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TEACHERS' AND STUDENTS' PERCEPTION OF WORK ETHICS:

A LOOK AT PENNSYLVANIA'S COMMUNITY COLLEGES

A Dissertation in

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by

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ABSTRACT

The volume of literature for research on work ethics is extensive but most involves workers on the job or looking for employment (Petty & Hill, 2005). A gap in the literature exists for research of work ethics among students and instructors involved in Career and Technical Education. Using the Employability Skills Assessment (ESA) authored by Roger Hill (whose work ethics research is extensive) this study of students and instructors from Pennsylvania community colleges was completed to determine if the self-perceived work ethics of students and their instructors was different. This study further investigated the relationship of demographic data (gender, age, race, marital status, veteran status, GPA, years of teaching experience, and number of semesters enrolled) to the work ethic of Pennsylvania community college students and their instructors. The following is a summation of the research findings derived from the research questions prepared for this study.

Several significant relationships were found among the variables of this study however in contrast to the research question; to what extent is there a significant difference in the occupational work ethics of career and technical students enrolled in two year programs in the Community Colleges of Pennsylvania and their instructors? Data analysis indicated there was no significant difference between the self-reported work ethic of community college students and instructors from Pennsylvania community colleges. Data analysis through multiple regression however produced statistical evidence that the second research question; to what extent is there a statistically

significant relationship between the work ethic of community college students based on the demographic data collected; gender, age, race, GPA, program area, veteran status, marital status, semesters enrolled? Indicated no significant relationship existed between demographic characters and the self-reported work ethics for students. Gender however was shown to be marginally significant with females indicating a slightly higher initiative than males. Multiple regression analysis also produced statistical evidence that research question three; to what extent is there a statistically significant relationship between the work ethics of community college instructors based on the demographic data collected; gender, age, race, program area, veteran status, marital status, and years of teaching? was supported showing a significant difference for the self-reported work ethic of instructors for the following demographic characters; program area of hospitality and health sciences reported scores that were significantly higher than other program areas for the subscale dependability, initiative and interpersonal skills scores were significant for gender with females instructors reporting higher scores, the subscales dependability and initiative were found to be significantly higher for married instructors.

The overall model showed differences in interpersonal skills to be insignificant while differences in dependability and initiative were found to be significant. Therefore when using this model dependability and initiative are predictable among instructors.

The self-reported higher scores by female participants are consistent with the literature and post-hoc analysis through a one-way analysis of variance for gender showed significantly higher scores were reported between groups by all female respondents (students and instructors) compared to male respondents.

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INTRODUCTION

Historical Perspective

The behaviors that collectively define a person's work ethic as being positive in relationship to personal gain and beneficial to society have long been an important attribute in employee-employer relationships. Historically, work ethic owes its origin to the biblical references in Genesis "Cursed be the ground because of you! In toil shall you eat its yield all the days of your life. By the sweat of your face shall you get bread to eat" (Gen. 3:19 New American Bible). The concept of work ethic is further supported in the book of Proverbs (Prov. 10; 14:13; 4:20; 13) as necessary for survival.

Early Greek and Roman societies, although not beholding to the Bible, also devalue and hold prejudice toward work, as did Europeans throughout the Middle Ages (Hill, 1992, 1999). A reevaluation of work through new insights derived from the scriptures spawned The Protestant Reformation marking a turning point in these prejudices. Protestant reformer John Calvin states that work is necessary to please God, regardless of one's economic status (p. 5). Captain John Smith established the importance of work ethic early in the new world with his famous mandate (Osgood, 1904): "'Seeing nowe the authoritie resteth wholly in my selfe, you must obey this for a law, that he that will not worke shall not eat, except by sicknesse he be disabled.' This reflection of biblical beliefs in European and colonial ordinance came to be known as the protestant work ethic (PWE). The Industrial Revolution and the rise of capitalism fueled the value of work, and the inclusion of these attitudes along with reading and writing in schools served to reduce prejudice against work" (p. 9).

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Overview of Work Ethic Research

Historically studies of work ethic are conducted through the framework of sociology and psychology. More recent studies are generated through researchers outside of this discipline leading to a non-comprehensive body of literature (Boatwright & Slate, 2000). Contradictions are observed when researchers attempt to replicate work ethic studies. Boatwright & Slate (2000) give two instances of contradiction in work ethic studies. Ganster (1981) contradicts research by Merrens & Garrett (1975). While Merrens & Garrett find that a strong protestant work ethic translates to more time on task and greater productivity, Ganster (1981) finds the opposite by studying different job descriptions. A comparison of Buchholz (1978) and Goodling (1972) finds contradictions in work ethic behaviors based on age.

In order to define work ethic relative to those who deliver instruction to workers and the workers who receive that training, Gregory C. Petty (1991) developed the *Occupational Work Ethic Inventory* (OWEI) as an instrument for those involved in work force education and training. Petty (1991) includes in his instrument these four factors; *dependability, consideration, cooperation,* and *ambition*. Roger Hill modified the instrument in order to reduce the length of the survey in order to improve complete responses while still measuring the same constructs present in the OWEI. Hill's survey is titled the *Employability Skills Assessment* (ESA) and is about one half the length of Petty's OWEI (Hill, personal communication, March 4, 2008). Hill and Petty, (1995) states, "The elements of work ethic that are of the greatest significance in the preparation of people for work are the attitudes and behaviors ascribed to work ethic rather than a sectarian belief system that includes these characteristics" (p. 60). Petty and Hill (2005)

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cites past researchers' (Brauchle & Azam 2004b; Cherrington, 1980; Church, 1995; Hatcher, 1993; Hill & Petty, 1995) findings, which include information regarding work ethic traits and their effects on job performance as being difficult to interpret by career and technical educators. This leads to the understanding that further research is needed to improve the data base and to create a better understanding of compiled information on work ethic. Petty and Hill notes that:

Studies have examined the connection between demographic variables and employee work ethics (Brauchle & Azam, 2004) as well as the part that mentor-apprentice relationships play in the acquisition of skills and knowledge in the workplace (Evanciew & Rojewski, 1999) although these and other studies have analyzed the effects of workplace organizational systems on work ethics and performance, few studies have focused on the compatibility of the beliefs that workers and supervisors bring to their roles in the workplace (Hollingsworth, 1995; Dagley & Slater, 2004). As industries concentrate on profitability and workplace improvement, little attention has been given to the interaction between the work ethics of the worker and their supervisors (McCortney & Engels, 2003). Few researchers have compared the affective tenets of workers and supervisors that is their work attitudes, habits, and values, and the effect these attitudes have on performance and productivity (Church, 1995; Hollingsworth, Brewer & Petty, 2002).

The Problem

Through personal communication with the business community and technical institute administrators, Boatwright and Slate (2000) have come to suggest a common perception –'employees lack a suitable work ethic.' Similar perceptions are reiterated in focus group discussions leading to an increased level of concern by the business community and technical institutes who point to the "incongruity between adequate skill levels and appropriate work ethic" leading to unemployable applicants (Boatwright & Slate, 2000).

According to Petty & Hill, (2005) "A better understanding of the occupational work ethic and differences between workers and supervisors in their work ethic perceptions could have implications for improving career and technical education and training with the knowledge of these differences guiding career and technical educators in their development of instructional content designed to prepare people for work" (p. 17). Petty & Hill, (2005) also suggests that ordinal data of work ethic characteristics for workers and supervisors provides information that is valuable in creating curriculum that prepares students/trainees for work.

Despite the desire of employers to cultivate positive work ethic behavior, few studies on work ethic behavior have investigated the interaction between the work ethics of workers and their supervisors (McCortney & Engels, 2003) or students and their instructors. Petty and Hill, (2005) compares the work ethic of supervisors and workers in order to gain insight and a better understanding of attitudes in the work place, implying that these insights supply career and technical educators and human resource professionals helpful information to meet their goals through a better understanding of attitudes in the work environment (Petty & Hill, 2005).

The purpose of this study was to compare the self perceived work ethic of career and technical students to that of their instructors to determine the level of work ethic behaviors that currently exists and to look for similarities in the self-reporting of those characteristics using the Employability Skills Assessment (ESA). The relationship between the work ethic for students and instructors was compared to the demographic data collected which included age, gender, race, number of years of teaching, number of semesters enrolled, marital status, veteran status, and GPA. The study was intended to extend the research of work ethic for workers and supervisors in the work place (Petty and Hill, 2005) to students and their instructors in career and technical schools.

According to Gray & Herr (1998) the goals of career and technical educators are providing individuals with labor market advantage along with, preparing a 'World Class' Workforce, preventing labor shortages, and making firms competitive. In Gray & Herr (1998) a survey of 2500 firms with 100 or more employees by the National Association of Manufacturers demonstrated the rejection of five out of six job seekers is due to the lack of basic skills, occupational skills or a work ethic. A need exists to carry over the research of Petty & Hill (2005) from industry into education. This can be accomplished by studying the compatibility of beliefs about and the interaction between the work ethic of students and their instructors.

This study specifically targets community colleges because they provide a significant number of skilled employees to the workforce. Pennsylvania provides a geographic layout that will allow for the data to be collected in urban and rural locations.

Significance of the Study

Research cited in Brauchle & Azam (2004), Beach (1982), Cluster and Claiborne (1992, 1995), and Gregson and Bettis (1992) suggests that loss of employment and failure to be promoted are in most cases due to poor work attitudes rather than inability or lack of skills. According to Brauchle and Azam (2004) "If Career and Technical Education is to succeed in producing graduates who can gain and hold employment in a competitive world, it must succeed in enhancing their work ethic in addition to their technical skills" (p. 122). Brauchle and Azam (2004) further state that work ethic skills must be taught in order to improve work attitudes. Improvement in work attitudes will lead to employees' ability to be promoted and longevity in their employment situations. A comparison of work ethic for career and technical students and instructors is necessary to determine the level of work ethic behaviors that currently exists. Once again, the goals of career and technical educators according to Gray & Herr (1998) are preparing a 'World Class' Workforce, preventing labor shortages and making firms competitive. In order to meet these goals, teachers must understand the perception of work ethic by their students, and students must be able to realize the expectations of their instructors.

Petty and Hill (2005) compares the work ethic of employees and their supervisors in various business and industry job classifications. In postsecondary career and technical schools the teacher-student relationship is the precursor of the supervisor-employee relationship in industry. Expanding the understanding of the worker-supervisor/student-instructor relationship into postsecondary education will increase the body of literature for work ethic research, which may eventually lead to practical applications by those responsible for the development of curricula and by those who

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deliver instruction. In other words, a greater understanding of the work ethics of career and technical students and their instructors may lead to improvement of work ethics for employees.

In Gray and Herr (1998) a model of employability skills shows the importance of a basic skills level including an acceptable work ethic behavior. Similarly Hitt (1990) uses Maslow's Ladder and Piaget's Development Hierarchy to illustrate that a hierarchy of development is dependent on an orderly progression of basic skills (p. 59). This model suggests the basic skills level must be obtained in order for potential employees to transfer the higher skill levels into the workplace. It is therefore the responsibility of career and technical educators to deliver these skills along with the technical skills set provided through curricula.

Included within the five ethical imperatives of workforce educators is the transfer of learning from the classroom to the workplace. The Gray-Herr model shows that in order to transfer technical skills to the job, career and technical instructors must also ensure the transfer of expected work ethic behavior. In order to ensure a complete curriculum (one that contains work ethic skills instruction), teacher and student perceptions of work ethic must be understood. In other words, career and technical professionals must find out how they as teachers perceive work ethic skills as compared to the students they teach in postsecondary career and technical education programs.

In order to gather and analyze appropriate data and build on current research, this study will reapply the instrument and research design used by Petty & Hill (2005) while surveying Pennsylvania career and technical school students and instructors. The OWEI, developed and employed by Petty, 1993; Petty, 1995) measures four constructs ("non-

observable traits such as intelligence, which explains behavior and explain certain differences in individuals" (Gay, 1996)) that summarize the main components of work ethic (Brauchle & Azam, 2004). This study will examine those constructs as defined in Petty and Hill (2005), using this new population and the ESA survey specifically modified to explore these factors including interpersonal skills, initiative, and dependability.

