pilot study participants for willingness to answer questions and determine if any questions produce a hesitant response, resulting in loss of data. The participants in the pilot study analyzed the Teaching Method Survey (Appendix B), providing suggestions and feedback for

instrument refinement prior to conducting the full study. The participants were asked six follow up questions pertaining to the survey instrument. The follow-up questions were:

- Is question #1 and #2 clear?
- Is question #1 and #2 pertinent to the teaching method used in the course and the students' course grade outcome?
- Is question #1 & #2 logical to the study?
- Is question #1 & #2 simple?
- How long did it take to complete the survey?
- Do you have any suggestions, concerns, or comments relation to the entire survey?

After the pilot study, adjustments were made for validation. The students involved in the validation of the instrument were excluded from the data collection process. The researcher cross checked names to ensure students involved in the pilot study was not used for the full study. The sampling for the pilot study was the spring 2017 semester accounting students, at a community college in the Chicago area. Visiting accounting classes prior to class start time aided in recruitment of study subjects with the approval of the course instructors and department dean.

A pilot study was conducted to improve upon the study design prior to performance. The pilot study was comprised of at least 10% of a sample population of 81 participants. The 18 additional pilot study participants were not included in the data collection process. After the pilot, adjustments were made to the instruments for validation purposes. The participants used to validate the survey were not used for data collection. The researcher gains experience and develops fluency by conducting a pilot

study (Leedy & Ormrod, 2010). The instrument was created and based on the theoretical foundation of teaching method attributes and the students' numerical course outcome. The instructors were asked to give each student their current grade, in the course, prior to the administered survey.

The pilot study was conducted to validate the survey (Appendix A) for use on the remainder of the survey population. After gaining permission from the Vice President of Planning and Institutional Effectiveness at the community college (Appendix D), the researcher searched permission from the individual instructors. The researcher needed 18 participants for the pilot study. Twenty pilot participants from five different accounting courses at the community college received the instrument. The researcher surveyed two extra participants as a safeguard against incomplete surveys. Feedback was received from the 20 participants and suggestions for wording changes was accepted by the researcher. The participants of the study were qualified to examine the wording and content of the questions for possible and necessary changes. The instrument used to measure the teaching method attributes and the course grades was a two-questions survey.

After pilot study validation, additional validity, on the instrument was determined on the entire population using the Statistical Package for the Social Sciences SPSS program. A Pearson, r , correlation coefficient was used to ensure validity. A Pearson correlation coefficient, sometimes called Pearson's product-moment correlation analysis, aided the researcher in comparing the participants' course grade variable with the teaching method variable, used in the course, to see if a linear relationship, ranging from -1 to +1, exists between variables (Simon, 2005). The direction of the relationship (" -1"

or “+1”) tells the researcher if there is an increase or decrease in association (Choi, Peters, & Mueller, 2010). A negative value of r is a negative association between variables and a positive value of r is a positive association between variables (Choi, Peters, and Mueller, 2010). A significance value greater than .05 indicates no significance and a value less than .05 indicates statistical significance. In the pilot study, the course grade of the participants was correlated with the teaching method primarily used in the course. The Pearson r correlation was .546 and the significance was .013. Once a relationship was established, the full study was conducted.

Teaching method survey. A paper survey instrument, Teaching Method Survey (Appendix B), was administered to record answers to questions about independent variables and the relation to a students’ numerical self-reported course grade outcome. A paper survey was used to ensure all data were collected in a timely manner. The brief survey was composed of questions related to the main teaching method attribute used by the instructor and the students’ current numerical grade in the accounting course.

The survey instrument, Teaching Method Survey (Appendix B), in this study provided data for the variables related to the main teaching method attribute used in accounting courses and course grade of the students. This study investigated the broad knowledge of teaching method attributes used in accounting courses and course grade outcomes. This study included the paper distribution of a statistical survey. The questionnaire survey helped to provide data needed to determine any significant relationship between teaching method attributes and an accounting students’ self-reported course grade outcome. The researcher created the survey instrument, due to lack of existing measures. The instrument was tested for validity. The survey responses were

based on the learning experience of the subjects. Open format questions were not acceptable for this study because open-ended questions are based on opinion and have no predetermined set of responses. Open-ended questions may obscure the topic of interest due to differences in the verbal ability of the subjects (Leedy & Ormrod, 2010).

The Teaching Method Survey (Appendix B) used a close-ended questionnaire to gather information. The survey is brief, comprised of two questions with relational significance addressing the research question. The researcher purposely set a small amount of questions to appeal to the subjects. There were no incentives/rewards offered for participants and administrators/faculty. Each subject was required to respond to the mandatory questions. One writing utensil and the survey are the only items needed. The instrumentation (Appendix B) examined the relationship between the attributes and variable in the study. Reducing errors and validating context are done with valid research instruments (Gjersing, Caplehorn, & Clausen, 2010).

The grading scale (Table 1) at the community college is standard for every class with ranges from 0-100 (Table 1). The instructors are required to issue a numerical and letter grade to the students and the records department, after midterm, at a specified date. The researcher gathered the main teaching method attribute used and grade information before the specified date. All accounting courses, in the study, are four-credit hours and 16 weeks in length. Midterm exams and grades are recorded on or around the 8th week from the course start date.

Table 1	
<i>Community College Standard Grading Scale</i>	
Letter Grade	Corresponding Numerical Grade
A	90-100
B	80-89
C	70-79
D	60-69
F	59 and Below
Table 1	

College midterms usually end mid-March for the spring semester. In the spring term, it is customary for midterms to end the week before spring recess. From the researcher's experience, midterm grades are due to the records department upon return from spring recess.

Reliability and Validity of Instruments

Reliability measurements are obtained as quantitative guides of reliability. The four popular reliability tests are retest, equivalent forms, internal consistency, and interrater reliability (Christensen et al., 2010). Validity is how accurate the test scores are interpreted. The test can be performed by any measurement or device (Christensen et al., 2010). Validity is confirmed by the development of a theory that explains how an instrument functions when working properly. The evidence is obtained by testing the theory (Christensen et al., 2010). Validation is ongoing, and the more evidence of validity provided, the more assurance placed on interpretations. The results of test scores

determine the validity by what the test measures and how well it is measured (Christensen et al., 2010).

Two important branches of validity are internal and external validity. Internal validity refers to the consistency with which the study is conducted and the extent to which the creators of a study have considered different explanations for any relationship that is explored (Leedy & Ormrod, 2010). A common threat to internal validity is reliability. Reliability is often in jeopardy when assessments, taken over time, executed by different people are highly biased (Leedy & Ormrod, 2010). Another threat to validity is the “Hawthorne Effect” where subjects may think the researcher wants questions answered in a particular way (Leedy & Ormrod, 2010). The researcher can remind the subjects of confidentiality regarding individual answers, and the researcher does not need individual names on the survey, to avoid the Hawthorne Effect.

The pilot study of the survey instrument is the opportunity for test reliability by observing study participants and gathering suggestions and feedback. The pilot study validated the survey instrument and question content. The sample size needed for an effective quantitative study was 81 participants enrolled in a 16-week accounting course and an additional 18 participants are needed for the pilot study. The students participating in the pilot study were not allowed to participate in the full study.

Problems jeopardizing the ability to draw conclusions from sample data are external validity threats (Creswell, 2005). There are three threats affecting the ability to generalize inferences: treatment and selection, treatment and setting, and treatment and history (Leedy & Ormrod, 2010). Treatment and selection refer to the generalizability of the study beyond the study group. An increase in population diversity satisfies the threat.

This study population was male and female, from any ethnic background, living in the Chicago area, and most are under the age of 25. Treatment and setting refer to the inability to generalize from the setting of this study. Analyzing the impact of treatment for different types of settings satisfies the threat. This study was conducted in a classroom setting. Treatment and history refer to the generalization of the findings to past or present situations. Creating a similar study later can satisfy the threat. External validity threats have limitations on the sample selected due to the school being a state college. The sample of this study can apply to schools and states with similar demographic and characteristics as the community college of study.

Due to the different levels of accounting courses offered at the college, the researcher expects an adequate amount of variability between methods of teaching. Extraneous variables could have a bearing on the results of this study. The education level of the instructor, grading practices, experience level of instructor, former knowledge of students, student motivation, and the age of the instructor are a few extraneous variables that aided in the generalizability of the results of this study. Control is limited when the classroom is the laboratory (Benke & Street, 1992). The researchers lose the power of generalizability when subjects are selected from a range with multiple restrictions. Random assignment is not feasible in this study.

Data Analysis

The researcher analyzed data using statistical control techniques used to adjust for pretest differences on the measured variables. The survey included questions related to (a) traditional chalkboard lectures, (b) collaborative/ group learning, (c) case studies, and (d) course grades. To aid in data analysis, each teaching method category was assigned

an arbitrary value (traditional chalkboard lectures = 1, collaborative/ group learning =2, case studies = 3). The goal of the questionnaires was to provide data appropriate for statistical analysis and examination of any relationship between variables.

Knupfer and McLellan (1996) stated the following:

Descriptive statistics utilize data collection and analysis techniques that yield reports concerning the measures of central tendency, variation, and correlation.

The combination of its characteristics summary and correlational statistics, along with its focus on specific types of research questions, methods, and outcomes is what distinguishes descriptive research from other research types (p. 1197).

The researcher used excel spreadsheets to ensure tables are presentable and reliable. The tables included descriptive statistics consisting of numerical data categorized by variables (Newman, 2003), to determine a possible relationship between teaching method attributes and self-reported course grade outcomes. Measures of central tendency (the mean, the median, and the mode) helps to summarize the data, quantify the data, and draw conclusions about the data (Neuman, 2006). Descriptive statistics summarize data by bringing forth trends (Simon, 2005). To evaluate data further, the researcher used inferential statistics such as ANOVA and instead of using a post hoc comparison using Tukey HSD, a Welch test was performed due to a violation of homogeneity of variance.

The range, mean deviation, variance, and standard deviation are the measures of variability. The scale between the highest and lowest value is the range. The mean deviation represented the scores for the teaching method attributes (Runyon & Haber, 1977). The distribution around the mean of teaching methods was the variance (Cooper & Schindler, 2008). The standard deviation represents the distance the data values were

from the average (Cooper & Schindler, 2008). The standard deviation estimates the precision and error (Runyon & Haber, 1977). The study planned to determine if a relationship existed between the teaching method attributes and the students' self-reported course grade outcome.