Research Question

This study answers the following question:

1. To what extent is there a significant difference in the Employability Skills of career and technical students enrolled in two year programs in the Community Colleges of Pennsylvania and their instructors?

2. To what extent is there a statistically significant relationship between the work ethic of community college students based on the demographic data collected; gender, age, race, GPA, veteran status, marital status, semesters enrolled and years of teaching?

3. To what extent is there a statistically significant relationship between the work ethic of community college instructors based on the demographic data collected; gender, age, race, GPA, veteran status, marital status, semesters enrolled and years of teaching?

Scope

The population of this study is approximately 127,000 based on data from the PA Higher and Adult Education Statistics Publication College and Universities Digest 2004-

2005. A random sample will be taken from both two-year postsecondary career and technical education students currently enrolled in community colleges of Pennsylvania and their instructors. Students and instructors from Harrisburg Area Community College and the Community College of Philadelphia were surveyed.

This implemented the Employability Skills Assessment (ESA), which contains twenty-three descriptors measuring the same constructs as the OWEI. The effect of gender, age, and other similar variability are also analyzed in this study.

The OWEI consists of fifty work ethic descriptors based on a seven point Likert scale for self-reporting (Petty & Hill, 2005). The OWEI's "factors are replicable in different populations and evidence exists for construct validity of this instrument," therefore "others can use these factors with confidence and without fear of population bias in their research" (Brauchle & Azam, 2004).

Limitations

The population is limited to two-year career and technical college instructors and their students from community colleges located in Pennsylvania. Generalizing nationally is cautioned without expanding the sample size. The ESA, developed in 1995 by Hill and tested for validity, (Brauchle and Azam, 2004) covers only those characteristics of work ethic as defined within the instrument. Since the literature often contains a broader definition, the research may not be comparable to other work (research utilizing other instruments). Demographics and voluntary participation and a limit of two institutions may have an influence on the responses.

Assumptions

Teachers and students hold belief in the value of work ethic behaviors. Work ethic is necessary in order for employees to gain and maintain employment (Gray & Herr, 1998; Hitt, 1990) and for students to meet the minimum requirements for entry into the population being studied. In most cases, job loss and lack of promotion is due to poor work attitudes and not the inability to perform technical tasks (Brauchle and Azam, 2004). The belief was also held that work ethic is a measurable trait, and therefore a quantitative design is appropriate (Boatwright & Slate, 2002).

The population sample was considered to be consistent with diversity levels found in the general population due to the geographic locations of the institutions where data were collected.

Conceptual Framework

This study was grounded in the work ethic construct both in its earliest implied value and through its evolution reflecting societal changes, changes in the workplace and in the concept of work. In part these include the protestant work ethic philosophy as described by Max Weber in 1904-05 in *The Protestant Ethic and the Spirit of Capitalism* and in the context of teaching and learning described by Cherrington (1980):

> The values of adults are largely shaped through childhood experiences. These include not just work values, but other values as well, such as honesty, compassion, and altruism. Children acquire a strong work ethic when their parents exert firm discipline, demand obedience, and expect children to accept personal responsibility for performing the tasks assigned to them…research

evidence suggests that authoritative parenting develops children who not only

believe in the importance of work but also independent, self-disciplined, and

socially responsible (p. 119).

This study was also based on work ethic and its relationship to the employability

skills model (Gray & Herr 1998; Hitt, 1990). Similar in structure to Maslow's Ladder

and Piaget's Development Hierarchy, it shows work ethic as its most basic skill level

(Hitt, 1990). This model suggests the basic skills level must be obtained in order for

potential employees to transfer the higher skills levels into the workplace.

Measurement for the foundational skill (work ethic) was accomplished using the

Employability Skills Assessment (ESA) (Hill, 2002) which is a modified version of the

Occupational Work Ethic Inventory (OWEI) (Petty, 1995) and is an instrument

considered to be valid for measuring characteristics found to be desirable by employers

(Brauchle and Azam, 2004). "There have been numerous studies that have used the

OWEI. It has proven to be a very reliable instrument and its simplicity and practicality

offer users multi dimensions in its use" (Petty, personal communication, March 25,

2008). The ESA and instruments used in other research are defined in the definition of

terms section of this paper.

 Definition of Terms

Construct - a non-observable trait such as intelligence, which explains behavior

and can explain certain differences between individuals (Gay, 1996).

Employability Skills Assessment (ESA) - a 23 item inventory that measures the

constructs of work ethic outlined in the OWEI (R. Hill, personal communication, April

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28, 2008). A seven-point Likert scale which uses 23 descriptors for work ethic under the subscales dependable, initiative, interpersonal skills and reverse order items.

Multidimensional Work Ethic Profile (MWEP) - a 65 item inventory that measures seven conceptually and empirically distinct facets of the work ethic construct (Miller, Woehr, & Hudspeth, 2002).

Occupational Work Ethic Inventory (OWEI) - a 50-item instrument developed in 1991 by Petty, in which 11 items are reversibly stated, measuring work attitudes using a 7-point Likert scale to measure the following four factors within the construct of work ethic; *dependability, consideration, cooperation,* and *ambition.* The descriptors include *dependable, stubborn, independent, accurate, and ambitious* (Brauchle & Azam, 2004).

The Protestant Ethic Scale - a scale designed and developed in 1969 by Milton Blood to measure individual differences in work values and expressed through factors of job satisfaction (Boatwright & Slate, 2002).

A modified version of this scale found in Mirels and Garrett's 1971 study has been more commonly adopted with evidence in 39 published works (Furnham et al., 1993) with its focus on personality variables (Boatwright & Slate, 2002).

Protestant Work Ethic - encompasses an entire philosophy of life which related to religious and economic activity formatted by Max Weber in 1904-05 in *The Protestant Ethic and the Spirit of Capitalism* "therefore when people talk about Protestant ethic, they are referring to a broad philosophy that might include numerous beliefs about work and related topics" (Cherrington, 1980, p. 20).

School to Work Program - program of study that involves partnerships between teachers, business leaders and labor representatives funded by the US Congress through the School to Work Opportunities Act (1994) (Beder, 2000).

Standard Occupational Classification (SOC) aggregate group classification - groupings of workers as defined in the Standard Occupational Classification Manual and are as follows; (a) administrative, engineering, scientific, teaching, and related including creative artists; (b) technical, clerical, sales, and related occupations; (c) service occupations, including military occupations; (d) farming, forestry, fishing, and hunting occupations; precision production, craft, and repair; and (f) operators, fabricators and laborers (Petty & Hill, 2005).

Survey of Work Values - instrument designed to reflect an index of a person's general attitude toward work developed in Wollack, Goodale, & Smith, (1971) and based on the construct of the Protestant work ethic (Boatwright & Slate, 2002).

Worker - any individual of age and capable of employment

Work ethic - the definition of work ethic applied in this study will follow the combined characteristics as outlined in Boatwright and Slate (2000) and will include positive work attitudes, values and beliefs consistent with Miller & Coady (1986) defining an individual value set enabling work ethic as "an integrated and interactive system of attitudes, values and beliefs that empowers an individual to adapt to and initiate change in order to sustain long term harmony with his or her work environment"(p. 6).

Chapter 2

REVIEW OF RELATED LITERATURE

The purpose of this study was to compare the self-perceived work ethic of career and technical students to that of their instructors to determine the level of work ethic behaviors that currently exists and to look for similarities in the self-reporting of those characteristics using the Employability Skills Assessment (ESA). The relationship between the work ethic for students and instructors to the demographic data collected which included age, gender, race, number of years of teaching, number of semesters enrolled, marital status, veteran status, and GPA. The study was intended to extend the research of work ethic for workers and supervisors in the work place (Petty and Hill, 2005) to students and their instructors in career and technical schools.

The following sub-headings were reviewed within the body of literature: the history of work ethic; the work ethic; work ethic in business and industry; work ethic in education; measurement instruments; the OWEI instrument and the adaptation of the ESA; the development of a work ethic curriculum. The conclusion of this chapter provides a summary of the literature review.

Work Ethic History

The earliest recorded historical references to work are recorded with negative connotation (Gen. 3:19). Early Greek and Roman societies continued to devalue and hold prejudice and a negative attitude toward work, as did Europeans throughout the Middle Ages (Hill, 1992, 1999). The Protestant Reformation marked a turning point in these prejudices. John Calvin held that work was necessary in order to please God regardless of one's economic status (p. 5). The Industrial Revolution and the rise of capitalism fueled the valuing of work, and the inclusion of these attitudes along with reading and writing in schools served to reduce prejudice (p. 9).

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According to Cherrington (1980) the Protestant Work Ethic philosophy described by Max Weber in 1904-05 in *The Protestant Ethic and the Spirit of Capitalism* has spawned a debate that raged for seven decades. Cherrington describes the protestant work ethic in the context of child development (1980) as follows:

The values of adults are largely shaped through childhood experiences. These include not just work values, but other values as well, such as honesty, compassion, and altruism. Children acquire a strong work ethic when their parents exert firm discipline, demand obedience, and expect children to accept personal responsibility for performing the tasks assigned to them…research evidence suggests that authoritative parenting develops children who not only believe in the importance of work but also independent, self-disciplined, and socially responsible (p. 119).

In the mid 1980s, research described in Miller and Coady addressed the need to teach work ethic in schools and specifically; (1) to develop a conceptual model of the content and process of vocational ethics instruction and (2) to survey existing programs in order to obtain the then current status of vocational ethics instruction in Illinois schools (p. 4). This move to teach work ethic in schools is believed by some to be based on biased information. Seymour Lipset (1990) refers to *Work in America* and the resulting task force of the Department of Health, Education and Welfare as misrepresentative of the facts. The study suggested that many Americans were dissatisfied with their working lives creating discontentment at all occupational levels. Lipset states "… I have few doubts the work ethic is less prominent now than in the nineteenth century, however the available facts do not justify bad mouthing it. In the 1950s a number of sociologists predicted that Americans would increasingly choose to emphasize leisure and abandon work as reported in *Psychology Today* March 1989 were proven wrong" (p. 63).

According to Yankelovich and Immerwahr (1984) work ethic is not deteriorating, and in America the work ethic is sound, especially among better-educated employees. These authors consider America's work ethic to be a valuable resource in a competitive economy.

More recently research literature largely suggests that valuing work is a desirable trait to employers and that workers are terminated due to poor work attitudes, values, and habits (work ethic behaviors) far more often than lack of technical skills or for some other reason (Brauchle & Azam, 2004).

The Work Ethic

The work ethic incorporates more than an isolated concept of great effort. It includes other qualities such as commitment, dependability, and willingness to learn. The work ethic also is associated with values such as honesty, patience, and generosity (Berry & Glenn, 2004).

In the past, volumes of research approached work ethic behavior from a psychological perspective and included the identification of numerous concepts defined as work values, including job satisfaction, involvement, skill variety, security work conditions, recognition, opportunity for promotion and others (Boatwright & Slate, 2000). Boatwright and Slate (2000) report a lack of continuity in the body of literature, which exists for work ethic research, and in some cases produces contradictory results. Examples listed in Boatwright and Slate (2000) include results showing workers reporting a strong protestant work ethic spend more time on task and have a greater level of productivity, yet when the study was conducted by others and tasks were changed, the outcome was reversed. Reversed results were shown when age was the independent variable studied.

In an attempt to conduct research studying work ethic behavior with the intent of impacting the workforce through education and training, several researchers compiled works contributing to the work ethic initiatives. The Georgia Department of Technical and Adult Educational System (GDTAE) is the most comprehensive curriculum on work ethic instruction in the United States of America, and according to Hill, (2003) defines and measures work ethic using the Occupational Work Ethic Inventory (OWEI), a reliable instrument for measuring the appropriate constructs (Boatwright & Slate, 2000; Hatcher, 1995; Hill, 1995; Hill & Fouts, 2005; Petty, 1995; Petty & Hill, 2005). In a personal communication with Hill about adopting the GADTAE in other states particularly Pennsylvania he further commented:

> Work ethic is relevant to any region that is participating in the global economy be it Georgia, Tennessee, Pennsylvania, or China. With regard to your ultimate goal, while I agree the system-wide implementation of a work ethic curriculum is a worthy goal, I would have a number of recommendations with respect to what that curriculum (work ethic) should look like. In particular, I think it should be based on research-based constructs rather than the 10 items currently selected for use in the GADTAE materials.