The researcher analyzed collected data using SPSS statistical software capable of carrying out an analysis of variance (ANOVA) and instead of a post hoc comparison using Tukey HSD, a Welch test was performed due to an assumption violation of homogeneity of variance. A one-way ANOVA test was conducted with each variable. Researchers use ANOVA tests when there is a single independent variable to compare the mean differences between two groups (Howell, 2010). The independent variable is paired with the dependent variable to run the ANOVA test. ANOVA is a comparison of two or more group means with one dependent variable and categorical independent variable (Christensen et al., 2011). ANOVA was suitable for this study because the study contained variables and included testing differences between different groups; two or more groups will be investigated; and more than one level or variable was being used (Salkind, 2007). The test indicated if a relationship exists between the variables. The researcher used SPSS statistical software version 24, capable of carrying out an Analysis of Variance (ANOVA), in this study as the statistical significance test. The researcher compared the teaching method attributes (variables) (chalkboard lecture, collaborative/group learning, and case studies) used in the accounting courses and the students' numerical self-reported course grade outcome.

Summary

Chapter 3 details the research design and the application to the study. The research is a quantitative descriptive study designed to reveal a possible relationship between teaching method attributes and the self-reported course grade outcome. The chapter also contained a discussion of data collection and data analysis methods. The quantitative research method and descriptive design were appropriate for use in this study (Creswell, 2005). The sample population consisted of students currently registered in a four-credit hour, 16-week, accounting course, at the community college in the spring 2017 semester. Members of the sample consisted of male and female students with different educational/ professional backgrounds. The sample of the population was extracted near mid-term. This study used a reliable and valid questionnaire to gather information needed for the study.

In Chapter 4, the analysis and results of the study will be presented. The researcher used the research design to evaluate statistical relationships between the main teaching method attribute used in the course and the self-reported course grade outcome. Chapter 4 begins with an analysis of the reliability and validity of the survey instrument and descriptive statistics related to the collected data.

Chapter 4

Results

The purpose of the quantitative descriptive research study was to determine, using statistical comparison, any significant relationship between the main teaching method attribute used in accounting courses and the students' self-reported course grade outcome. The literature review consisting of scholarly journals and articles provided three teaching method recommendations for college accounting courses. The teaching method survey was presented to 81 survey participants attending accounting courses at a community college in the Chicago area. Prior to conducting the main study, a pilot study was conducted using 20 participants from the target population.

The pilot study aided in the validation of the survey. The 20 participants in the pilot study was part of the target population and were excluded from the final study. The participants of the pilot study reviewed the survey for content validity and reliability. Small adjustments were made to the survey instrument from the results of the pilot study and the recommendations made by the participants. The collected data were analyzed using SPSS statistical software version 24.

Chapter 4 presents the results of the analyzed data from the 81 survey participants. The main teaching method attribute and the relationship to the self-reported course grade outcomes was identified during the data analysis. A two-question survey instrument was used to conduct the study with three teaching method attributes and the students' course grade. A description of the data collected, the relationship between the teaching method attributes and the self-reported course grade outcomes, the connection of the variable to the research question and hypothesis is included in the data analysis. The

researcher collected data on traditional chalkboard lectures, collaborative/ group learning, case studies, and course grade outcomes to explain the relationship.

Research Question

One research question explored the relationship between the main teaching method attribute and the self-reported course grade outcomes of the students. The research question was: What is the relationship between the main teaching method attribute (traditional chalkboard lectures, collaborative/ group learning, and case studies) used in accounting courses and the numerical self-reported course grade outcome of the students?

Hypotheses

One hypothesis and a null hypothesis explored the relationship between the teaching method attributes and the self-reported course grade outcomes of the students.

The hypothesis that supported the research questions were:

H_{1o}: There is no relationship between the main attribute of the teaching method used in accounting courses and students' numerical self-reported course grade outcome.

H_{1a}: There is a relationship between the main attribute of the teaching method used in accounting courses and students' numerical self-reported course grade outcome.

The data analysis and the research findings covered the research question and the hypothesis. A quantitative interpretation of this study is presented, from the data collected, using tables.

Sample Size

The spring 2017 semester accounting students were used as the purposeful sample. There were 81 additional participants needed for the target population. Using

Survey Monkey Sample Size Calculator (2016), the valid statistical analysis on a survey population of 101 participants with a 95% confidence level would be 81 survey participants. The study used 20 participants for the pilot study and an additional 81 survey participants for the research study. The researcher allowed participants to submit more than one survey if registered for multiple accounting courses. The researcher allowed ten additional surveys. Six of the surveys were incomplete and/ or included multiple answers for questions requiring a single answer. The six surveys were not included in the final analysis. The study concluded with 85 participants completing the survey with a response rate of 93%. The number of complete surveys was four more than the 81 needed.

Data collection

Data were collected utilizing the validated survey instrument (Appendix B) and input into the SPSS Statistical Package for the Social Sciences program. The researcher emailed sixteen instructors for permission to survey the classes. Nine instructors opted out of the survey. The remaining seven instructors taught a combined total of 10 sections. The 10 sections yielded 74 possible participants. An additional 47 participants were recruited outside of the classrooms to complete the full study. The researcher gathered information, from the college website, on the location, dates, and times accounting courses met. The researcher stood outside of the courses, until the sessions were complete, and recruited students by asking for time and participation. The students agreeing to participate were allowed and give an informed consent and Teaching Method Survey (Appendix B).

Twenty of the 121 participants were used for the pilot study. Of the 101 participants remaining, 81 were needed for the sample. The researcher arrived at the classes prior to the start time and after the lectures were complete. The researcher limited the number of visits to each class, to two, to avoid multiple disruptions to the learning process. The paper Teaching Method Survey (Appendix B) and the informed consent (Appendix C), was administered, to each willing participant. The informed consent explained the survey intent, confidentiality, and security of responses. Surveys were not given to any participant until the researcher received a signed consent form from the participant. Surveys were collected from participants as they were completed. Due to class absences and participants opting out of participation, 91 participants were surveyed. Six of the surveys were excluded from the results due to unanswered questions and multiple answers for questions requiring one answer. The researcher received 85 complete surveys with a 93% response rate.

The population of the study participants added a reliability measure that allowed the researcher to generalize the study to the population. All data collected by the researcher was entered in Excel and coded to reflect the participant's response to the questions on the instrument. All data were exported into SPSS Statistical Package for the Social Sciences program, version 24, for analysis from Excel. A detailed description analysis is included in the data analysis.

Data analysis

Descriptive and inferential statistics were used to analyze data. Descriptive statistics summarized the data and aided in the identification of any trends. Inferential statistics assisted in drawing conclusions. Data were exported into SPSS Statistical

Package for the Social Sciences program, version 24, for analysis from Microsoft Excel. SPSS calculated the descriptive and inferential statistics used in the study. The researcher used the analysis function, in SPSS, to calculate the means and frequencies. One-way ANOVA was used to examine and compare the mean scores. To conclude the results, the researcher did not use Tukey HSD to conduct a post hoc analysis. A Welch test was performed due to a violation of homogeneity of variance.

The three teaching methods was coded using the following numerical data: traditional chalkboard lectures (1), collaborative/ group learning (2), and case studies (3). The summary of descriptive statistics was generated for central tendencies. An ANOVA was used to evaluate the data after a relationship was established. A Welch test was performed due to a violation of homogeneity of variance, to analyze the data further and determining the difference between the teaching methods used in the course and the student's course grade at a community college in the Chicago area.

Findings

Ninety percent of students do not perform well in the accounting courses, receiving low grades, might lack the knowledge needed to make sound business decisions, in the real world (Al-Twajjry, 2010). Traditional accounting subjects are important for a relevant accounting program, but the program is inadequate if it fails to emphasize other learning activities considered necessary for the development of an accountant (Byrne et al., 2002). Researchers suggested evidence of an association between teaching methods and course grades (Satha & Phapruk, 2011). The purpose of this quantitative descriptive research study was to determine, using statistical comparison,

any significant relationship between the main teaching method attribute used in accounting courses and the students' self-reported course grade outcome.

The research question is what is the relationship between the main teaching method attribute (traditional chalkboard lectures, collaborative/ group learning, and case studies) used in accounting courses and the numerical self-reported course grade outcome of the students? In the current study, the research question (RQ1) focused on establishing a relationship between teaching methods used in the course and the students' self-reported course grade outcome.

Population data. Eighty-five surveys were received in the research study. The data included the teaching methods and the self-reported course grade outcomes. The teaching method used in the course varied among participants. The three teaching method attributes included in the survey instrument is traditional/chalkboard lectures, collaborative/group learning, and case studies.

Table 2 illustrates the measures of frequency and percent for the course grades. The highest frequency for the course grades was 8 (85%) and numerous grades received the lowest frequency of 1. Most of the students were passing the courses with a 70% or better. The researcher did not receive any participant with grades lower than 60%.

Table 2

Frequency and Percent for Course Grades

Grades	Frequency	Percent
60	2	2.4
62	1	1.2
65	1	1.2
67	1	1.2
68	1	1.2
70	3	3.5
73	1	1.2
74	1	1.2
75	1	1.2
78	2	2.4
80	3	3.5
81	2	2.4
82	5	5.9
83	4	4.7
84	6	7.1
85	8	9.4
86	1	1.2
87	6	7.1
88	7	8.2
90	5	5.9
91	4	4.7
92	2	2.4
93	2	2.4
94	7	8.2
95	2	2.4
97	2	2.4
98	3	3.5
99	1	1.2
100	1	1.2
Total	85	100.0

Table 2

Descriptive and inferential statistics. The first statistical procedure related to the 85 participants was the measures of central tendency and variations of the data for the three teaching method attributes (traditional chalkboard lectures, collaborative/ group learning, and case studies). Table 3 and 4 illustrates the descriptive statistics for the teaching methods and the course grades. The descriptive statistics is comprised of measure of variation (standard deviation) and measure of central tendency (mean).

The mean scores are all above 80 on a 0-100 scale. This signifies students are earning good grades no matter which teaching method is used. The highest mean score was for case studies (87.87). The lowest mean score was Traditional/Chalkboard Lectures (83.17). The overall mean score for the attributes reflects that most students appear to be earning grades of, at least, a B or better in the accounting courses. The mean score for teaching method was 1.62 on a 1-3 scale (1-traditional chalkboard lectures, 2-collaborative/ group learning, and 3-case studies). Most students learned using traditional and collaborative learning formats.