The definition of work ethic applied in this study followed the combined characteristics as outlined in Boatwright and Slate (2000). Personal accountability and responsibility for work has its foundation in the belief that work itself has value (Cherrington, 1980; Colson and Eckerd, 1984; Yankelovich & Immerwahr, 1984). This study also included positive work attitudes, values and beliefs consistent with Miller and Coady (1986) defining an individual value set enabling work ethic as "an integrated and interactive system of attitudes, values and beliefs that empowers an individual to adapt to and initiate change in order to sustain long term harmony with his or her work environment" (p. 6).

Work Ethic in Business and Industry

"A work ethic is what most employers want in terms of work preparation from the educational system" (Beder, 2000, p. 196). The behaviors that collectively define a person's work ethic as being positive in relationship to personal gain and beneficial to society have long been an important attribute in employee-employer relationships (Gray & Herr, 1998). "The concept of *work ethic* relates to the desirable work attitudes, values, and habits expected from employees. Positive work attitudes are attributes that are desired from every employed person, from the lowest level of employees to the CEO of the organization" (Brauchle & Azam, 2004). Brauchle & Azam (2004), Beach (1982), Cluster and Claiborne (1992, 1995), and Gregson and Bettis (1992) also suggests that loss of employment and failure to be promoted were in most cases due to poor work attitudes, not inability or lack of skills.

Gerald W. Bracey, an independent researcher and fellow with the Education Policy Studies Laboratory at Arizona State University – Tempe, suggests the inability of recent graduates to get hired is due mainly to poor work ethic and "soft skills" (Bracey, 2007). According to Petty & Hill, (2005) supervisors value workers who demonstrate positive work ethic, but the expected or desired work ethic of the supervisor may differ from those subordinates he/she manages, and the information available pertaining to work ethic traits is many times "misunderstood or misrepresented by human resource specialists and career and technical educators" (p. 1).

Researchers consistently report that employers place a high priority on soft skills and desire potential employees to have the appropriate work ethic. Wallis (2001) states:

The National Association of Colleges and Employees reports that the top 10 qualities employers seek have little to do with technical skills and a lot to do with personality and

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attitude. Employers want team players with great verbal and written communication skills, honesty and integrity, interpersonal skills, motivation and initiative, a strong work ethic, and analytical skills (p. 15).

Lewis (2006) emphasizes the lack of the desired skills among potential employees in applied skills including professionalism and work ethic.

About 70 percent of the respondents cited deficiencies among incoming high school graduates in 'applied' skills, including professionalism and work ethic, which were defined as 'demonstrating personal accountability, effective work habits, e.g. punctuality, working productively with others, time and workload management. (p. 6). Multiple surveys show that work ethic is a major attribute that American employers look for when recruiting employees (Beder, 2000). Beder (2000) lists the following examples: A 1997 survey of 1,900 US personnel officers found that they were more concerned that applicants had a good attitude, were dependable when it came to turning up to work and were unlikely to steal or be dishonest, than they were with grades; A survey of 150 human resource managers from the largest US companies found that the work ethic was the most cited quality that employers looked for in employees; A survey of 3,000 employers by the Commission on the Skills of the American Workforce found that 80 percent of those interviewed were most concerned with 'finding workers with good work ethic and appropriate social behaviors; A survey of US employers by Towers Perrin found that a lack of appropriate work attitudes and behaviors was the most common reason, after lack of prior work experience, for not hiring applicants (p. 196).

Similar results have been found in France, Australia, Canada, and Great Britain (Beder, 2000). Petty and Hill (2005) cite Brauchle & Azam, 2004; Cherrington, 1980; Church, 1995; Hatcher, 1993; Hill& Petty, 1995 as suggesting information regarding work ethic characteristics and their role in workplace performance as being misrepresented and often misunderstood by human resource professionals and career and technical educators. Hill and Fouts (2005) studied jobseekers to examine differences in work ethic in terms of the OWEI and reported that employers continue to search for employees with a strong work ethic. According to Denka, (1994); Hill& Petty, (1995); Young, (1986) (as cited in Hill& Fouts, 2005) and Cherrington, (1980); Commission on the Skills of the American Workforce, (1990); Crosby & Petrosko, (1990); Petty, (1983); Pucel and Yankelovich, (1985) (as cited in Hatcher, 1995) work ethic is often cited as the most desirable characteristic for new employees. According to Petty and Hill (2005):

> The *occupational work ethic* is displayed in an employee's work behavior and is based on the employee's personal values and mores (Hill, 1992; Hill, 1997; Kazanas, 1978; Petty, 1995c). It is a culturally developed, affective behavior which is a combination of family, religious, and ethnic beliefs and values (Colson & Eckerd, 1991; Hill, 1996; Kazanas, 1978; Petty, 1995b). The workplace is becoming not only more culturally diverse but also more operationally complex (McCortney & Engels, 2003; Yankelovich & Immerwahr, 1984). As this diversity infuses the workplace, educators and human resource directors are challenged to find training and development solutions to bring congruence to the varying work ethics that intertwine in the workplace (Cherrington, 1980; Naisbitt & Aburdene, 1990; Petty, 1995c; Petty & Hill, 1994; Hill & Petty, 1995; Yankelovich & Immerwahr, 1984) (p. 6).

This study examined a different population, which, although outside the data sets of those researchers studying workers, may fill a critical gap in the available data. The recommendation for intervention in workforce preparation programs (Hill & Fouts, 2005; Petty & Hill, 2005) supports the need to study individuals before they become jobseekers, specifically those individuals not yet in the job pool. In this study specifically, those in community colleges in Pennsylvania who are not yet part of the workforce, either as employed workers or as unemployed jobseekers were studied.

Work Ethic in Education

Throughout history work ethic was taught by parents in an agrarian society through discipline and assigned tasks performed due to the necessity of providing for one's own existence. According to Cherrington:

> The values of adults are largely shaped through childhood experiences. These include not just work values, but other values as well, such as honesty, compassion, and altruism. Children acquire a strong work ethic when their parents exert firm discipline, demand obedience, and expect children to accept personal responsibility for performing the tasks assigned to them…research evidence suggests that authoritative parenting develops children who not only believe in the importance of work but also independent, self-disciplined, and socially responsible. (1980, p. 119)

Such behaviors learned in early childhood translate into employee characteristics which are sought after in the workplace. "Studies conducted in the 1970's (Maywood 1982), (as cited in Naylor, 1988) provide evidence that employers have traditionally agreed on the behaviors and

attitudes they expect from employees and the security and benefits that they are willing to provide in return. According to Maywood, "employers' rankings of the attributes most desired in employees consistently confirm that the most desirable employee is one who demonstrates characteristics of reliability, dependability, pride of craftsmanship, a willingness to learn and who derives personal satisfaction from doing a good job."

Today, societal changes and a shift from agriculture to service and industrial employment have changed the environment of children. Many life skills, once taught at home, have shifted to the schools and "the importance of schools ensuring that future workers have a strong work ethic is evident to employers" (Beder, p. 216).

> The desire of employers for well-trained employees with good work ethic puts
> pressure on schools throughout the twentieth century to produce children who fit
> employer requirements. If schools provided the appropriate skills and behavior,
> they argued, then the nation would gain prosperity and competitiveness from
> being a more productive workforce" (p. 195).

Incorporation of the work experience and school may well have been the first formal setting for work ethic instruction. Leading educators in the early part of the twentieth century began to encourage vocational schools (Beder, 2000). According to Beder (2000) "The commissioner of education believed what was good for business was good for America and suggested the goal of education was national economic efficiency"(p. 208). Charles Prosser, who was appointed to develop vocational schools that would replace 'general education' with vocational training, aimed at equipping students to get a job, hold it and advance in it. "Prosser

said of vocational education that it 'must establish habits: habits of correct thinking and of correct doing' " (Beder, 2000, p. 208).

Not all prominent educators of this time period of educational restructuring were in agreement. John Dewey proposed the idea of integrating 'general education' with vocational training "…it will aim at such a reorganization of existing schools as will give all pupils a genuine respect for useful work, an ability to render service, and a contempt for social parasites whether they are called tramps or leaders of society…"(as cited in Beder, 2000, p. 209).

Contemporary educators continue to support the basic elements within the philosophies of Prosser and Dewey in that work ethic is a necessary component of vocational curricula. According to Miller and Coady (1986) "The purpose of teaching work vocational ethics is therefore to provide students with a framework for recognizing and resolving ethical conflicts within themselves, with others, and within their environment in such a way as to promote individual job satisfaction and continuous and productive employment after the students enter the workforce" (p. 5).

Further evidence of the contemporary support for these philosophies exists in the literature, which shows that in order for students to transfer technical skills to the job, career and technical instructors must also ensure the transfer of expected work ethic behavior (Gray & Herr, 1998; Miller & Coady, 1986; Stone & Josiam, 2000). In order to ensure a complete curriculum (one that contains work ethic skills instruction), teacher and student perceptions of work ethic must be understood by those responsible for curriculum development, delivery of instruction and those required to meet the desired goals and objectives in the career and technical education (CTE) classroom. Hill & Wicklein (2000) report numerous studies recommending changes in

teacher preparation in order to meet the demands for implementing the "silent curriculum" to develop students' personal traits such as work ethic. Students preparing for work in CTE classrooms should exhibit the behaviors expected in the workforce, and teachers must be able to identify their actions as appropriate for transfer into the workplace.

> Preparing CTE students for success in today's workforce means more than just teaching them the technical know-how. They need to be equipped to function in a work environment; they need to learn to be dependable and reliable, to take the initiative, and work well with their fellow employees. In other words, preparing students for success also means teaching them about the importance of having a positive work ethic (Predmore, 2005, p. 52).

Hill and Petty (1995) suggests the need for a cumulative effort to model and highlight important skills such as interpersonal skills, initiative and dependability within the context of all subject matter in the curriculum in order for students to benefit fully from their inclusion of these skills. "Educators in all content areas should seek ways to embed consideration of work ethic throughout the instructional program. For many program areas, however, opportunities for dealing with work ethic constructs are more prevalent because of the nature of the existing curriculum" (Hill and Petty, 1995, p. 71).

Addressing work ethic instruction through the CTE curriculum in the United States has been sporadic and undefined in terms of delivery of instruction, objectives and outcomes (Hill, 2003). Most states have a very limited agenda for teaching work ethic or lack one all together. The existence of a comprehensive plan to instruct career and technical students in work ethic behavior is nearly absent from the nation's postsecondary career and technical schools (Hill, 2003). "The state of Georgia alone has a clear and comprehensive curriculum for teaching work

ethic behavior in postsecondary technical schools even though many states recognize the need for work ethics inclusion in some capacity" (Hill, 2003, p. 16). The GDTAE has, in collaboration with business and industry (employers), educators (technical school teachers and administrators) and policy makers, created a curriculum to deliver instruction for appropriate work ethic values (Boatwright & Slate, 2000), "…which involves separate course work and grades present on college transcripts" (Boatwright & Slate, 2000, p. 2). In his report, *Key Attributes of Georgia Technical College Work Ethic Instruction* (2003), Roger Hill provides a comparison of the Georgia program to post-secondary work ethic initiatives in other states. Among the initiatives studied none were as comprehensive as that of the GDTAE. Most states referred to life skills, Secretary's Commission on Achieving Necessary Skills (SCANS), some-type of K-12 program or gave no response to the study survey. The Pennsylvania Commission for Community Colleges Executive Director Diane Bosak replied that some of the colleges are offering "work readiness" classes dealing with these types of (work ethic instruction) issues. She offered the Community College of Allegheny County in Pittsburg as a good example.

Gregory Petty, developer of the OWEI, (as cited in Predmore, 2005) suggests that teachers need to be cognizant that assimilation of favorable work ethic attributes takes time to develop and may not be expressed immediately by students. Roger Hill (as cited in Predmore, 2005) has coauthored research with Petty and feels the challenge is further complicated because, "teachers don't necessarily know how to do it or don't feel equipped" (as cited in Predmore, 2005, p. 52). Petty, in support of Hill's thoughts, states "Teachers feel their efforts at teaching work ethic are not effective because they cannot measure or see direct results" (as cited in Predmore, 2005, p. 52). "Answering the question of why it matters, Hill recalls his earliest exposure to the rationale for including work ethic skills in curriculum building. Business and

industry require or actually prefer these skills over the technical skills, which change over time and require continuous update training" (Predmore, 2005, p. 53). In order to fill the gap which exists in the available research connecting studies of worker/supervisor to student /instructor the work ethic perceptions which exist between student and instructor in Pennsylvania's two-year career and technical colleges will be explored.

Measurement Instruments

The instruments employed to measure work ethic have focused in two general divisions, those measuring the micro processes and those more broadly defined (protestant work ethic) (Boatwright & Slate 2000; Cherrington, 1980). Among the instruments available from the research literature are the following:

Affective Work Competencies Inventory (AWCI) is an instrument from which the OWEI was modeled. It used identified affective characteristics considered desirable for working people. It lists 63 affective work competencies clustered into fifteen categories important in industry and education and originally employed in 1978 by Beech, Kazansas, Sapko, Sisson and List.

The Value Survey Module (VSM) was developed in 1980 to study cross-cultural behavioral differences reflected in work values which theoretically exist across cultural barriers. In contrast, in 1987 after consulting Chinese social scientists, Michael Bond developed a questionnaire for a list of values described as important specifically to the Chinese referred to as the Chinese Value Survey (CVS) (Al-Sharqawi & Sambrook, 2002). These instruments are not directly related to this study but are mentioned to provide insight into the sociological and psychological framework of some research.

The Employability Skills Assessment (ESA) is an instrument developed by Hill based on research using the OWEI. The descriptors used to measure the same constructs of the OWEI are presented through 23 questions preempted with 'When you are working or doing a job… for the electronic version an alternate format is used for hard copy (paper) questionnaires (R. Hill, personal communication, March 4, 2008).

The Multidimensional Work Ethic Profile (MWEP) is a 65-item inventory that measures seven empirically and conceptually distinct factors of the work ethic construct (Miller, Woehr, & Hudspeth, 2002).

The Protestant Ethic Scale, as described in Boatwright and Slate (2002), is a scale designed and developed in 1969 by Milton Blood which measures individual differences in work values and expresses them through factors of job satisfaction. A modified version of this scale found in Mirels and Garrett's 1971 study has been more commonly adopted, with evidence in 39 published works, while (Furnham et al., 1993) having its focus on personality variables (Boatwright & Slate, 2002).

The Occupational Work Ethic Inventory (OWEI) is based on the AWCI and is revised to identify 39 work ethic descriptors delivered electronically through 45 questions preempted by 'As a worker I can describe myself as:' The inventory was developed by Petty in 1991 (Petty & Hill, 1996) in order to measure specific characteristics of employees that are deemed desirable by employers under the construct of work ethic (Boatwright & Slate 2000). The OWEI was evaluated for construct validity through comparative factor analysis (Brauchle & Azam, 2004) based on self-perceived work attitudes of workers and supervisors in manufacturing. Brauchle and Azam (2004) indicated "the factors measured by the OWEI were virtually the same, for both groups providing evidence of construct validity for this instrument."

Survey of Work Values is an instrument designed to reflect an index of a person's general attitude toward work developed in Wollack, Goodale, & Smith, (1971) and based on the construct of the protestant work ethic (Boatwright & Slate, 2002).

The Occupational Work Ethic Inventory / Employability Skills Assessment

As defined by Petty and Hill and Hill respectively:

The Occupational Work Ethic Inventory (OWEI) - an Instrument developed in 1991 by Petty of the University of Tennessee, Knoxville (Petty & Hill, 1996) to provide a concise but accurate measure of the work ethic endorsement by building on extensive research related to work ethic. A panel of experts was used to select the list of items included on the instrument and the process followed was similar to the one used by Kazanas (1978) in his development of the Affective Work Competencies Inventory and reported by Petty and others (Petty, Kazanas, & Eastman, 1981) (Petty & Hill, 1996, p. 271). "The ESA was developed as an alternate form of the OWEI. I have some notes and materials on how it was developed, but have not published those. I would recommend pilot testing prior to use to provide documentation of validity and reliability" (personal communication, Hill, February 9, 2009).

The OWEI contains 50 items, in which 11 items are stated reversibly, while the ESA contains 23 items of which 3 are reversed ordered. Both measure work attitudes using a 7-point Likert scale. The descriptors for the OWEI include *dependable, stubborn, independent, accurate, and ambitious* (Brauchle & Azam, 2004) and for the ESA the subscales are dependable, initiative and interpersonal skills. The fifty (OWEI) or twenty three (ESA) descriptors of work ethic traits are based on a self-reporting questionnaire (personal communication, Hill, February 9, 2009, Petty & Hill, 2005). The development of these

instruments followed an extensive review of literature on work ethic behaviors, attitudes and values (personal communication, Hill, February 9, 2009, Petty, 1995). Construct validity is examined and recommendations are made in Brauchle and Azam (2004) which states that the OWEI's "factors are replicable in different populations and that evidence exists for construct validity of this instrument…" and "…others can use these factors with confidence and without fear of population bias in their research." According to Petty, "There have been numerous studies that have used the OWEI. It has proven to be a very reliable instrument and its simplicity and practicality offer users multi dimensions in its use" (personal communication, March 25, 2008).

The Work Ethic Curriculum

The literature reflects the sporadic delivery of work ethic instruction in career and technical education in the United States (Boatwright & Slate, 2000; Hill, 2003; Wells, 1998). Wells (1998) reports the development of an outcomes rubric to measure direct, indirect and self-evaluative teaching methods in an ethnographic study of a secondary health occupation program. Conclusions from this study were given as follows:

1. Vocational work ethics can be introduced effectively using a combination of direct, indirect and self-evaluative methods.

   - Direct methods included technical material so students connected vocational work ethic with technical skills of their trade. This enabled the 34 performance outcomes to become the primary curriculum while the established, technical curriculum became the means by which the outcomes were taught.

- Indirect methods like modeling behavior or teachable moments and self-evaluation included sharing with students' rubrics, which reinforced the direct teaching methods used.

2. When vocational work ethics are taught via direct, indirect and self-evaluative methods, students are more likely to be aware of the behavior employers expect from entry-level employees.

3. Most health occupation students are able to evaluate their own work behavior with accuracy but recognize responsible behavior more easily than self-directed behavior.

4. Patterns of health occupation students' behavior suggest that old workplace behavior is replaced with new behavior in developmental stages as vocational work ethics are learned.

5. Vocational work ethics are best learned when they are taught consistently using a combination of direct, indirect and self-evaluative methods.

Ford and Herren (1993) studied the perceptions and practices of secondary work program coordinators in Georgia to determine the extent to which the concept of work ethic was being taught by those coordinators and found, although the coordinators believed they were prepared to teach work ethic and that work ethic can be taught in school, the teaching of work ethic by them was informal and actually unintentional. Few resources are available to aid teachers in the instruction of work ethic behaviors for the general population of students. Farmer, Farmer and Burrow, (2008) however in their recently published textbook *Leading with Character* outline the personal qualities and traits of the 'honor code' which includes the work ethic construct defining

the characteristics of good attendance, positive attitude and quality of performance in the context of preparing students for leadership roles in industry (p. 180).

Postsecondary institutions have shown a curriculum with no more emphasis on work ethics teaching than their secondary counterparts. There are very few specific objectives designed to teach and evaluate work ethic behaviors in postsecondary career and technical institutions in the United States (Hill, 2003). One reason the curriculum may be absent or sparse is alluded to by Hill and Wicklein (2000) in *Great Expectations: Preparing Technology Education Teachers for New Roles and Responsibilities*. Hill and Wicklein point out that, based on the literature and personal observation, teacher preparation focuses almost exclusively on specific technical content.

Georgia's secondary curriculum may be lacking a system to deliver work ethic instruction (Ford & Herren, 1993) however, among the 50 states Georgia alone has a clear and comprehensive curriculum for teaching work ethic behavior in postsecondary technical schools (Hill, 2003). Many states do, however, recognize the need for work ethic's inclusion in some capacity (p. 16), but in most cases it is treated arbitrarily (pp. 9-15). The Georgia Department of Technical and Adult Education (GDTAE) has, in collaboration with business and industry (employers) educators (technical school teachers and administrators) and policy makers, created a curriculum to deliver instruction for appropriate work ethic values (Boatwright & Slate, 2000), which involves separate course work and grades presented on college transcripts (p. 2)

Chapter Summary

Work ethic has been presented from an historical perspective and more specifically within the social context of American society. The definition of work ethic, in reference to

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general societal context and again more specifically in business and industry as well as academia, has been explained in chapter two in order to lay out the framework from which this body of research was developed. This study will outline where the United States has been, where it is going, and most importantly, how it will be able to get there in terms of meeting the demands of business and industry through its educational system based on the comprehensive data base provided by researchers of the work ethic construct. If the United States is going to meet the goals of society, particularly within business and industry workforce education professionals must also continue the mission of creating a 'world-class workforce,' solving human performance problems and providing labor market advantage to CTE students (Gray & Herr, 1998).

A summation of why a continued investigation into work ethic and the constructs which define is necessary is found in Colson and Eckerd (1991):

> NO MATTER HOW MANY STRUCTURES we fix, no matter how many laws we transform, restoring the work ethic in our society ultimately boils down to one thing: We must restore it in the hearts and minds of individuals. It is through the individual—the factory worker, the field foreman, the CEO, the secretary, the volunteer, the fast food server— that the work ethic becomes a reality on the floor of the shop, at the desk in the office, in the boardroom, and on the assembly line (p. 123).

It is not yet clear if the constructs contained within the GDTAE are meeting the goals or objective they were designed to meet or if they wholly or in part define the construct of work ethic as would be hoped. What has been accomplished is a data set for continued research, which is necessary to maximize the benefits to the economy and society in general, and workforce education professionals can meet individual needs of workers within the system.

Research comparing the work ethic perceptions of teachers and students for the purposes of creating a data set and establishing a starting point for continued studies, which will lead to creating a curriculum, will meet the goals of society and also allow a continued mission of workforce education professionals in creating a world-class workforce, solving human performance problems and providing labor market advantage to CTE students (Gray & Herr, 1998) has been pursued in this study of postsecondary CTE schools in Pennsylvania.

Conducting this research was consistent with the recommendations found throughout the literature; "because employers and society in general are consistently telling educators that students are leaving school without enabling work ethics" (Ford & Herren, 1993, p. 7). Petty (1995) recommended "Special efforts should be made to provide data that can be used to guide the practice of teacher educators, vocational and technical educators, and curriculum development specialists of the future" (p. 80). The reviewed literature reflected a focus on worker and/or supervisor attitudes and behaviors (Azam & Brauchle, 2004; Brauchle & Azam, 2004; Hatcher, 1995; Petty & Hill, 2005). Some researchers focused on adolescents and socialization and the relationship of work attitudes to health and quality of life (Axelsson, Anderson, Hakansson & Ejlertsson, 2005), and still others viewed work ethic as part of culture, portrayed as a stable attitude (Bogt, Raaijmakers & Wel, 2005). Hill and Wicklein, (2000) suggested the need for developing qualitative research strategies to determine specific reasons for difficulties teachers are experiencing. The recommendations for teaching, learning and exhibiting the skills considered to be necessary for appropriate work ethic behavior explained in the collective body of research rather by workers, supervisors, parents, teachers, or students presents a gap in the connecting of teachers with the learner in their perceived work ethics. This gap justified the need to conduct this study.