Table 3					
<i>Descriptive Statistics of the Course Grades</i>					
Teaching Method Attributes	N*	Mean	SD**	Minimum	Maximum
Traditional/Chalkboard Lectures	47	83.17	10.716	60	100
Collaborative/Group Learning	23	87.57	5.743	80	99
Case Studies	15	87.87	4.051	83	95
Total	85	85.19	8.909	60	100
*number of participants, **SD= standard deviation					
Table 3					

Table 4				
<i>Descriptive Statistics of Teaching Method</i>				
Category	Mean	SD*	Minimum	Maximum
Teaching Method	1.62	0.771	1	3
*Standard Deviation				
Table 4				

A one-way ANOVA was performed to compare teaching methods and course grade outcomes. It was concluded that there is no statistically significant difference between group means as determined by one-way ANOVA ($F(2,82) = 2.819, p = .065$). Further, unexpected testing was needed due to the variances not being equal. The significance level is underestimated and the null hypothesis falsely rejected when large sample variances are associated with small samples. A Welch test was performed. The standard deviation for traditional/chalkboard lectures, collaborative/ group learning, and case studies were 10.716, 5.743, and 4.051 respectively.

The Welch test is robust to variance of homogeneity (Lix, Keselman, & Keselman, 1996). Welch's (1951) test is used when variances are unequal or the one-way design has unbalanced data. The Welch test is sensitive to large skewness in data and sample sizes less than 10 are not recommended (Sheng, 2008). The researcher chose to use the Welch test due to the unequal sample sizes for the groups. Table 5 illustrates the Welch test, showing a $p\text{-value} = 0.042 < .05$, which concludes there is a statistically significant difference between the means of the three groups.

Table 5				
<i>Welch Test</i>				
	Statistic ^a	df1	df2	Sig.*
Welch	3.374	2	48.714	0.042
^a =Asymptotically F distributed.				
*p<0.05				
Table 5				

Summary

Chapter 4 detailed the research design and procedures in the quantitative descriptive study. The findings included descriptive statistics, inferential statistics and analysis using SPSS statistical software version 24. The inferential statistics included an ANOVA and the Welch test.

The research investigated one research question. The research question was what is the relationship between the main teaching method attribute (traditional chalkboard lectures, collaborative/ group learning, and case studies) used in accounting courses and the numerical self-reported course grade outcome of the students.

The major findings from this study are:

1. A weak positive relationship exists between the teaching method attributes (traditional chalkboard lectures, collaborative/ group learning, and case studies) and course grade outcome.
2. Over half of the study participants learned by traditional/chalkboard lectures and a little over a quarter learned by

collaborative/group learning. Only 18% learned by case studies despite recommendations by researchers and organizations.

3. Course grades were slightly higher for students learning by collaborative/ group learning and case studies than students learning by traditional/chalkboard lectures.
4. Statistically significant difference between the mean scores of the three groups (group 1= traditional/chalkboard lectures and collaborative/group learning, group 2= traditional/chalkboard lectures and case studies, group 3= collaborative/group learning and case studies).

Chapter 5 presents an interpretation of the findings, implications and significance of the results. Chapter 5 will also include recommendations and suggestions for future studies along with limitations of the study.

Chapter 5

Conclusions and Recommendations

The purpose of this quantitative descriptive research study was to determine, using statistical comparison, any significant relationship between the main teaching method attribute used in accounting courses and the students' self-reported course grade outcome. The research problem focused on explaining the relationship, if any, between the teaching methods attribute and the self-reported course grade outcome. This descriptive research study involved a sample of accounting students at a community college in the Chicago area using a questionnaire survey instrument, utilizing close-ended questions.

This study gathered data on the teaching method attributes (traditional/ chalkboard lectures, collaborative/ group learning, and case studies) and the students' grade in the course. The information in this study might help researchers, educators, and administrative staff recognize the importance of the teaching methods used in accounting courses. Findings of this study will provide educators with knowledge on the teaching method that foster better grades for students and may, in turn, foster better understanding of the accounting material presented. This study will help to bridge the gap for colleges and universities, responsible for producing potential business professional, between knowing and not knowing, what methods are best for educating students in accounting for the best grade outcome.

This study established if there was a significant relationship between the main teaching method attribute used in accounting courses and the students' self-reported course grade outcome. Chapter 5 provides a summary of the study, the purpose,

conclusions drawn, implications of findings, and recommendations for future studies. The purpose of the study was fulfilled using a quantitative research design and descriptive research to correlate the main teaching method attribute used in the course with the course grades of the participants.

Findings

The research questions were the driving force for the study. The hypotheses were created to address the research question. The research question focused on the teachings method attributes and the course grade. The research question what is the relationship between the main teaching method attribute (traditional chalkboard lectures, collaborative/ group learning, and case studies) used in accounting courses and the numerical self-reported course grade outcome of the students. A summary of the statistical analysis is presented in this section.

Teaching Method versus Course Grade

This study determined the degree of relationship between teaching method attribute and course grade. The survey instrument aided in the collection of the teaching method mainly used in the course and the self-reported course grade outcome. The findings from this study addressed the significance of the relationship between the teaching method attribute and the self-reported course grade outcome.

Hypothesis. The null hypothesis states there is no relationship between the main attribute of the teaching method used in accounting courses and students' numerical self-reported course grade outcome. Research results revealed there is a weak positive relationship between the teaching method attributes (traditional chalkboard lectures, collaborative/ group learning, and case studies) and self-reported course grade outcome.

The statistical findings of this quantitative descriptive study revealed there is a weak positive relationship between the teaching method attributes (traditional chalkboard lectures, collaborative/ group learning, and case studies) and self-reported course grade outcome. The results revealed lower course grades for students taught by traditional/ chalkboard lectures. The null hypothesis was rejected indicating a weak positive relationship existing between the teaching method attributes (traditional chalkboard lectures, collaborative/ group learning, and case studies) and self-reported course grade outcomes.

The reliability of the significance between the teaching method attribute and the students' course grade outcome, was ensured using an ANOVA showing that there is no statistically significant difference between group means. Unequal variances caused the researcher to perform the Welch test. Welch's test is used when variances are unequal or the one-way design has unbalanced data. Welch test, revealed there is a statistically significant difference between the means of the three groups, thus the null hypothesis was rejected (Welch's, 1951).

The results of this study indicated that the teaching method attribute, used in accounting courses is related to the course grade outcome. Findings suggest that students taught using traditional/ chalkboard lectures receive lower grades than students learning by collaborative/ group learning and case studies. The results suggest teaching methods do relate to the course grades. Norman (2009) believes researchers should survey students' learning style and before an assumption is made to tailor learning to fit the learning style, the assumption must be tested.

Implications

The implications of this research study indicate that the main teaching methods used in college accounting courses are related to the students' grades in the course. Over half of the study participants learned by traditional/chalkboard lectures and a little over a quarter learned by collaborative/group learning. A small percentage of the study participants learned by case studies despite recommendations by Jerome Bruner (Constructivist Learning Theory), researchers (Asal & Kratoville, 2013; Coram, 2005; Coupal, 2004; DeBoskey, 2009; Harrington & Enochs, 2009; Hassall, & Milne, 2004; Hassler, 1950; Mostyn, 2012; Wines et al., 1994), and organizations (AECC).

Accounting instructors should introduce proactive teaching strategies to facilitate student learning and become familiar with larger groups of students (Puttee, 2008).

Several researchers believe collaborative/ group learning extends the learning environment of accounting students (Lancaster & Strand, 2001; Lindquist, 1995; Peek, Winking, & Peek, 1995). Researchers believe (Hassall, & Milne, 2004; Hassler, 1950; Wines et al., 1994) accounting is better learned through case studies to help aid in the development of personal skills. Contrary, research does not address the best teaching method that promotes better grades. To do so, a relationship between teach method attributes and self-reported course grade outcomes must be established.

Little research exists with usable substance relating to successful accounting teaching methods. Accounting education literature lacks controlled testing of various teaching method attributes and the relation to the course grade outcome (Lamarche-Bisson, 2002; Satha & Phapruk, 2011). Little studies were found involving instructional

strategies, in accounting education, optimizing learning. The current study established a relationship between teaching method attributes and self-reported course grade outcomes.

Students are understanding more accounting information when nontraditional learning methods are used. Educators can no longer rely on traditional teaching methods (Jaijairam, 2012). Results of the instrument for this study further indicate that instructors are not using the recommended teaching method as the main method. This study supports that students in this sample earn better grades in accounting courses when the instructor teaches using collaborative/ group learning and case studies.

Significance of Results

The purpose of this study was to identify a possible relationship between the attributes of teaching methods and students' self-reported course grade outcome. This study will aid educational leaders with quantitative data to support changes in teaching methods used in accounting courses. This study found a weak positive relationship between teaching method attributes and the course grade outcomes for accounting students. Higher grades were found in accounting courses taught using collaborative/group learning and case studies.

The results of this study support researcher's, from the literature review, beliefs that accounting students should learn by collaborative/group learning or case studies (Hassall, & Milne, 2004; Hassler, 1950; Lancaster & Strand, 2001; Lindquist, 1995; Peek, Winking, & Peek, 1995; Wines et al., 1994). The data supports the premise that course grades earned in accounting courses are, in part, determined by the teaching method used in the course. Accounting instructors should be more conscience of how

material is presented to students and the product that is released into the world. Other factors, from the literature may be a more predictive

Accounting courses are designed per the curriculum set by administrators and instructors. The teaching approach used in accounting courses has significant effects on students' perceptions of the skills needed for success by accounting professionals (Friedlan, 1995). Cooperative/ group learning relies on structured forms of small group problem solving, promoting positive interdependence while sharpening social and leadership skills in accounting students (Cottell, 2010). Accounting education should aim to develop students by use of case studies (Hassall & Milne, 2004). Accounting courses do not just inform students about how to do accounting, they are important sources of information about the careers choices in the accounting field. Learning is improved by the method instructors use in accounting courses. Accounting can be rigorous. Students must understand accounting rules to correctly reflect reality for firms. It is the job of the instructor to ensure accounting information is displayed so students grasp an understanding.

Recommendations and Suggestions for Future Research

Results of the study established a weak positive relationship between teaching methods and the course grade outcomes. Educators should be aware of the relationship and understand how the relationship can aid in further understanding of accounting information for students, help to reach all learning styles, and release qualified candidates into the work world. Understanding the relationship can aid college administration and educators to choose the right course material and teach students using the recommended methods.