Chapter 3

METHODOLOGY

Purpose

The purpose of this study was to compare the self-perceived work ethic of career and technical students to that of their instructors to determine the level of work ethic behaviors that currently exists and to look for differences in the self-reporting of those characteristics using the Employability Skills Assessment (ESA). The relationship between the work ethic for students and instructors to the demographic data collected which included age, gender, number of years of teaching, number of semesters enrolled, marital status, veteran status, and GPA was also studied. The study was intended to extend the body of research on work ethic for workers and supervisors in the work place (Brauchle& Azam, 2004; Hatcher, 1995; Petty & Hill, 2005) to students and their instructors in career and technical schools. Chapter three includes a discussion of the problem, the population and sampling, instrumentation, the pilot test, data collection and analysis processes.

The Problem

Personal communication with the business community and technical institute administrators by Boatwright and Slate (2000) suggests a common perception that employees lack a suitable work ethic. Similar perceptions were echoed in focus group discussions leading to an increased level of concern by the business community and technical institutes which point to the "incongruity between adequate skill levels and appropriate work ethic" leading to unemployable applicants (Boatwright & Slate, 2000).

Despite the desire to cultivate positive work ethic behavior, few studies on work ethic behavior have investigated the interaction between the work ethics of workers and their supervisors (McCortney & Engels, 2003). Petty and Hill, (2005) compares the work ethic of supervisors and their workers in order to gain insight and a better understanding of attitudes in the work place, implying that these insights can supply career and technical educators and human resource professionals helpful information to meet their goals and a better understanding of attitudes in the work environment (Petty & Hill, 2005).

The goals of career and technical educators involve both the workforce and the worker (Gray & Herr 1998). The goals focusing on the workforce include; preparing a 'World Class' Workforce, preventing labor shortages, and making firms competitive. The worker-focused goal provides individuals with a labor market advantage when competing for positions in the workforce over those individuals without a career and technical education. A survey of 2500 firms with 100 or more employees by the National Association of Manufacturers (Eisen, 1993) in Gray and Herr (1998) showed the rejection of five out of six job seekers was due to the lack of basic skills, occupational skills or a work ethic. The research literature largely suggests that workers are let go due to poor work attitudes, values, and habits far more often than lack of technical skills or some other reason (Brauchle & Azam, 2004). There is currently little information on the perceptions of postsecondary career and technical students and their instructors. This study is designed to extend the body of research literature from industry into two year postsecondary career and technical education in the community colleges of Pennsylvania by studying the compatibility of beliefs about, and the interaction between, the work ethic of students and their instructors.

Research Questions

This study attempts to answer the following questions:

1. To what extent is there a significant difference in the occupational work ethic of career and technical students enrolled in two year programs in the community colleges of Pennsylvania and their instructors?

2. To what extent is there a statistically significant relationship between the work ethic of community college students based on the demographic data collected; gender, age, race, GPA, veteran status, marital status, semesters enrolled?

3. To what extent is there a statistically significant relationship between the work ethic of community college instructors based on the demographic data collected; gender, age, race, GPA, veteran status, marital status, and years of teaching?

Population

The population of this study is Pennsylvania postsecondary career and technical education students and their instructors. Students and instructors are the independent variables of this study, and selection will be based on the students' enrollment or the instructors' employment in the Pennsylvania Community College System.

Sampling

This sample size was based on the number of subjects appropriate for a total population between one hundred thousand and one million where the recommended sample sizes are respectively (n=383) and (n=384) at a ninety five percent confidence interval for a normal distribution

(Krueger, 2001, pp. 249-50). The Pennsylvania Commission for Community Colleges (2005) posts demographic figures within this range.

Methods of collection varied from mailings to direct dissemination and collection. Four hundred questionnaires were distributed and of those one hundred and ninety six were returned. These included a total of 114 students and 63 faculty members of which 82 students were from the Harrisburg Area Community College and 32 from the Community College of Philadelphia. Among the instructors, 19 faculty members were from the Harrisburg Area Community College and 44 were from the Community College of Philadelphia.

Variables

Dependent variable

The dependent variables for this study are found as subscales of the ESA and consist of three factors including interpersonal skills, initiative, and dependability, along with reverse instrument items. The dependent variables represented by the subscales of the ESA are all related to the overall work ethic construct defined within the Occupation Work Ethic Inventory (personal communication, Hill, February 9, 2009, Petty & Hill, 2005).

Independent variables

Students and instructors enrolled in or teaching CTE programs in postsecondary institutions in Pennsylvania are the independent variables of this study, and selection was based on the geographic location of the campuses having the potential to provide a population of diversity among students and instructors.

Instrumentation

A quantitative research method was used in this study. Data collection was accomplished through the implementation of an existing survey instrument. This process was in line with the recommendations of Hill (2001, p. 207) for the use of an existing instrument if it has produced scores in prior research that were valid and reliable. The Employability Skills Assessment (ESA), a modified version of the Occupational Work Ethic Inventory (OWEI) as described previously, has been shown to be such an instrument and was therefore used in this study. The ESA (see Appendix) was developed in 1995 by Hill and uses a 23 item questionnaire, in which 3 items are reversibly stated measuring work attitudes with a 7-point Likert scale. The descriptors include successful, careless, committed etc. (Hill, 1995).

Reliability

The term reliability refers to the consistency with which an instrument measures what was intended (Farmer & Rojewski, 2001, p. 223). Brauchle and Azam, (2004) shows reliability across populations for the OWEI factors studied. "The OWEI has been shown to be highly reliable with recorded alphas of .95 for Hill, 1992 and .90 for Hatcher, 1995" (Brauchle and Azam, 2004). The subscale correlation coefficients were shown to be .89 for dependability, .92 for interpersonal skills, .88 for initiative, and .80 for work commitment (Hatcher, 1995). These values indicate a good to very good reliability (Hill, 2001, p. 227). " In developing this instrument an extensive review of human resource literature regarding work attitudes, work values, and work habits identified the psychometric items used to measure work ethic" (Petty, 1995; Petty, 1995c)" (Hill, & Petty, 2005). According to Petty "…There have been numerous studies that have used the OWEI. It has proven to be a very reliable instrument and its simplicity

and practicality offer users multi dimensions in its use" (personal communication, March 25, 2008). The ESA was developed according to Hill in order to create a condensed version of the OWEI and therefore the use of the ESA ensures reliability yet pilot testing was still recommended (personal communication, February 9, 2009).

With standardized instruments, test reliability has already been established for the instrument of choice so the investigator need not worry about having to determine reliability for the study. In many cases more than one reliability coefficient has been obtained for a particular instrument. However the investigator must ensure the following criteria are met when selecting an instrument.

- The reliability coefficient is high (e.g., r .80) or at least marginally acceptable (e.g., r .60)

- The length of time used to establish test-retest reliability is similar to the length of time used in the study. Note that as the length of time increases between administrations reliability decreases.

- The sample used to determine reliability (pilot test) of the instrument was similar to the sample in the current study (Gloeckner, G.W., Gliner, J.A., Tochterman, S. M., & Morgan, G. A., 2001, p. 239).

These criterions were met by the investigator in this study through the use of an established instrument (ESA) with reliability coefficients above .80, by administering the survey as directed by the author and by pilot testing prior to actual data collection.

Data Collection and Analysis

     Pilot Testing

     Krueger, (2001) gives the recommended number of subjects for a pilot test as typically between ten and thirty except where item analysis is being conducted, then twenty-five should be included in order to complete statistical computations (p. 238). Therefore, fifteen students and instructors from the Pennsylvania College of Technology were solicited to field test the instrument. This was a convenience sample based on the cooperation of the institutions solicited. The instrument was delivered face-to-face along with support information including consent forms with a confidentiality statement. (Hill, 2001, p. 217, personal communication, Hill, February 9, 2009).

     Ten students and five instructors from the Pennsylvania College of Technology participated in pilot testing the ESA. The pilot test was delivered in order to provide the researcher insight into the ability of the students and instructors to interpret the meaning of the descriptors found on the instrument and provide evidence of reliability. A Cronbach's alpha score of .88 provided evidence that the instructions on the instrument were understood by students and instructors and indicated that the descriptors were interpreted correctly. The correlations showed a high level of reliability.

Survey Administration

     According to Hill, (2001) data collection for survey research can be conducted using a written questionnaire (p. 205). A questionnaire using the ESA which contained twenty three work ethic descriptors based on a 7-point Likert scale for self-reporting (see appendix) was delivered in person by the researcher to instructors who then disseminated the survey to their

students. The dissemination of the questionnaire was preceded by an introductory letter (see appendix) from the researcher explaining the intent of the research along with explanations of confidentiality. A follow-up letter of support for the research (see appendix) was sent by Dr. Edgar Farmer, committee chairperson, three weeks later to prompt the completion of the questionnaire and reduce procrastination.

In order to increase the sample size, an additional method for data collection was employed.   Instructors from the Community College of Philadelphia were solicited a second time by the researcher face-to-face during a professional development session in Philadelphia. Two hundred questionnaires were distributed.

Data Analysis

To test the comparison of the perceived work ethic of students to that of their instructors a one-way analysis of variance (ANOVA) was conducted. The test examined whether significant differences existed for each of the dependent variables using scores from the ESA subscale responses. Multivariate analysis of variance (MANOVA) was also used to look at individual subscale scores, and where multivariate procedures resulted in significant differences in the dependent variables, univariate analysis of variance was conducted to determine if a significant difference existed for each of the ESA subscale responses. Multiple regression analysis was used to examine the relationship between the students' and instructors' work ethic and the demographic variables of age, gender, the number of semesters enrolled, years of teaching experience, veteran status, marital status, and GPA.

Significance was considered at the $p < .05$ level, which according to Lewis, (2001) is standard for social science research (p. 188). The dependent variables represented by the

subscales of the ESA are all related to the overall work ethic construct, however univariate analyses was necessary to examine each subscale component represented by the factors of interpersonal skills, initiative and being dependable. Individual response items were also compared for students and instructors. All calculations were done using SPSS statistical software (SPSS inc., 2009).

Chapter 4

RESULTS

This chapter describes the statistical findings associated with the research questions presented in chapter one and the analysis of the data collected by the researcher. The chapter is divided into three general sections. The first section provides the descriptive data and has presented data relative to the personal and educational background of the students and instructors along with the individual responses to each item on the questionnaire.

The second section presented data pertaining to hypothesis one regarding the self-perceived work ethic of students compared to instructors. The results of multivariate and univariate analysis have been recorded. The results have been reported for the complete Employability Skills Assessment (ESA) and for the individual subscales of the ESA.

The third section includes the results of multiple regression analysis used to investigate relationships between demographic items including gender, ethnicity, marital status, veteran status, program, semester standing and years teaching on the work ethic of community college students and instructors as stated in hypotheses two and three respectively.

Personal information

Students who participated in this study are profiled in Table 1. Data were arranged by gender, ethnicity, marital status, veteran status, program and semester standing. The total number of respondents was 124, yet not all items were answered by every respondent as shown in Table 1. Only one student declined to indicate his/her gender, while ten failed to indicate race. Marital status was not indicated on eleven forms and veteran status was absent from

sixteen. Seventeen respondents chose not to provide the number of semesters they had been enrolled, and only one failed to indicate his/her program major.

Instructors who participated in this study are profiled in Table 2. Data were arranged by gender, ethnicity, marital status, veteran status, program and years teaching experience. The total number of respondents was 69, yet not all items were answered by every respondent as shown in Table 2. Three instructors failed to respond to the gender item, nine declined to indicate race, marital status and teaching experience while eleven did not respond to veteran status. Among the student participants 64% were female and 36% were male. Similar percentages represented the faculty with 62% female and 38% male.

Table 1. Personal and educational background of students (n =124).

Characteristic	Frequency	Valid Percent
Gender		
Male	44	35.8
Female	79	64.2
Total	123	100.0
Ethnicity		
Asian Pacific Islander	2	1.8
African Black American	6	5.3
Latino Hispanic American	5	4.4
White American	99	86.8
Foreign Non Immigrant	2	1.9
Total	114	100.0
Marital Status		
Single	82	72.6
Married	31	27.4
Total	113	100.0
Veteran		
Yes	4	3.7
No	104	96.3
Total	108	100.0
Program		
Hospitality Culinary Arts	40	32.5
Health Sciences	53	43.1
Other	30	24.4
Total	123	100.0
Semester Standing		
First	22	20.6
Second	13	12.1
Third	14	13.1
Fourth	38	35.5
Fifth	3	2.8
Sixth	10	9.3
Seventh	4	3.7
Eighth	3	2.8
Total	107	100.0

Table 2. Personal and educational background of faculty (n =69).

Characteristic	Frequency	Valid Percent
Gender		
Male	25	37.9
Female	41	62.1
Total	66	100.0
Ethnicity		
Asian Pacific Islander	0	0.0
African Black American	7	11.7
Latino Hispanic American	1	1.7
White American	52	86.7
Foreign Non Immigrant	0	0.0
Total	60	100.0
Marital Status		
Single	19	31.7
Married	41	68.3
Total	60	100.0
Veteran		
Yes	8	13.8
No	50	86.2
Total	58	100.0
Years Teaching Experience		
1 – 3 years	9	15.0
4 – 6 years	5	8.3
7 – 9 years	8	13.4
10 – 12 years	6	10.0
13 – 15 years	3	5.0
16 – 18 years	5	8.3
19 – 21 years	4	6.7
22 – 24 years	1	1.6
25 – 27 years	4	6.7
28 – 30 years	2	3.3
31 – 33 years	3	5.0
34 – 36 years	4	6.7
37 – 39 years	1	1.6
40 – 42 years	3	5.0
43 - 45 years	1	1.6
46 – 48 years	1	1.6
Total	60	100.0

Mean years of teaching = 17.52 yrs (SD = 13.10 yrs) & median of 14.50 yrs.

The percentages of all respondents selecting different response options for each Employability

Skills Assessment (ESA) item are shown in Table 3.

Table 3. Percent of all respondents selecting different response options for each ESA item (n=193).

ESA Item	Response Option						
	Never	2	3	4	5	6	Always
	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %	Row N %
E1-A happy person	.0%	.5%	1.0%	7.8%	33.7%	48.2%	8.8%
E2-Eager to be successful	.0%	.0%	.5%	3.6%	11.4%	39.9%	44.6%
E3-Waste time	5.7%	21.8%	21.2%	29.5%	13.5%	6.2%	2.1%
E4-Say do something, then you do it	.0%	.0%	.5%	5.2%	22.8%	44.6%	26.9%
E5-Thoughtful of others	.0%	.5%	.0%	2.1%	15.0%	45.1%	37.3%
E6-Aware of what is going on	.0%	.0%	.0%	5.2%	22.3%	46.6%	25.9%
E7-Like to be with others	.0%	.0%	1.6%	13.5%	25.9%	37.8%	21.2%
E8- Committed to doing good work	.0%	.0%	1.0%	2.1%	6.7%	29.5%	60.6%
E9-Work well with others	.0%	.5%	.5%	4.2%	15.6%	49.5%	29.7%
E10-Avoid making careless mistakes	.0%	.0%	1.0%	5.7%	28.5%	48.2%	16.6%
E11-Have good manners	.0%	.0%	.0%	1.0%	14.1%	36.5%	48.4%
E12-Do things right first time	.0%	.0%	1.6%	10.4%	35.2%	45.1%	7.8%
E13-Follow instructions	.0%	.0%	1.0%	6.7%	17.6%	53.4%	21.2%
E14-People like you	.0%	.0%	1.0%	5.7%	24.4%	48.7%	20.2%
E15-Help other people	.0%	.5%	2.1%	5.2%	19.8%	41.1%	31.3%
E16-Difficult to find solutions to problems	4.7%	27.1%	22.9%	12.0%	17.2%	12.5%	3.6%
E17-Tell the truth	.0%	.5%	1.0%	4.1%	14.5%	47.7%	32.1%
E18-Eager to complete your work	.5%	.0%	1.6%	9.9%	19.3%	41.1%	27.6%
E19-Disappoint people	3.1%	26.9%	17.1%	26.9%	12.4%	12.4%	1.0%
E20-Follow rules, even if disagree with them	.0%	3.1%	4.7%	13.0%	26.4%	34.7%	18.1%
E21-Accomplish your goals	.0%	.0%	1.6%	3.6%	22.3%	58.0%	14.5%
E22-Do more than is required	.5%	1.0%	.5%	10.9%	25.4%	40.4%	21.2%
E23-Others enjoy being with you	.0%	.0%	.0%	7.8%	24.9%	50.3%	17.1%

These percentages are shown separately for student and faculty responses in Tables 4 and 5 respectively.

Table 4. Percent of student respondents selecting different response options for each ESA item (n=124).

Response Option ESA Item	Never Row N %	2 Row N %	3 Row N %	4 Row N %	5 Row N %	6 Row N %	Always Row N %
E1-A happy person	.0%	.0%	.8%	8.1%	36.3%	46.8%	8.1%
E2-Eager to be successful	.0%	.0%	.0%	4.0%	12.1%	34.7%	49.2%
E3-Waste time	5.6%	21.8%	21.0%	33.1%	10.5%	4.8%	3.2%
E4-Say do something, then you do it	.0%	.0%	.8%	8.1%	24.2%	44.4%	22.6%
E5-Thoughtful of others	.0%	.8%	.0%	2.4%	16.9%	41.9%	37.9%
E6-Aware of what is going on	.0%	.0%	.0%	4.8%	25.8%	39.5%	29.8%
E7-Like to be with others	.0%	.0%	2.4%	12.9%	26.6%	33.9%	24.2%
E8- Committed to doing good work	.0%	.0%	.8%	2.4%	8.9%	32.3%	55.6%
E9-Work well with others	.0%	.8%	.0%	4.1%	17.1%	46.3%	31.7%
E10-Avoid making careless mistakes	.0%	.0%	1.6%	6.5%	29.0%	46.0%	16.9%
E11-Have good manners	.0%	.0%	.0%	1.6%	10.6%	30.9%	56.9%
E12-Do things right first time	.0%	.0%	2.4%	12.1%	33.9%	41.9%	9.7%
E13-Follow instructions	.0%	.0%	.8%	8.1%	15.3%	50.8%	25.0%
E14-People like you	.0%	.0%	.8%	8.1%	20.2%	49.2%	21.8%
E15-Help other people	.0%	.0%	3.3%	5.7%	19.5%	45.5%	26.0%
E16-Difficult to find solutions to problems	3.3%	22.8%	21.1%	13.8%	20.3%	13.0%	5.7%
E17-Tell the truth	.0%	.8%	1.6%	4.8%	16.9%	41.1%	34.7%
E18-Eager to complete your work	.8%	.0%	2.4%	12.2%	18.7%	37.4%	28.5%
E19-Disappoint people	4.8%	29.0%	17.7%	24.2%	10.5%	12.1%	1.6%
E20-Follow rules, even if disagree with them	.0%	2.4%	3.2%	11.3%	22.6%	37.1%	23.4%
E21-Accomplish your goals	.0%	.0%	2.4%	2.4%	25.0%	55.6%	14.5%
E22-Do more than is required	.8%	1.6%	.0%	12.9%	27.4%	38.7%	18.5%
E23-Others enjoy being with you	.0%	.0%	.0%	8.9%	18.5%	51.6%	21.0%

Table 5. Percent of faculty respondents selecting different response options for each ESA item (n=69).

Response Option ESA Item	Never Row N %	2 Row N %	3 Row N %	4 Row N %	5 Row N %	6 Row N %	Always Row N %
E1-A happy person	.0%	1.4%	1.4%	7.2%	29.0%	50.7%	10.1%
E2-Eager to be successful	.0%	.0%	1.4%	2.9%	10.1%	49.3%	36.2%
E3-Waste time	5.8%	21.7%	21.7%	23.2%	18.8%	8.7%	.0%
E4-Say do something, then you do it	.0%	.0%	.0%	.0%	20.3%	44.9%	34.8%
E5-Thoughtful of others	.0%	.0%	.0%	1.4%	11.6%	50.7%	36.2%
E6-Aware of what is going on	.0%	.0%	.0%	5.8%	15.9%	59.4%	18.8%
E7-Like to be with others	.0%	.0%	.0%	14.5%	24.6%	44.9%	15.9%
E8- Committed to doing good work	.0%	.0%	1.4%	1.4%	2.9%	24.6%	69.6%
E9-Work well with others	.0%	.0%	1.4%	4.3%	13.0%	55.1%	26.1%
E10-Avoid making careless mistakes	.0%	.0%	.0%	4.3%	27.5%	52.2%	15.9%
E11-Have good manners	.0%	.0%	.0%	.0%	20.3%	46.4%	33.3%
E12-Do things right first time	.0%	.0%	.0%	7.2%	37.7%	50.7%	4.3%
E13-Follow instructions	.0%	.0%	1.4%	4.3%	21.7%	58.0%	14.5%
E14-People like you	.0%	.0%	1.4%	1.4%	31.9%	47.8%	17.4%
E15-Help other people	.0%	1.4%	.0%	4.3%	20.3%	33.3%	40.6%
E16-Difficult to find solutions to problems	7.2%	34.8%	26.1%	8.7%	11.6%	11.6%	.0%
E17-Tell the truth	.0%	.0%	.0%	2.9%	10.1%	59.4%	27.5%
E18-Eager to complete your work	.0%	.0%	.0%	5.8%	20.3%	47.8%	26.1%
E19-Disappoint people	.0%	23.2%	15.9%	31.9%	15.9%	13.0%	.0%
E20-Follow rules, even if disagree with them	.0%	4.3%	7.2%	15.9%	33.3%	30.4%	8.7%
E21-Accomplish your goals	.0%	.0%	.0%	5.8%	17.4%	62.3%	14.5%
E22-Do more than is required	.0%	.0%	1.4%	7.2%	21.7%	43.5%	26.1%
E23-Others enjoy being with you	.0%	.0%	.0%	5.8%	36.2%	47.8%	10.1%

Difference in Work Ethic for Students and Instructors

HYPOTHESIS 1:

Ho: There is no significant difference between the self-perceived work ethic of community college students and instructors. To compare the data collected from instructors' and students' responses a one-way analysis of variance (ANOVA) was performed at a significance level of alpha = .05. This test showed no significant differences in the ESA scores for students and instructors, (see Table 6), therefore, a univariate comparison was performed at a significance level of alpha = .05 to examine each of the ESA subscales.

Table 6. ANOVA Results for Employability Skills Assessment Total Score

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.021	1	.021	.092	.763
Within Groups	43.501	186	.234		
Total	43.523	187			

Table 6a. Tests of Between-Subjects Effects Dependent Variable: Employability Skill Scale

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.921[a]	3	.974	4.344	.006
Intercept	5098.867	1	5098.867	22749.028	.000
Status	.013	1	.013	.060	.807
Gender	2.678	1	2.678	11.950	**.001**
Status * Gender	9.551E-6	1	9.551E-6	.000	.995
Error	40.344	180	.224		
Total	6006.367	184			
Corrected Total	43.265	183			

a. R Squared = .068 (Adjusted R Squared = .052)

Furthermore, a two-way ANOVA was performed to determine if gender and student/faculty status interact in their impact on ESA. Table 6a shows that there is no interaction, and reaffirms

that status (student/faculty) does not influence ESA scores, but gender does, showing that female respondents from both groups reported higher scores than did male respondents.

Table 7. MANOVA Results and One-way Anova Results for Three Employability Skills Subscales

Subscale	Number	Mean	SD	Anova F (p)
Interpersonal				
Student	119	5.92	.56	.32 (.575)
Faculty	69	5.88	.55	
Initiative				
Student	119	5.53	.65	2.68 (.103)
Faculty	69	5.68	.54	
Dependability				
Student	119	5.60	.66	.78 (.377)
Faculty	69	5.52	.43	

Manova Results: Wilks' Lambda = .970; df = 2/185; p = .062

Table 7 reports that a MANOVA finds no significant differences (p = .062) in the means of the three subscales for faculty and students. Further, the three univariate ANOVAs are performed and no significant differences are found.