The researcher recommends college administrators and educators compile a list of educational material for instructors to educate themselves on teaching methods that promote learning for certain subjects. College educators should be required to obtain more than just a degree to qualify to teach students. Competency is an important aspect all instructors should possess.

Suggestions for future research is drawn from the results of this study. Both teaching methods and course grades are crucial to a students' success and should be examined in future studies. This study used a tool created by the researcher to collect data and future studies may need to use established tool, proven to ensure reliability. This study opens the way for analysis of gender differences in relation to course grades in accounting. Research in learning styles, the existence of learning styles, catering learning styles, and student preference of learning styles are important aspects that should be explored.

This study identified a relationship between teaching method attributes and self-reported course grade outcomes. Future research can seek to identify a relationship in other undergraduate and graduate courses that contain accounting related content. This study use grades to measure the performance of students and future studies can extend performance measures to a wider range of skills. This study opens the doors for future studies utilizing larger accounting classes.

This study population was limited to community college students enrolled in an accounting course during the spring semester of 2017. The sample was collected over one semester. The sample may not reflect the students at the community college. The

study excluded students in four-year colleges and universities and trade schools and recommendations for this group of students are made.

Additional studies are needed for students in different geographical locations, professional or educational background, age, attitude towards the subject, ethnic backgrounds, class size, and population. This study assumed teaching methods as a sole factor relating to course grades. Additional studies are needed to access unrelated factors (i.e. illness, family issues) related to students' course grades. This study population data was gathered mid-semester. Another study can be conducted accessing students grades at year end. Additional studies are needed comparing accounting majors to non-accounting majors. Another study can be conducted focusing on specific training needed for accounting instructors.

This study was limited by popular teaching methods mainly used in accounting courses and may not be generalizable to other colleges with different school settings. This study did not consider students course grades resulting from curved scores or extra credit assignments, given by one instructor/ course but absent in another. The course grades may not depict the course grades of the students at the community college. Recommendations for future research investigating the level of education of the instructors and the students' course grade outcome are made. Recommendations are also made to explore different research designs and data collection to improve results and control variables.

Conclusion

The quantitative descriptive study established a relationship between the teaching method attributes and the course grades outcomes of the students. Participants in the

study were community college students enrolled in an accounting course in the spring semester of 2017. Research data were collected using a survey instrument included course grades and teaching method mainly used in the course.

The study intended to establish a relationship and explore a possible cause for low accounting grades. This study examined on campus college students and whether traditional/ chalkboard lectures, collaborative/group learning, or case studies were related to the grade in the course. Also, the purpose was to provide education leaders with insight to support recommendations for teaching methods to produce competent future accountants. Educational leaders and administration need to create a plan to deal with the complex information available and how to expand students' ability to process the information to meet the demand of today's workforce (Riedling, 2002).

Focusing on student learning in higher education has become more important. Lack of relevancy of information is a growing concern. AECC demands change in course material delivery and the development of state-of-the-art teaching techniques. Thus, colleges and universities are increasing active learning techniques (Carter & Hogan, 2013).

Accrediting agencies have assessment plan requirements that include addressing evaluation of student performance to enhance learning, utilizing results to improve curriculum, and assessment can be for entire program or just the major. The Association to Advance Collegiate Schools of Business (AACSB) requires accredited institutions to develop a mission statement to help measure the progress of students and achievement of program objectives (Carter & Hogan, 2013).

Chapter 5 concludes this research study. The findings from this study showed a small positive relationship between teaching method attributes, mainly used in accounting courses, and the course grade outcome of students, rejecting the null hypothesis 1 at the 0.05 level of significance. ANOVA and Welch. The results of this study are applicable to all two-year community colleges with a similar geographic location and population. Recommendations for this research pave the way for college educators to increase opportunities for students and future accounting professionals. This research also offered information for colleges to update material used in accounting courses to reflect the recommended teaching method.

References

- Abayadeera, N., & Watty, K. (2014). The expectation-performance gap in generic skills in accounting graduates. *Asian Review of Accounting*, 22(1), 56-72. doi: <http://dx.doi.org/10.1108/ARA-09-2013-0059>
- About the AICPA. (2016). Retrieved from <http://www.aicpa.org/About/Pages/About.aspx>
- About the SEC. (2016). Retrieved from <https://www.sec.gov/about.shtml>
- Al-Twaijry, A. (2010). Student academic performance in undergraduate managerial-accounting courses. *Journal of Education for Business*, 85(6), 311. doi: 10.1080/08832320903449584
- Albrecht, W. (2014). Steven M. Mintz and Roselyn E. Morris, Ethical obligations and decision making in accounting: Text and cases. *Journal of Business Ethics*, 121(3), 497-498. doi:10.1007/s10551-014-2127-6
- Ali, R., Bakar, Z. A., & Akhtar, N. (2014). The demarcation of cognitive and learning style: Myth or reality as an impediment in educational research. *Journal of Psychological and Educational Research*, 22(2), 76-101. Retrieved from <https://search-proquest-com.contentproxy.phoenix.edu/docview/1664462090?accountid=458>
- Allcock S. J., Hulme J. A. (2010). Learning styles in the classroom: Educational benefit or planning exercise? *Psychology Teaching Review* 16(2), 67-79.
- Almunais, T. A., Alfraih, M. M., & Alharbi, F. M. (2014). Determinants of accounting students' performance. *Business Education & Accreditation*, 6(2), 1-9. Retrieved from <http://search.proquest.com/docview/1525837824?accountid=458>

- Andreou, E., & Vlachos, F. (2013). Learning styles of typical readers and dyslexic adolescents. *Journal of Visual Literacy*, 32(2), 1-13.
- Asal, V. v., & Kratoville, J. (2013). Constructing international relations simulations: examining the pedagogy of IR simulations through a constructivist learning theory lens. *Journal of Political Science Education*, 9(2), 132-143.
doi:10.1080/15512169.2013.770982
- Baldvinsdottir, G., Burns, J., Norreklit, H., & Scapens, R. (2010). Professional accounting media: Accountants handing over control to the system. *Qualitative Research in Accounting and Management*, 7(3), 395-414.
<http://dx.doi.org/10.1108/11766091011072819>
- Benke Jr., R. L., & Street, D. L. (1992). Accounting education research methodology. *Accounting Education*, 33(5)
- Bergsteiner, H., Avery, G. G., & Neumann, R. (2010). Kolb's experiential learning model: Critique from a modelling perspective. *Studies in Continuing Education*, 32(1), 29-46. doi:10.1080/01580370903534355
- Bonwell, C.C., & Eison, J. (1991). *Active learning: Creating excitement in the classroom. ASHE-ERIC Higher Education Report (No. 1)*. Washington, DC: The George Washington University School of Education and Human Development.
- Borg, W. R., & Gall, M. D. (1989). *Educational Research: An Introduction 5th. ed.* New York: Longman.
- Breaux, K., Chiasson, M., Mauldin, S., & Whitney, T. (2010). Ethics education in accounting curricula: Does it influence recruiters' hiring decisions of entry-level

- accountants? *Journal of Education for Business*, 85(1), 1-6. Retrieved from <http://search.proquest.com/docview/580117321?accountid=458>
- Buckhaults, J., & Fisher, D. (2011). Trends in accounting education: Decreasing accounting anxiety and promoting new methods. *Journal of Education for Business*, 86(1), 31-35. doi:10.1080/08832321003720692
- Butler, S. A., & Ghosh, D. (2015). Individual differences in managerial accounting judgments and decision-making. *The British Accounting Review*, 47(1), 33-45. doi:10.1016/j.bar.2014.09.002
- Burch, G. F., Burch, J. J., Heller, N. A., & Batchelor, J. H. (2015). An empirical investigation of the conception focused curriculum: The importance of introducing undergraduate business statistics students to the 'real world'. *Decision Sciences Journal of Innovative Education*, 13(3), 485-512. doi:10.1111/dsji.12074
- Byrne, M., Flood, B., & Willis, P. (2002). The relationship between learning approaches and learning outcomes: A study of Irish accounting students. *Accounting Education*, 11(1), 27-42. doi:10.1080/09639280210153254
- Byrne, S., & Pierce, B. (2007). Towards a more comprehensive understanding of the roles of management accountants. *European Accounting Review*, 16(3), 469-498. doi:10.1080/09638180701507114
- Carey, P. & Tanewski, G. (2016). The provision of business advice to SMEs by external accountants. *Managerial Auditing Journal*, 31(3), 290-313. <http://dx.doi.org/10.1108/MAJ-12-2014-1131>
- Carrithers, J. M. (1951). Problems and theories of teaching elementary accounting. *Accounting Review*, 26(1), 93.

- Carter, F. L., & Hogan, P. T. (2013). Integrating active learning and assessment in the accounting classroom. *Journal of Instructional Pedagogies*, 11, 1-16. Retrieved from <http://search.proquest.com/docview/1440862444?accountid=458>
- Case study. (2016). Retrieved from <http://www.merriam-webster.com/dictionary/case%20study>
- Chaffee, P. (2010). *Preparing to match teaching styles to student learning styles* (Order No. 3488627). Available from Dissertations & Theses @ University of Phoenix; ProQuest Central; ProQuest Dissertations & Theses Global. (911029233). Retrieved from <http://search.proquest.com/docview/911029233?accountid=35812>
- Chakraborty, T. R. (2016). Pros and cons of active learning. *The FASEB Journal*, 30(1), Retrieved from http://www.fasebj.org/content/30/1_Supplement/776.27.short
- Chiang, B., Nouri, H., & Samanta, S. (2014). The effects of different teaching approaches in introductory financial accounting. *Accounting Education*, 23(1), 42-53. doi:10.1080/09639284.2013.833724
- Choi, J., Peters, M., & Mueller, R. O. (2010). Correlational analysis of ordinal data: From Pearson's r to bayesian polychoric correlation. *Asia Pacific Education Review*, 11(4), 459-466. doi:<http://dx.doi.org/10.1007/s12564-010-9096-y>
- Christensen, L. B., Johnson, R. B., & Turner, L. A. (2010). *Research methods, design, and analysis (11 ed.)*. Boston, MA: Allyn & Bacon.
- Claydon, L. S. (2015). Rigour in quantitative research. *Nursing Standard (2014+)*, 29(47), 43. <http://dx.doi.org/10.7748/ns.29.47.43.e8820>

- Cooper, J. L., Prescott, S., Cook, L., Smith, L., Mueck, R., & Cuseo, J. (1990). *Cooperative learning and college instruction: Effective use of student learning teams*. Long Beach, CA: Institute of Teaching and Learning.
- Cooper, D. R., & Schindler, P. S. (2003). *Business research methods (8th Ed.)*. Boston, MA: McGraw-Hill Irwin.
- Cooper, D. R., & Schindler, P. S. (2008). *Business research methods (105th Ed.)*. Boston, MA: McGraw-Hill Irwin.
- Coram, P. (2005). Active learning in accounting: A case study in preaching to the unconverted. *Accounting Research Journal*, 18(1), 13-20.
<http://dx.doi.org/10.1108/10309610580000671>
- Costantin, R., & Gornea, A. (2012). Management accounting in decision-making. *Valahian Journal of Economic Studies*, 3(2), 7-20. Retrieved from
<http://search.proquest.com/docview/1399685070?accountid=458>
- Cottell, P. G. (2010). Cooperative learning in accounting. In Millis, B. (Ed.), *Cooperative learning in higher education* (pp. 11-34). Sterling, Virginia, Stylus.
- Cottell, P.G., & Millis, B.J. (1993). Cooperative structures in the instruction of accounting. *Issues in Accounting Education*, 8(1), 40–60
- Coupal, L. V. (2004). Constructivist learning theory and human capital theory: Shifting political and educational frameworks for teachers' ICT professional development. *British Journal of Educational Technology*, 35(5), 587-596.
[doi:10.1111/j.0007-1013.2004.00415.x](https://doi.org/10.1111/j.0007-1013.2004.00415.x)
- Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research (2nd ed.)*. Upper Saddle River, NJ: Pearson.