Although the MANOVA and univariate analysis indicated no significant differences between instructors' and students' self-perceived work ethic summated values for each ESA subscales, Wilks' Lambda did however show responses to individual items had significant

differences for students and instructors (see Tables 8, 9,&10) with the direction of which group was higher was indicated by the means.

The responses to item numbers 4 and 20 (ESA, dependability) indicated a significant difference existed between instructors and students see (Table 8), the direction of who was higher indicated by the means. Instructors scored significantly higher on item 4 while students scored significantly higher on item 20 (dependability) respectively when asked; (4.) when you say you will do something, do you do it? …and (20.) do you follow the rules even if you disagree with them?

Individual items for (ESA, initiative) (Table 9) included; is it difficult for you to find solutions to problems on your own?... and Do you do more than is required or expected of you? …numbers 16 and 22 respectively. Reponses indicated a significant difference between instructors and students. Examination of the mean in tables 8 and 9 respectively indicated that instructors scored significantly higher for items 16 and 22 (initiative). Individual ESA items for interpersonal skills specifically item 11; Do you have good manners? …showed a significant difference between students and instructors. The higher mean shown in Table 10 indicates a greater level of manners was reported by students. Students also scored higher on number 23 (interpersonal) Do other people enjoy being with you... but the difference was approaching statistical significance ($p = .064$).

Table 8. Manova and Anova results for dependability by students and faculty

Individual Item	Group	Mean	Std. Deviation	n	F	p
E4-Say do something, then you do it	Student	5.80	.910	124	7.341	.007
	Faculty	6.14	.733	69		
	Total	5.92	.866	193		
E10-Avoid making careless mistakes	Student	5.70	.883	124	.571	.451
	Faculty	5.80	.759	69		
	Total	5.74	.840	193		
E13-Follow instructions	Student	5.91	.893	124	.782	.378
	Faculty	5.80	.797	69		
	Total	5.87	.859	193		
E17-Tell the truth	Student	6.00	.996	124	.734	.393
	Faculty	6.12	.697	69		
	Total	6.04	.900	193		
E19-Disappoint people	Student	3.49	1.506	124	1.980	.161
	Faculty	3.80	1.324	69		
	Total	3.60	1.447	193		
E20-Follow rules, even if disagree with them	Student	5.59	1.196	124	9.025	.003
	Faculty	5.04	1.230	69		
	Total	5.39	1.233	193		

Manova Results: Wilks' Lambda = .888; df = 6/188; F=3.982; p = .001.

Table 9.   Manova and Anova results for initiative by students and faculty.

Individual Item	Group	Mean	Std. Deviation	n	F	p
E2-Eager to be successful	Student	6.28	.836	122	.899	.344
	Faculty	6.16	.834	69		
	Total	6.24	.835	191		
R_E3	Student	4.49	1.380	122	.018	.893
	Faculty	4.46	1.399	69		
	Total	4.48	1.384	191		
E6-Aware of what is going on	Student	5.95	.871	122	.091	.764
	Faculty	5.91	.762	69		
	Total	5.94	.831	191		
E8- Committed to doing good work	Student	6.39	.819	122	2.804	.096
	Faculty	6.59	.754	69		
	Total	6.47	.800	191		
E12-Do things right first time	Student	5.44	.919	122	.385	.536
	Faculty	5.52	.699	69		
	Total	5.47	.845	191		
R_E16	Student	4.15	1.625	122	8.138	**.005**
	Faculty	4.83	1.495	69		
	Total	4.39	1.608	191		
E18-Eager to complete your work	Student	5.73	1.150	122	1.810	.180
	Faculty	5.94	.838	69		
	Total	5.81	1.051	191		
E21-Accomplish your goals	Student	5.77	.821	122	.504	.478
	Faculty	5.86	.733	69		
	Total	5.80	.790	191		
E22-Do more than is required	Student	5.54	1.122	122	3.861	**.050**
	Faculty	5.86	.944	69		
	Total	5.65	1.069	191		

Manova Results: Wilks' Lambda = .902; df = 9/181; F=2.814; p = .025.

Table 10. Manova and Anova results for interpersonal by student and faculty.

Individual Item	Status	Mean	Std. Deviation	n	F	p
E1-A happy person	Student	5.54	.786	121	.049	.825
	Faculty	5.57	.931	69		
	Total	5.55	.839	190		
E5-Thoughtful of others	Student	6.13	.875	121	.477	.491
	Faculty	6.22	.704	69		
	Total	6.16	.816	190		
E7-Like to be with others	Student	5.64	1.056	121	.020	.888
	Faculty	5.62	.925	69		
	Total	5.64	1.008	190		
E9-Work well with others	Student	6.04	.889	121	.059	.745
	Faculty	6.00	.840	69		
	Total	6.03	.869	190		
E11-Have good manners	Student	6.43	.751	121	7.152	**.008**
	Faculty	6.13	.726	69		
	Total	6.32	.754	190		
E14-People like you	Student	5.83	.891	121	.114	.736
	Faculty	5.78	.802	69		
	Total	5.81	.858	190		
E15-Help other people	Student	5.84	.983	121	2.055	.153
	Faculty	6.06	1.013	69		
	Total	5.92	.997	190		
E23-Others enjoy being with you	Student	5.85	.843	121	3.478	.064
	Faculty	5.62	.750	69		
	Total	5.77	.816	190		

Manova Results: Wilks' Lambda = .911; df = 8/181; F=2.205; p = .02

Factors Influencing Work Ethic for Students

HYPOTHESIS 2:

Ho; there is no statistically significant relationship between the work ethic of community college students based on the demographic data collected; gender, age, race, GPA, veteran status, marital status, and number of semesters enrolled.

This hypothesis was tested using, a multiple regression analysis on student demographic data in order to determine if a relationship between the subscale variables (initiative, dependability, and interpersonal skills) and the predictor variables (gender, age, race, marital status, veteran status, GPA, program area and number of semesters enrolled) exists. This analysis provided the researcher an opportunity to determine whether student work ethic could be predicted based on the demographic data (gender, age, race, marital status, veteran status, GPA, program area and number of semesters enrolled). The independent variables for this analysis were represented by the demographic data, and the subscales initiative, dependability and interpersonal skills represented the dependent variable subscale scores.

The results of the multiple regression analyses of the three dependent variables of the ESA based on the demographic data are shown in Table11. There is no evidence for any demographic item to predict work ethic or any of the three work ethic subscales; therefore, we fail to reject the null hypothesis; there is no significant relationship for work ethic of community college students based on the following demographics: gender, age, marital status, veteran status, GPA, program area and number of semesters enrolled. Female students however, reported slightly higher scores of initiative and interpersonal skills.

Table 11. Multiple regression summary results for student participants   * = nearly significant

Predictor Variable	Y' = Interpersonal	Y'= Initiative	Y' = Dependability
	Beta (p)	Beta (p)	Beta (p)
Age of Student	.012 (929)	.033 (.805	.060 (.663)
Semester	.004 (.972)	-.093 (.411)	-.110 (.348)
HS GPA			
C or Less (0)			
A or B (1)	-.045 (.708)	.086 (.463)	.043 (.718)
Current GPA			
C or Less (0)			
A or B (1)	-.099 (.463)	.168 (.197)	.127 (342)
*Gender			
Female (0)			
Male (1)	-.249 (.056)*	-.215 (.085)*	-.136 (.280)
Marital Status			
Single (0)			
Married (1)	-.090 (.488)	.034 (.783)	.002 (.986)
Veteran			
Yes (0)			
No (1)	.040 (.713)	.028 (.791)	-.023 (.832)
Program Area			
Other (0)			
Hospitality or Health Sciences	-.191 (.173)	-.169 (.204)	-.129 (.345)
Model Summary Information			
F	.787	1.641	.809
df	8/85	8/86	8/87
p	.615	.125	.597
R Squared	.069	.132	.069
Adjusted R Squared	.019	.052	.016

HYPOTHESIS 3:

Ho; there is no statistically significant relationship between the work ethic subscale scores of community college instructors based on the demographic data collected; gender, age, race, veteran status, marital status, and years of teaching.

This hypothesis was tested using a multiple regression analysis using the instructor demographic data in order to determine if a relationship between the ESA subscale variables (initiative, dependability, and interpersonal skills) and the predictor variables (gender, age, race, marital status, veteran status, and years of teaching experience) exists. This analysis provided the researcher an opportunity to determine whether instructor work ethic could be predicted based on the demographic data (gender, age, marital status, veteran status, program area and years of teaching experience). The independent variables for this analysis were represented by the demographic data, and the subscales initiative, dependability and interpersonal skills, represented the dependent variables.

The results of the multiple regression analyses for the three dependent variables of the ESA based on the demographic data (gender, age, race, marital status, veteran status, years of teaching experience) are shown in Table 12.

Table 12.   Multiple regression summary results for faculty participants.

Predictor Variable	Y' = Interpersonal	Y' = Initiative	Y' = Dependability
	Beta (p)	Beta (p)	Beta (p)
Age of Teacher	-.225 (.280)	-.009 (.906)	.232 (.255)
Years Teaching	.071 (.730)	.148 (.463)	-.109 (.590)
Gender			
Female (0)			
Male (1)	-.309 (**.049**)	-.365 (**.018**	-.149 (.326)
Marital Status			
Single (0)			
Married (1)	.119 (.387)	.307 (**.025**)	.281 (**.041**)
Veteran			
Yes (0)			
No (1)	.019 (889)	-.135 (.309)	-.028 (.836)
Program Area			
Other (0)			
Hospitality or Health Sciences (1)	.098 (.483)	.245 (.075)	.343 (**.015**)
Model Summary Information			
F	1.904	2.497	2.295
df	6/47	6/47	6/47
p	.100	**.035**	**.050**
R Squared	.196	.242	.227
Adjusted R Squared	.093	.145	.128

Dependability and initiative were shown to have a significant relationship with the independent variables. Regression indicated the demographic items as significant predictors of being dependable and having initiative (see Table 12).   The demographic characteristics gender

for interpersonal skills and initiative and marital status for initiative and dependability are shown to be significant at $p < .05$. Female respondents reported significantly higher scores than their male counterparts and married instructors were also shown to report higher scores for initiative and being dependable than did single respondents. Dependability was also shown to be reported significantly higher among Hospitality and Health Science instructors than from instructors in other programs.

The overall model showed differences in interpersonal skills to be insignificant while differences in dependability and initiative were found to be significant. Therefore when using this model dependability and initiative are predictable among instructors

Chapter Summary

This study of students and instructors from Pennsylvania community colleges was completed to determine if the self-perceived work ethic of students and their instructors were different. The study further investigated the relationship of demographic data (gender, age, race, marital status, veteran status, GPA, years of teaching experience, program area and number of semesters enrolled) to the work ethic of Pennsylvania community college students and their instructors. The following is a summation of the research findings derived from the research questions prepared for this study.

Several significant relationships were found among the variables of this study. Relative to the first research question; (To what extent is there a significant difference in the occupational work ethic of career and technical students enrolled in two year programs in the Community Colleges of Pennsylvania and their instructors?) data analysis indicated there was no significant difference between the self-reported work ethic of community college students and instructors

from Pennsylvania community colleges. Data analysis produced statistical evidence that the second research question, (To what extent is there a statistically significant relationship between the work ethic ESA subscale scores of community college students based on the demographic data collected; gender, age, race, GPA, veteran status, marital status, program area and semesters enrolled?) indicated no significant relationship existed between demographic characteristics and the self-reported work ethic for students. Gender, however, was shown to be marginally significant, with females indicating a slightly higher initiative than males. Multiple regression analysis also produced statistical evidence that research question three, (To what extent is there a statistically significant relationship between the work ethic ESA subscale scores of community college instructors based on the demographic data collected; gender, age, race, veteran status, marital status, program area and years of teaching?) was supported showing a significant difference for the self-reported work ethic of instructors for the demographic characteristics of gender marital status and program area. Female instructors reported significantly higher scores for the subscales interpersonal skills and initiative dependability. Married instructors reported significantly higher scores for initiative and dependability. Instructors from the program areas of Hospitality and Health Sciences reported higher for dependability than instructors from other program areas.