- Cuevas, J. (2015). Is learning styles-based instruction effective? A comprehensive analysis of recent research on learning styles. *Theory and Research in Education*, 13(3), 308-333. <https://doi.org/10.1177/1477878515606621>
- Davies, T. L., Cotton, V. K., & Korte, L. (2016). Student usage and perceptions of the value of recorded lectures in a traditional face-to-face (F2F) class. *Journal of College Teaching & Learning (Online)*, 13(3), 85-n/a. Retrieved from <http://search.proquest.com/docview/1804899841?accountid=458>
- De Araujo, A. M., & Slomski, V. G. (2013). Active learning methods: An analysis of applications and experiences in Brazilian accounting teaching. *Creative Education*, 4(12), 20-27. Retrieved from <http://search.proquest.com/docview/1491015592?accountid=458>
- Deaton, S. (2015). Social learning theory in the age of social media: implications for educational practitioners. *Journal of Educational Technology*, 12(1), 1-6.
- DeBoskey, D. G. (2009). Enhancing teaching effectiveness of financial accounting to Chinese executives-A generalized approach with case study and assessments. *Issues in Accounting Education*, 24(4), 511-529. Retrieved from <http://search.proquest.com/docview/210910117?accountid=458>
- Department of Health, Education, and Welfare (DHEW). (2016). Retrieved from <http://www.dictionary.com/browse/department-of-health--education--and-welfare>
- Dewey, J. (1938). *Experience and education*. New York: Macmillan
- Diller-Haas, A. (2004) Time to change introductory accounting. *The CPA Journal*, 74(4), 60– 62

- Dimitrios, B., Labros, S., Nikolaos, K., Maria, K., & Athanasios, K. (2013). Traditional teaching methods vs. teaching through the application of information and communication technologies in the accounting field: Quo vadis? *European Scientific Journal*, 9(28), 73. doi:10.1037/0003-066X.59.1.29
- Dobrovolny, J. L., & Fuentes, S. C. G. (2008). Quantitative versus qualitative evaluation: A tool to decide which to use. *Performance Improvement*, 47(4), 7-14. Retrieved from <http://search.proquest.com/docview/237234192?accountid=35812>
- Dolnicar, S. (2013). Asking good survey questions. *Journal of Travel Research*, 52(5), 551-574. doi:10.1177/0047287513479842
- Duchac, J. E., & Amoruso, A. J. (2012). A descriptive study of institutional characteristics of the introductory accounting course. *Issues in Accounting Education*, 27(1), 1-16. Retrieved from <http://search.proquest.com/docview/940914356?accountid=458>
- Duffy, M. E. (2006). Resources for determining or evaluating sample size in quantitative research reports. *Clinical Nurse Specialist*, 20(1), 9-12
- Dweck, C. (2006). *Mindset: The new psychology of success*. New York, NY: Random House
- Edmond, T. & Tiggeman, T. (2009). Accounting experiences in collaborative learning. *American Journal of Business Education*, 2(7), 97-100. Retrieved from <http://search.proquest.com/docview/195912644?accountid=458>
- El-Sayed, H., & Youssef, M. A. E. (2015). "Modes of mediation" for conceptualizing how different roles for accountants are made present. *Qualitative Research in*

- Accounting and Management*, 12(3), 202-229. Retrieved from
<http://search.proquest.com/docview/1696232265?accountid=458>
- Extraneous and Confounding Variable. (2012). Retrieved from
<http://dissertation.laerd.com/extraneous-and-confounding-variables.php>
- Ferguson, J., Collison, D., Power, D., & Stevenson, L. (2011). Accounting education, socialization and the ethics of business. *Business Ethics: A European Review*, 20(1), 12-29. doi:10.1111/j.1467-8608.2010.01607.x
- FERPA General Guidance. (2016). Retrieved from
<http://www2.ed.gov/policy/gen/guid/fpco/ferpa/students.html>
- Force, M.S. (2002). Authors of accounting education study reflect on current state of education, professional satisfaction. *The Journal of Government Financial Management*, 51(3), 8-9.
- Fratto, V. A. (2011). Enhance student learning with PowerPoint games: Using twenty questions to promote active learning in managerial accounting. *International Journal of Information and Communication Technology Education (IJICTE)*, 7(2), 13-20. doi:10.4018/jicte.2011040102
- Fridley W. & Fridley C. (2010). Some problems & peculiarities with the learning styles rhetoric and practice. *Journal of Philosophy & History of Education* 60, 21–27.
- Friedlan, J. M. (1995). The effects of different teaching approaches on students' perceptions of the skills needed for success in accounting courses and by practicing accountants. *Issues in Accounting Education*, 10(1), 47.

- Gammie, E. & Kirkham, L. (2008). Breaking the link between quality and university in the creation of the professional accountant: The ICAS story. *British Accounting Review*, 40(4), 356–375. doi:10.1016/j.bar.2008.06.002
- Garner, B. (2007). *Getting to got it! Helping struggling students learn how to learn*. Alexandria, VA: Association for Supervision & Curriculum Development.
- Getha-Eby, T., Beery, T., Xu, Y., & O'Brien, B., A. (2014). Meaningful learning: Theoretical support for concept-based teaching. *Journal of Nursing Education*, 53(9), 494-500. doi:http://dx.doi.org/10.3928/01484834-20140820-04
- Gholami, S., & Bagheri, M. S. (2013). Relationship between VAK learning styles and problem solving styles regarding gender and students' fields of study. *Journal of Language Teaching & Research*, 4(4), 700-706. doi:10.4304/jltr.4.4.700-706
- Gjersing, L., Caplehorn, J., & Clausen, T. (2010). Cross-cultural adaptation of research instruments: Language, setting, time and statistical considerations. *BMC Medical Research Methodology*, 10(1), 13. doi:10.1186/1471-2288-10-13
- Gooderham, P., Tobiassen, A., Doving, E., & Nordhaug, O. (2004). Accountants as sources of business advice for small firms. *International Small Business Journal*, 22(1), 5-22. doi: 10.1177/0266242604039478
- Goodsell, A. S., Maher, M. R., & Tinto, V. (1992). Discipline-specific bibliography. In A. Goodsell, M. Maher, & V. Tinto (Eds.), *Collaborative learning: A sourcebook for higher education* (75-79). University Park, PA: National Center on Postsecondary Teaching, Learning, & Assessment.

- Goretzki, L., Strauss, E., & Weber, J. (2013). An institutional perspective on the changes in management accountants' professional role. *Management Accounting Research*, 24(1), 41-63. doi:10.1016/j.mar.2012.11.002
- Grade. (2016). Retrieved from <http://www.merriam-webster.com/dictionary/grade>
- Granlund, M., & Lukka, K. (1998). It's a small world of management accounting practices. *Journal of Management Accounting Research*, 10, 153-179. Retrieved from <http://search.proquest.com/docview/210178088?accountid=458>
- Grasha, A. F. (1996). Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles. Pittsburgh: Alliance Publishers.
- Harrington, R. A., & Enochs, L. G. (2009). Accounting for preservice teachers' constructivist learning environment experiences. *Learning Environments Research*, 12(1), 45-65. <http://dx.doi.org/10.1007/s10984-008-9053-4>
- Hassall, T., & Milne, M. J. (2004). Using case studies in accounting education. *Accounting Education*, 13(2), 135-138. doi:10.1080/09639280410001676594.
- Hassler, R. H. (1950). The case method of teaching accounting. *Accounting Review*, 25(2), 170
- Herald, B., & Davis, M. R. (2015). 'De-Identifying' Student Data Is Key for Protecting Privacy. *Education Week*, 35(2), 12-13.
- Hosal-Akman, N., & Simga-Mugan, C. (2010). An assessment of the effects of teaching methods on academic performance of students in accounting courses. *Innovations in Education & Teaching International*, 47(3), 251-260.

- Hove, N., Muropa, B. C., Taruwona, M., Maseko, N., Denga, J., Mudzura, M., Zivanai, O., & Chipfere, E. (2011). An investigation into the causes of low grades in advanced level accounting: A survey of Bidura urban schools. *Journal of Business Management and Economics*, 2(1), 28-39.
- Howell, D. C. (2010). *Statistical methods for psychology* (7th ed.). Belmont, CA: Wadsworth Cengage Learning.
- Hoy, W. K. (2010). *Quantitative research in education: A primer*. Thousand Oaks, CA: SAGE Publications, Inc.
<http://dx.doi.org.ezproxy.apollolibrary.com/10.4135/9781452272061.n1>
- Humphrey, C. (2005). In aftermath of crisis: Reflections on the principles, values and significance of academic inquiry in accounting: Introduction. *European Accounting Review*, 14(2), 341–351. doi:10.1080/09638180500127585
- Institutional Review Board. (2016). Retrieved from <http://www.apus.edu/community-scholars/institutional-review-board/>
- Ivie, S. D. (1998). Ausubel's learning theory: An approach to teaching higher order thinking skills. *The High School Journal*, 82(1), 35. Retrieved from <http://search.proquest.com/docview/220213213?accountid=458>
- Jaijairam, P. (2012). Engaging accounting students: How to teach principles of accounting in creative and exciting ways. *American Journal of Business Education (Online)*, 5(1), 75. Retrieved from <http://search.proquest.com/docview/1418437688?accountid=458>

- Jarvenpaa, M. (2007). Making business partners: A case study on how management accounting culture was changed. *European Accounting Review*, 16(1), 99-142. doi:10.1080/09638180701265903
- Kapp, M. B. (2007). The business case for medical informed consent. *International Journal of Risk & Safety in Medicine*, 19(1/2), 57-64
- Kebritchi, M. (2014). Preferred teaching methods in online courses: Learners' views. *Journal of Online Learning and Teaching*, 10(3), 468-n/a. Retrieved from <http://search.proquest.com/docview/1650488991?accountid=458>
- Kerrigan, H. D. (1952). Some current problems in the teaching of accounting. *Accounting Review*, 27(1), 79.
- Knupfer, N. N., & McLellan, H. (1996). Descriptive research methodologies. In D. H. Jonassen (Ed.), *Handbook of research for educational communications and technology* (pp. 1196-1212). New York: Macmillan.
- Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. New Jersey: Prentice-Hall.
- Kolb, D., Rubin, I. M., & McIntyre, J. M. (1971). *Organizational psychology: An experiential approach*. Englewood Cliffs, NJ: Prentice Hall.
- Konak, A., Clark, T. K., & Nasereddin, M. (2014). Using Kolb's Experiential Learning Cycle to improve student learning in virtual computer laboratories. *Computers & Education*, 72, 11-22. <http://dx.doi.org/10.1016/j.compedu.2013.10.013>
- Kotb, A., & Roberts, C. (2011). E-business in accounting education: A review of undergraduate accounting degrees in the UK and Ireland. *Accounting Education*, 20(1), 63-78. doi:10.1080/09537325.2010.547318

- Kropp, R. P. (1973). Workshop on the improvement of education in agricultural economics by defining goals, developing curricula, and improving instruction. *American Journal of Agricultural Economics*, 55(4), 757-761
- Kunkel, J. G., & Shafer, W. E. (1997). Effects of student team learning in undergraduate auditing courses. *Journal of Education for Business*, 72(2), 197–200.
- Lakshman, M., Sinha, L., Biswas, M., Charles, M., & Arora, N. K. (2000). Quantitative vs qualitative research methods. *Indian Journal of Pediatrics*, 67(5), 369-377.
- Lamarche-Bisson, D. (2002). There's more than one way to learn. *Canadian HR Reporter*, 15(20), 1-G7. Retrieved from <http://search.proquest.com>
- Lancaster, K. A. S., & Strand C. A. (2001). Using the team-learning model in a managerial accounting class: An experiment in cooperative learning. *Issues in Accounting Education*, 16(4), 549–567.
- Langenderfer, H. Q. (1996). The struggle for status: A history of accounting education. *The Accounting Historians Journal*, 23(1), 149-154. Retrieved from <http://search.proquest.com/docview/219626906?accountid=458>
- Larkin, R. M. (2011). Federal regulations for prison-based research: an overview for nurse researchers. *Journal of Nursing Law*, 14(1), 17-20. doi:10.1891/1073-7472.14.1.17
- Learning Style. (2016). Retrieved from <http://www.dictionary.com/browse/learning-style>
- Leedy, P. D., & Ormrod, J. E. (2010). *Practical research: Planning and design (9th ed.)*. Upper Saddle River, NJ: Prentice Hall.
- Leite, W. L., Svinicki, M., & Shi, Y. (2010). Attempted validation of the scores of the VARK: Learning styles inventory with multitrait-multimethod confirmatory

factor analysis models. *Educational and Psychological Measurement*, 70(2), 323-339

Levy, Y., & Ellis, T. J. (2006). A systems approach to conduct an effective literature review in support of information systems research. *Informing Science Journal*, 9, 181-212. Retrieved from <http://inform.nu/Articles/Vol9/V9p181-212Levy99.pdf>

Li-Fang, Z. (2000). University students' learning approaches in three cultures: An investigation of Bigg's 3P model. *The Journal of Psychology*, 134(1), 37-55. Retrieved from <http://search.proquest.com/docview/213833881?accountid=458>

Lindquist, T. M. (1995). Traditional versus contemporary goals and methods in accounting education: Bridging the gap with cooperative learning. *Journal of Education for Business*, 70(5), 278-284.

Liu, C., Yao, L. J., & Hu, N. (2012). Improving ethics education in accounting: Lessons from medicine and law. *Issues in Accounting Education*, 27(3), 671-690. Retrieved from <http://search.proquest.com/docview/1037806366?accountid=458>

Lix, L. M. Keselman, J. C. Keselman, H. J. (1996). Consequences of assumption violations revisited: A quantitative review of alternatives to the one-way analysis of variance F test. *Review of Educational Research*, 66(4), 579-619.

Lizzio, A., Wilson, K., & Simons, R. (2002). University students' perceptions of the learning environment and academic outcomes: Implications for theory and practice. *Studies in Higher Education*, 27(1), 27.

Lucas, U., & Mladenovic, R. (2009). The identification of variation in students' understandings of disciplinary concepts: The application of the SOLO taxonomy

within introductory accounting. *Higher Education*, 58(2), 257-283.

<http://dx.doi.org/10.1007/s10734-009-9218-9>

Massa L.J., Mayer R.E. (2006). Testing the ATI hypothesis: Should multimedia instruction accommodate verbalizer-visualizer cognitive style? *Learning and Individual Differences*, 16(4), 321–336

Matching teaching to learning. (1999). *Curriculum Journal*, 10(3), 322

McCourt, A., Low, M., & Tappin, E. (2013). The relevance of business law education for future accountants: A New Zealand perspective. *The E - Journal of Business Education & Scholarship of Teaching*, 7(2), 1-16. Retrieved from <http://search.proquest.com/docview/1492826101?accountid=458>

Minter, R. L. (2011). The learning theory jungle. *Journal of College Teaching and Learning*. 8(6), 7-15. Retrieved from <http://search.proquest.com>

Moore, D. A., & Buxeda, R. J. (2000). Transforming a sequence of microbiology courses using student profile data. *Journal of Microbiology & Biology Education*. 1(1). Retrieved from <http://search.proquest.com>

Moorthy, M. K., Voon, O. O., Samsuri, C. S. B., Gopalan, M., & Yew, K. (2012). Application of information technology in management accounting decision-making. *International Journal of Academic Research in Business and Social Sciences*. 2(3), 1. doi:10.1037/0003-066X.59.1.29

Moser, D. V. (2012). Is accounting research stagnate? *Accounting Horizons*. 26(4), 845–850.

Mostyn, G. R. (2012). Cognitive load theory: What it is, why it's important for accounting instruction and research. *Issues in Accounting Education*, 27(1), 227-

245. Retrieved from

<http://search.proquest.com/docview/940912381?accountid=35812>

Mwai, N. W., Kiplang'at, J. & Gichoya, D. (2014). Application of resource dependency theory and transaction cost theory in analyzing outsourcing information communication services decisions. *The Electronic Library*. 32(6), 786-805. doi: <http://dx.doi.org/10.1108/EL-09-2012-0112>

Neuman, W. L. (2003). *Social research methods: Qualitative and quantitative approaches* (5th ed.). Upper Saddle River, NJ: Pearson Education.

Neuman, W. L. (2005). *Social research methods: Qualitative and quantitative approaches* (6th ed.). Boston, MA: Allyn & Bacon.

Neuman, W. L. (2006). *Social research methods: Qualitative and quantitative Approaches* (7th ed.). Toronto: Pearson

Nga, J., & Mun, S. W. (2013). The perception of undergraduate students towards accountants and the role of accountants in driving organizational change: A case study of a Malaysian business school. *Education and Training*. 55(6), 500-519. <http://dx.doi.org/10.1108/ET-07-2012-0074>

Nielsen, L. B., Mitchell, F., & Norreklit, H. (2015). Management accounting and decision-making: Two case studies of outsourcing. *Accounting Forum*. 39(1), 69-82. doi:10.1016/j.accfor.2014.10.005

Nienhuser, W. (2008). Resource dependence theory: How well does it explain behavior of organizations? *Management Revue*, 19(1/2), 9-32. Retrieved from https://www.researchgate.net/publication/23779867_Resource_Dependence_Theory_-_How_Well_Does_It_Explain_Behavior_of_Organizations

- Noordzij, M., Dekker, F. W., Zoccali, C., & Jager, K. J. (2011). Sample size calculations. *Nephron*, 118(4), c319-c323. doi:<http://dx.doi.org/10.1159/000322830>
- Norman, G. (2009). When will learning style go out of style? *Advances in Health Sciences Education*, 14(1), 1-4.
- Novak, J. D. (2010). Learning, creating, and using knowledge: Concept maps as facilitative tools in schools and corporations. *Journal of e-Learning and Knowledge Society*, 6(3), 21-30
- O'Leary, S. (2012). Impact of entrepreneurship teaching in higher education on the employability of scientists and engineers. *Industry and Higher Education*, 26(6), 431-442. Retrieved from <http://www.ingentaconnect.com/contentone/ip/ihe/2012/00000026/00000006/art0003>
- Ocepek, U., Bosnić, Z., Šerbec, I. N., & Rugelj, J. (2013). Exploring the relation between learning style models and preferred multimedia types. *Computers & Education*, 69, 343-355
- Opdecam, E., Everaert, P., Van Keer, H., & Buysschaert, F. (2014). Preferences for team learning and lecture-based learning among first-year undergraduate accounting students. *Research in Higher Education*, 55(4), 400-432. doi:<http://dx.doi.org/10.1007/s11162-013-9315-6>
- Paas, F., & Ayres, P. (2014). Cognitive load theory: A broader view on the role of memory in learning and education. *Educational Psychology Review*, 26(2), 191-195. doi:<http://dx.doi.org/10.1007/s10648-014-9263-5>

- Panigrahi, J., Das, B., & Tripathy, S. (2015). Paving the path from education to employment. *Parikalpana: KIIT Journal of Management*, 11(1), 113-119.
Retrieved from
<http://search.proquest.com/docview/1692919181?accountid=35812>
- Pashler H, McDaniel M, Rohrer D. (2009) Learning styles: Concepts and evidence. *Psychological Science in the Public Interest* ,9(3), 105–119. doi: 10.1111/j.1539-6053.2009.01038.x
- Peek, L. E., Winking, C., & Peek, G.S. (1995). Cooperative learning activities: Managerial accounting. *Issues in Accounting Education*, 10(1), 111–125.
- Perrin, R. W., & Laing, G. K. (2014). The lecture: A teaching strategy through the looking glass. *The E - Journal of Business Education & Scholarship of Teaching*, 8(1), 67-77. Retrieved from
<http://search.proquest.com/docview/1558537061?accountid=35812>
- Pham H. L. (2012). Differentiated instruction and the need to integrate teaching and practice. *Journal of College Teaching & Learning* 9(1), 13–20
- Phillips, C. J. (2015). An officer and a scholar: Nineteenth-century west point and the invention of the blackboard. *History of Education Quarterly*, 55(1), 82-108.
doi:10.1111/hoeq.12093
- Picciano, A. G. (2004). *Educational research primer*. London: Continuum
- Porter, L.W., & Lawler, E. E. (1968). Managerial attitudes and performance in Selto, F. H., Vruwink, D. R., & Otto, J. R. (1987). Evaluation of teaching techniques for introductory accounting courses. *Accounting Review*, 62(2), 402.

- Price, J. H., Dake, J. A., Murnan, J., Dimmig, J., & Akpanudo, S. (2005). Power analysis in survey research: Importance and use for health educators. *American Journal of Health Education, 36*(4), 202-207. Retrieved from <http://search.proquest.com/docview/212709618?accountid=458>
- Proserpio, L., & Gioia, D. A. (2007). Teaching the virtual generation. *Academy of Management Learning & Education, 6*(1), 69-80.
doi:10.5465/AMLE.2007.24401703
- Puttee, C. M. (2008). In defense of the lecture: Strategies to assist in active learning experiences in accounting units. *E-Journal of Business Education & Scholarship of Teaching, 2*(2), 28. doi:10.1037/0003-066X.59.1.29
- Rae, D., Price, L., Bosworth, G., & Parkinson, P. (2012). Business inspiration: Small business leadership in recovery? *Industry and Higher Education, 26*(6), 473-489. Retrieved from <http://www.ingentaconnect.com/contentone/ip/ihe/2012/00000026/00000006/art00007>
- Ravenscroft, S. P., & Buckless, F. A. (1995). Incentives in student team learning: An experiment in cooperative group learning. *Issues in Accounting Education, 10*(1), 97-110.
- Ravenscroft, S. P., & Buckless, F. A. (1997). Student team learning – replication and extension. *Accounting Education, 2*(2), 151-173.
- Ravenscroft, S. P., Buckless, F. A., & Hassal, T. (1999). Cooperative learning – a literature guide. *Accounting Education: An International Journal, 8*(2), 163-176.

- Rebele, J. E., & St. Pierre, E. K. (2015). Stagnation in accounting education research. *Journal of Accounting Education*, 33(2), 128-137.
doi:10.1016/j.jaccedu.2015.04.003
- Rebele, J. E., Stout, D. E., & Hassell, J. M. (1991). A review of empirical research in accounting education: 1985-1991. *Journal of Accounting Education* 9(2), 167-231. doi:10.1016/0748-5751(91)90003-A
- Ribeiro, L. R. (2011). The pros and cons of problem-based learning from the teacher's standpoint. *Journal of University Teaching & Learning Practice*, 8(1). Retrieved from <http://ro.uow.edu.au/jutlp/vol8/iss1/4/>
- Riedling, A. M. (2002). Although automation: Planning for the future in automation, technology, and innovation. *The Book Report*, 20(4), 26-29
- Riener C, Willingham D (2010) The myth of learning styles. *Change: The Magazine of Higher Learning*, 42(5): 32–35.
- Rohrer, D., & Pashler, H. (2012). Learning styles: Where's the evidence? *Medical Education*, 46(7), 634-635.
- Rout, S. S. (2015). Education to employment: A critical model to bridge the gap. *Parikalpana: KIIT Journal of Management*, 11(1), 99-112. Retrieved from <http://search.proquest.com/docview/1693621313?accountid=35812>
- Runyon, R. P., & Haber, A. (1977). *Fundamentals of behavioral statistics* (3rd ed.). Reading, MA: Addison-Wesley.

- Sale, J., Lohfeld, L., & Brazil, K. (2002). Revisiting the quantitative-qualitative debate: Implications for mixed-methods research. *Quality and Quantity*, 36(1), 43-53.
doi:10.1023/A:1014301607592
- Salkind, N. J. (2007). *Encyclopedia of measurement and statistics*. Thousand Oaks, CA: SAGE Publications, Inc.
<http://dx.doi.org.contentproxy.phoenix.edu/10.4135/9781412952644>
- Samujh, R. H. (2011). Micro-businesses need support: Survival precedes sustainability. *Corporate Governance*, 11(1), 15-28.
<http://dx.doi.org/10.1108/14720701111108817>
- Santo, S. A. (2006). Relationships between learning styles and online learning: Myth or reality? *Performance Improvement Quarterly*, 19(3), 73-88. Retrieved from <https://search-proquest-com.contentproxy.phoenix.edu/docview/218517854?accountid=35812>
- Satha, W., & Phapruk, U. (2011). Accounting quality, accounting performance, and firm survival: An empirical investigation of Thai-listed firms. *International Journal of Business Research*, 11(4), 118-143. Retrieved from <http://www.iabe.org>
- Schulz, K. F., & Grimes, D. A. (2002). Blinding in randomized trials: Hiding who got what. *Lancet*, 359(9307), 696-700. doi:11879884 10.1016/S0140-6736(02)07816-9
- Scott, C. (2010). The enduring appeal of “learning styles. *Australian Journal of Education*, 54(1), 5–17.

- Sheng, Y. (2008). Testing the assumptions of analysis of variance. In J. Osborne (Ed.), *Best practices in quantitative methods* (pp. 324-340). Thousand Oaks, CA: SAGE Publications Ltd doi:10.4135/9781412995627.d27
- Siegel, P. H., Omer, K., & Agrawal, S. P. (1997). Video simulation of an audit: An experiment in experiential learning theory. *Accounting Education*, 6(3), 217-230.
- Simon, M. K. (2005). *Dissertation and scholarly research: Recipes for success*. Dubuque, IA: Kendall/Hunt Publishing.
- Simon, M. K. (2011). *Dissertation and scholarly research: Recipes for success*. Seattle, WA, Dissertation Success, LLC.
- Simon, M. K., & Francis, J. B. (2001). *The dissertation and research cookbook (3rd ed.)*. Dubuque, IA: Kendall/Hunt Publishing
- Slavin, R. E. (1992). Research on cooperative learning: Consensus and controversy. In A. Goodsell, M. Maher, & V. Tinto (Eds.), *Collaborative learning: A sourcebook for higher education* (97-99). University Park, PA: National Center on Postsecondary Teaching, Learning, & Assessment.
- Smigla, J. E. (1995). Changing how we teach introductory accounting. *Pennsylvania CPA Journal*, 66(2), 4- 6
- Soni, M. G. (1998). US teaching methods. *Nature*, 392(6676), 542.
<http://dx.doi.org/10.1038/33262>
- Stockwell, C. (2014). Same as it ever was: Top 10 most popular college majors. *USA Today College*. Retrieved from <http://college.usatoday.com/2014/10/26/same-as-it-ever-was-top-10-most-popular-college-majors>

- Stone, G. (2015). Power, dependence and frustration: A study of power in Australian accountants' advisory relationship with small business. *Meditari Accountancy Research*, 23(3), 250 – 275. <http://dx.doi.org/10.1108/MEDAR-05-2014-0042>
- Student-Centered Learning. (2014). Retrieved from <http://edglossary.org/student-centered-learning/>
- Sundem, G. L., & Williams, D. Z. (1992). Changes in accounting education: preparing for the twenty-first century. *Accounting Education: An International Journal*, 1(1), 55-61. doi:10.1080/09639289200000006
- Surjono, H. D. (2014). The evaluation of a moodle based adaptive e-learning system. *International Journal of Information and Education Technology*, 4(1), 89-92. <http://dx.doi.org/10.7763/IJiet.2014.V4.375>
- Survey Monkey Sample Size Calculator. (2016). Retrieved from <https://www.surveymonkey.com/mp/sample-size-calculator/>
- Taba, H. (1962). *Curriculum development: Theory and practice*. New York: Harcourt, Brace & World
- Teaching Method. (2016). Retrieved from <http://www.thefreedictionary.com/teaching+method>
- The Importance of Accounting in Today's World [Word document]. (2014). Retrieved from Lecture Notes Online Web site: <https://fisher.osu.edu/~young.53/Sample6.doc>
- The Uniform CPA Examination. (2016). Retrieved from <http://www.aicpa.org/BecomeACPA/CPAExam/Pages/CPAExam.aspx>

- Thompson, J., & Downing, R. (2007). The entrepreneur enabler: Identifying and supporting those with potential. *Journal of Small Business and Enterprise Development*, 14(3), 528-544. <http://dx.doi.org/10.1108/14626000710773592>
- Thornton, S. (2001). Subject specific teaching methods: History. *Advances in Research on Teaching*, 8, 291-314. doi:10.1016/S1479-3687(01)80031-6
- Tucker, B. P. (2016). Comparing the research-practice gap in management accounting. *Accounting, Auditing & Accountability Journal*, 29(3), 362. doi:10.1037/0003-066X.59.1.29
- Ueltschy, L. C. (2001). An exploratory study of integrating interactive technology into the marketing curriculum. *Journal of Marketing Education*, 23(1), 63-72.
Retrieved from <http://search.proquest.com/docview/204412839?accountid=458>
- Wagner, M., & Huang, J. C. (2011). Relative performance of English second language students in university accounting courses. *American Journal of Business Education*, 4(5), 31-38. Retrieved from <http://search.proquest.com>
- Wall, P. S., & Sarver, L. (2014). Liability of college faculty and administrators. *Research in Higher Education Journal*, 24, 1-9. Retrieved from <http://search.proquest.com/docview/1558845448?accountid=458>
- Wally-Dima, L. (2011). Bridging the gap between accounting education and accounting practice: The case of the University of Botswana. *IUP Journal of Accounting Research & Audit Practices*, 10(4), 7-27. Retrieved from <http://search.proquest.com>.
- Watson, R. (2015). Quantitative research. *Nursing Standard (2014+)*, 29(31), 44. <http://dx.doi.org/10.7748/ns.29.31.44.e8681>

Welch, B. L. (1951). On the comparison of several mean values: An alternative approach. *Biometrika*, 38(3-4),330-336(1951).

What is collaborative learning? (1997). Retrieved from
<http://archive.wceruw.org/cl1/cl/moreinfo/MI2A.htm>

What is Interactive Learning? -Overview and Tools. (2016). Retrieved from
<http://study.com/academy/lesson/what-is-interactive-learning-overview-tools.html>

Williams, D. (1993). Reforming accounting education. *Journal of Accountancy*, 176 (2),
76- 82.

Win, R., & Miller, P. (2005). The effects of individual and school factors on university students' academic performance. *Australian Economic Review*, 38(1), 1-18.

Wines, G., Carnegie, G., Boyce, G., & Gibson, R. (1994). *Using case studies in the teaching of accounting*. Deakin University, Victoria: Australian Society of Certified Practicing Accountants

Wilson, D. C., & Thomas, H. (2012). The legitimacy of the business of business schools: What's the future? *Journal of Management Development*. 31(4), 368– 376.
<http://dx.doi.org/10.1108/02621711211219040>

Wolske, K., Higgs, A., & Zint, M. (2010). Power analysis, statistical significance, & effect size. My Environmental Education Evaluation Resource Assistant.
Retrieved from <http://meera.snre.umich.edu/>

- Wylie, C. C. (2012). Teaching manuals and the blackboard: Accessing historical classroom practices. *History of Education, 41*(2), 257-272.
doi:10.1080/0046760X.2011.584573
- Young, M., & Warren, D. L. (2011). Encouraging the development of critical thinking skills in the introductory accounting courses using the challenge problem approach. *Issues in Accounting Education, 26*(4), 859-881. Retrieved from <http://search.proquest.com/docview/1013839001?accountid=458>
- Zheng, W., & Zhang, X. (2011). Problems and countermeasures in the teaching of college accounting computerization. *Asian Social Science, 7*(7), 235-238.
Retrieved from <http://search.proquest.com/docview/877038284?accountid=458>

Appendix A

Teaching Method Pilot Study Survey

- You can aid in the conduction of a research study to describe if a possible relationship exists between the main teaching method attribute used in this class and your course grade.
- Please read each statement carefully and respond, to the best of your knowledge, with an honest answer.
- Place an X in the appropriate box to indicate your response.
- Do not sign your name. The survey is anonymous and confidential.
- Below is a list of definitions to aid in the explanation of terms.
 - *Traditional Chalkboard Lectures* – delivery method of educational information by writing on a board with chalk and talking to an audience.
 - *Collaborative/ group learning* - an educational approach to teaching and learning that involves groups of students working together to solve a problem, complete a task, or create a product. A small group to complete a task, solve a problem, analyze a scenario, complete a project, or take a test.
 - *Case studies*- A situation, that happened in real life, which can be looked at or studied to learn about a topic of a subject (ex. The collapse of Enron can be studied to teach students about ethics, business practices, and illegal accounting practices).

I. Pilot Study Questions for Survey

	Traditional Chalkboard Lectures	Collaborative/ Group Learning	Case Studies
1. Which method is the main teaching method used by the instructor, in this course?			

Please answer the question to the best of your knowledge.

Letter Grade	Corresponding Numerical Grade
A	90-100
B	80-89
C	70-79
D	60-69
F	59 and Below

Table 1

2. Please use the grading scale (Table 1) above to answer question #2.

As of today, to the best of your knowledge, what is your current numerical grade in the course? Please write a response in the empty box below.

Please write response here
(**numeric grade**) for question
#2. Please **do not** provide a
letter grade here.

II. Pilot Study Follow-up Questions for Survey

	Yes	No	Comments or suggestions
1. Is question #1 and #2 clear?			
2. Is question #1 and #2 pertinent to the teaching method used in the course and the students' course grade outcome?			
3. Is question #1 & #2 logical to the study?			
4. Is question #1 & #2 simple?			
5. How long did it take to complete the survey?			
6. Do you have any suggestions, concerns, or comments relation to the entire survey?			

Appendix B

Teaching Method Survey

- You can aid in the conduction of a research study to describe if a possible relationship exists between the main teaching method attribute used in this class and your course grade.
- Please read each statement carefully and respond, to the best of your knowledge, with an honest answer.
- Place an X in the appropriate box to indicate your response.
- Do not sign your name. The survey is anonymous and confidential.
- Below is a list of definitions to aid in the explanation of terms.
 - *Traditional Chalkboard Lectures* – delivery method of educational information by writing on a board with chalk and talking to an audience.
 - *Collaborative/ group learning* - an educational approach to teaching and learning that involves groups of students working together to solve a problem, complete a task, or create a product. A small group to complete a task, solve a problem, analyze a scenario, complete a project, or take a test.
 - *Case studies*- A situation, that happened in real life, which can be looked at or studied to learn about a topic of a subject (ex. The collapse of Enron can be studied to teach students about ethics, business practices, and illegal accounting practices).

	Traditional Chalkboard Lectures (1)	Collaborative/ Group Learning (2)	Case Studies (3)
1. Which teaching method is mostly used by the instructor, in this course?			

Please answer the question to the best of your knowledge.

Letter Grade	Corresponding Numerical Grade or Percent
A	90-100
B	80-89
C	70-79
D	60-69
F	59 and Below

Table 1

2. Please use the grading scale (Table 1) above to answer question #2.

As of today, to the best of your knowledge, what is your current numerical grade or percent in the course? Please write a response in the empty box below.

Please write response here
(numeric grade or percent) for
question #2. Please **do not**
provide a letter grade here or a
grade range. (Sample answer:
85%)

**If you are unsure about how to answer a
question, please ask.**

Appendix C

Informed Consent Form

INFORMED CONSENT: SUBJECTS 18 YEARS OF AGE AND OLDER

Dear Colleague,

My name is Andrea Jones and I am a student at the University of Phoenix working on a Doctor of Business Administration degree. My proposed research is titled, A Quantitative Descriptive Research Study on College Accounting Teaching Methods and Self-Reported Course Grade Outcomes. The purpose of the study was to describe possible relationships that exist between teaching methods in accounting courses and students' self-reported course grade outcome.

Your participation will run less than five minutes. You will be administered a survey to answer two questions about the current accounting course. Each question on the survey can only have one answer.

It is your choice to join the study. Once you start, you may withdraw from the study at any time with no problem. The results of the study may be published, but your identity will remain confidential. Your name will not be revealed to any outside party.

In this research, there are no foreseeable risks to you. Although there may be no direct benefit to you from the study, there may be indirect benefits. A possible benefit may be to help your instructor better understand which teaching method will work best to administer accounting information to students.

If you have any questions about the research study, please call me at [REDACTED]

[REDACTED] or e-mail [REDACTED]. For questions about your rights as a study subject,

or any concerns or complaints, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu.

As a subject in this study, you should understand the following:

1. You may decide not to be part of this study.
2. If, at any time, you want to withdraw, you can do so without any problems.
3. Your identity will be kept confidential.
4. The results of this study may be published, but your name will not be used.
5. There will be no interviews. All data will be collected through the survey tool.
6. Data will be kept in a secure and locked area. The data will be kept for three years, and then destroyed.

1. Andrea Jones, the researcher, has fully explained the nature of the study and has answered all your questions and concerns.

“By signing this form, you agree that you understand the nature of the study, the possible risks to you as a subject, and how your identity will be kept confidential.

When you sign this form, this means that you are 18 years old or older and that you give your permission to volunteer as a subject in the study that is described here.”

I accept the above terms. I do not accept the above terms. (CHECK ONE)

Print name of interviewee _____

Signature of the interviewee _____ Date _____

Signature of the researcher _____ Date _____

Appendix D



PREMISES, RECRUITMENT AND NAME (PRN) USE PERMISSION

[Redacted]

Please complete the following by check marking any permissions listed here that you approve, and please provide your signature, title, date, and organizational information below. If you have any questions or concerns about this research study, please contact the University of Phoenix Institutional Review Board via email at IRB@phoenix.edu.

I hereby authorize Andrea S. Jones, a researcher from University of Phoenix, to recruit subjects for participation in a study entitled Relationships Between College Accounting Teaching Methods and Course Grade Outcomes: A Descriptive Study at the facility identified above.

[Redacted Signature]

Signature

[Redacted Date]

Date

[Redacted Name]

Name

[Redacted Title]

Title

[Redacted Address]

Address of Facility
(include URL if Website)

[Redacted Email Address]

Email Address

[Redacted Phone Number]

Phone Number

Table 1

Table 1	
<i>Community College Standard Grading Scale</i>	
Letter Grade	Corresponding Numerical Grade
A	90-100
B	80-89
C	70-79
D	60-69
F	59 and Below

Table 1

Table 2

Table 2		
<i>Frequency and Percent for Course Grades</i>		
Grades	Frequency	Percent
60	2	2.4
62	1	1.2
65	1	1.2
67	1	1.2
68	1	1.2
70	3	3.5
73	1	1.2
74	1	1.2
75	1	1.2
78	2	2.4
80	3	3.5
81	2	2.4
82	5	5.9
83	4	4.7
84	6	7.1
85	8	9.4
86	1	1.2
87	6	7.1
88	7	8.2
90	5	5.9
91	4	4.7
92	2	2.4
93	2	2.4
94	7	8.2
95	2	2.4
97	2	2.4
98	3	3.5
99	1	1.2
100	1	1.2
Total	85	100.0
Table 2		

Table 3

Table 3					
<i>Descriptive Statistics of the Course Grades</i>					
Teaching Method Attributes	N*	Mean	SD**	Minimum	Maximum
Traditional/Chalkboard Lectures	47	83.17	10.716	60	100
Collaborative/Group Learning	23	87.57	5.743	80	99
Case Studies	15	87.87	4.051	83	95
Total	85	85.19	8.909	60	100

*number of participants, **SD= standard deviation

Table 3

Table 4

Table 4				
<i>Descriptive Statistics of Teaching Method</i>				
Category	Mean	SD*	Minimum	Maximum
Teaching Method	1.62	0.771	1	3
*Standard Deviation				
Table 4				

Table 5

Table 5				
<i>Welch Test</i>				
	Statistic ^a	df1	df2	Sig.*
Welch	3.374	2	48.714	0.042
^a =Asymptotically F distributed.				
*p<0.05				
Table 5				