Post-hoc analysis revealed gender to have a significant effect on the overall work ethic (see Table 6a) as self-reported on the ESA with all female respondents (students and instructors) reporting higher scores.

Chapter 5

SUMMARY, CONCLUSIONS and RECOMMENDATIONS

Continued concern for the level of employability skills in the workforce has been the

rationale for the accumulation of the current body of literature pertaining to research of the work

ethic. Understanding the existing work ethic of those currently employed, seeking employment

or pursuing a technical education prior to seeking employment have been the population studied

in these volumes of research.   Those individuals involved with the supervision of such groups

are also among the population of participants in the research literature. The purpose of this study

was to compare the self perceived work ethic of career and technical students to that of

instructors to determine the level of work ethic behaviors that currently exists and to look for

differences in the self-reporting of those characteristics using the Employability Skills

Assessment (ESA). The relationship between the work ethic for students and instructors to the

demographic data collected which included age, gender, race, number of years of teaching,

number of semesters enrolled, marital status, program area veteran status, and GPA was also

studied. The study was intended to extend the research of work ethic for workers and supervisors

in the work place (Brauchle and Azam, 2004; Hatcher, 1995; Petty and Hill, 2005) to students

and instructors in career and technical schools.

Chapter Five was constructed to present the conclusions based on the results recorded in

Chapter Four, along with recommendations derived from those conclusions for future research

curriculum development and administration. This chapter was developed around three sections.

The first section provides a summary or overview of the study. In the second section the

hypotheses are examined restated and conclusions are reported corresponding to the results from

Chapter Four. These conclusions linked the findings to previous research. The final section was

designed to present the researcher's recommendations to stakeholders and for future research as well as to discuss limitations.

Summary, Conclusions and Recommendations

This comparative study quantitatively described and compared the self-reported work ethic of community college students and instructors. The study employed a research survey composed a twenty three item questionnaire administered to four sample groups: students and instructors from both Harrisburg Area Community College (HACC) and the Community College of Philadelphia (CCP).

The Employability Skills Assessment was administered to all four groups to determine to what extent students differ from their instructors in self-perceived work ethic. Demographic information was collected and analyzed in search of predictor variables within the student and instructor groups.

The student and instructor sample was very similar along the gender and race categories for percent of the total sample, and although other demographic differences did exist, their self-perceived work ethic was found to be the same. This study was supported by the literature in its findings for the research question one, where the work ethic was compared overall and found no difference between students and instructors. The review of research literature also supported, however, not completely, the findings where individual subscales were tested and those individual factor values although not statistically significant did show students reported higher scores for the subscales interpersonal and dependable while faculty reported higher scores for initiative which when viewed from the perspective of instructors as supervisors and student as subordinates was consistent with the literature. Although not statistically significant, data may

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indicate that instructors by nature of their position feel more empowered than students to initiate change. The slightly higher scores of students for being dependable may also be due to their position, the need to act as expected has a greater level of importance than it does among faculty who also because of the nature of their role feel less compelled to follow the rules. Higher scores reported for interpersonal skills may reflect a greater level of interaction among peers for students, more so than for instructors among their peers.

Significant differences reported in this study among instructors for the individual subscales based on gender were consistent with the literature (Hill, 1997) in that females reported higher scores for the overall ESA and for each subscale however dependability was not significantly higher. Significant differences among students were nonexistent; however, female students reported higher scores than their male counter parts for all three subscales.

A gap exists in the literature for some of the demographic information provided in this study therefore the significant differences in scores of married and single respondents as well as in those among program areas were not compared to the body of research reviewed.

Conclusions

The following conclusions were based upon data that were gathered from questionnaires containing the ESA to measure the construct of work ethic. The data analysis using MANOVA and univariate procedures were accompanied by descriptive statistics including mean values in order to determine the direction of any differences found.

Null Hypothesis One: There is no significant difference in the occupational work ethic of career and technical students and instructors in the community colleges of Pennsylvania.

Based on findings from the ESA responses, the researcher failed to reject the null hypothesis one. It was concluded that no significant difference exists between the self-perceived work ethic of community college students and instructors in Pennsylvania's community colleges. The researcher did however conclude that differences did exist in scores based on reported subscale responses. Descriptive statistics indicated students reported higher dependability and interpersonal skills scores based on the mean reported for each of the three subscales. Instructors however reported higher average scores for initiative based on the descriptive statistics.

> Null Hypothesis Two: there is no statistically significant relationship between the work ethic of community college students based on the demographic data collected; gender, age, race, GPA, veteran status, marital status, semesters enrolled.

The multiple regression performed rendered no significant differences among students based on their gender, age, race, GPA, program area, veteran status, marital status or semesters enrolled. The students' self-perceived work ethic within the subscales interpersonal skills, dependability and initiative was not significantly influenced by demographics. The researcher did note however, although scores were not significant gender was the most influential characteristic and the impact was greatest within the initiative factor.

> Null Hypothesis Three: there is no statistically significant relationship between the work ethic of community college instructors based on the demographic data collected; gender, age, race, veteran status, marital status, program area, and years teaching

The multiple regression performed rendered significant differences among instructors' work ethic based on dependability and initiative which were shown to have a significant relationship with the independent variables. Regression indicated the demographic items as

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significant predictors of being dependable and having initiative (see Table 12). The demographic characteristics gender, for interpersonal skills and initiative, and marital status for initiative and dependability are shown to be significant at $p < .05$. Female respondents reported significantly higher scores than their male counterparts and married instructors were also shown to report higher scores for initiative and being dependable than did single respondents. Dependability was also shown to be reported significantly higher among Hospitality and Health Science instructors than from instructors in other programs.

The overall model showed differences in interpersonal skills to be insignificant while differences in dependability and initiative were found to be significant. Therefore when using this model dependability and initiative are predictable among instructors.

Recommendations

The literature strongly argues that employees are fired or retrenched due to poor work attitudes, values and habits more often than for the lack of technical skills (Brauchle, & Azam, 2004). To the extent that the ESA is reliable and valid in its measure of work ethic characteristics of initiative dependability and interpersonal skills, continued assessment of the presence of such work attitudes and behaviors in the work force and in the pipeline (CTE) can create benchmarks to measure the strength of existing work ethic the environments that enhance them, and the extent to which they can be taught or enhanced. The importance of continued study of work ethic characteristics is essential since CTE remains the major source for developing workers for today, as well as for the future.

The following recommendations are based on the conclusions drawn from this study. Recommendations are included for educators, administrators and researchers.

Students have reported enjoying being around others therefore opportunities for cooperative learning should be considered valuable and educators should consider cooperative learning. Gender should also be considered as influential for student initiative. Therefore cooperative learning groups should include gender diversity. Data indicate students are dependable to follow directions and therefore specific instructions should be provided to individuals relative to roles within the group.

Students have reported having good manners, liking to be with others, working well with others, that others like them and they enjoy being with others, therefore educators should provide through curriculum learning environments designed to reinforce these characteristics. Good manners should be reinforced whenever possible in classroom settings. Instructors should design classroom activities that include using these attributes and develop rubrics which provide concrete feedback for improved work ethic behaviors.

Administrators should encourage gender diversity among faculty and consider the hiring and promotion of female Instructors. Since they have reported higher levels of initiative, and interpersonal skills should be assets for helping administrators manage change.

Researchers should consider the following;

Based on the results of this study and the personal experiences created by this study along with feedback from participants, the following recommendations are given:

The low level of cooperation from the participating institutions created difficulties for the researcher in collecting data. Future researchers seeking to work with similar populations and institutions should consider the following recommendations which are based on participant feedback and the researcher's personal experiences during the process.

The researcher should develop an online form to collect data and offer incentives for survey participation. Pilot test the institutions you plan to survey which will improve the researchers understanding of the level of cooperation to expect for the actual data collection.

Future research should include using the ESA and similar instruments however should not be limited to self-reported data. Future researchers should assess the extent to which a social desirability exists with the ESA and possibly progress from self-perception intended behavior to what actually is happening. Further research is warranted since the literature suggests converse outcomes when data is not self-reported.

Limitations

This study is limited by the inflation of the overall rate of error due to multiple testing of each factor and therefore should possibly seek significance at an alpha level less than .05 Therefore the areas of significance are actually showing marginal significance where *p* is slightly less than .05. Limitations also include a reduced sample size resulting from first having only two participating campus locations and second the poor level of cooperation from participating institutions at all levels; administrative, faculty and student. The sample in this study according to the American Association of Community Colleges was consistent with the population within the area of gender, with 62% of faculty participants being female as compared to the national average of 58% while female student participants reported at64% with the national average of 60% however characteristics such as veteran status were under represented.

REFERENCES

Al-Sharqawi, S.Y. & Sambrook, S. A. (2002). The development of a research
    instrument to compare working values across different cultures-based on
    Hoftede's VSM questionnaire. Doctoral research paper, University of Wales,
    Bangor. Retrieved from the World Wide Web January 12, 2007.

Azam, S. & Brauchle, P. E. (2004). A Study of Supervisor and Employee Perceptions of Work
Attitudes in Information Age Manufacturing Industries [Electronic Version]. *The Journal of
Vocational Education Research*, 28 (3)

Beder, S. (2000). *Selling the work ethic: From Puritan pulpit to corporate PR.*
    Australia: Scribe Publications.

Berry, R. L. & Glenn, R. E. (2004, March). The ABC's of a good work ethic.
    Teaching for Excellence, 23, 1—2, Spartanburg, SC.

Boatwright, J. R. & Slate, J. R. (2000). Work ethic measurement of vocational students
    in Georgia [Electronic Version]. *The Journal of Vocational Education Research,25* (4),
    532—574.

Bracey, G. W. (2007, January). A mismatched workforce?: Claims that U. S. workers
    are not skilled enough for jobs they need to fill are often more about perception than
    reality. *Principal Leadership, 7* (5), 58.

Brauchle, P. E. & Azam, M. S. (2004). Relationships between selected demographic
    variables and employee work ethics as perceived by supervisors [ElectronicVersion].
    Journal of Industrial Teacher Education, 41, (1).

Brauchle, P. E. & Azam, M. S. (2004b). Factorial invariance of the occupational work
    ethic inventory (OWEI). *Journal of Vocational Education Research, 29*, (2).

Cherrington, D. J. (1980). *The work ethic: Working values and values that work.* New
    York: AMACOM

Colson, C. & Eckerd, J. (1991). *Why America doesn't work?* London : World
    Publishing.

Farmer, B., Burrow, J.L., Farmer, E.I., & Burrow, J.R. (2008, February)
    Leading with character. Mason, Ohio : South-Western Educational Publishing.

Farmer, E. I. & Rowjewski, J. W. (2001). Eds. *Research pathways: writing professional
    papers, theses, and dissertations in workforce education.* New York University Press of
    America.

Furman, A., & Muhiudeen, C. (1984). The protestant work ethic in Britain and Malaysia. *Journal of Social Psychology, 57,* 1-9.

Gloeckner, G.W., Gliner, J.A., Tochterman, S. M., & Morgan, G. A. (2001). Assessing validity and reliability for data collection instruments. (pp. 223-245).

Gay, L. R. (1996). *Educational Research.* Englewood Cliffs, NJ: Prentice Hall.

Gray, K. & Herr, E. (1998). *Workforce education: The basics.* Needham Heights, MA: Allyn & Bacon.

Hatcher, T. (1995). From apprentice to instructor: Work ethic in apprenticeship training. *Journal of Industrial Teacher Education, 33* (1).

Hill R. B. (1992—1999). Historical context of the work ethic. Retrieved from the World Wide Web at http://www.coe.uga.edu/workethic/.

Hill, R. B. & Petty, G. C. (1995). A new look at selected employability skills: A factor analysis of the occupational work ethic. *Journal of Vocational Education Research, 20* (4), 59—73.

Hill, R. B. (1996). Work ethic differences in vocational students and full-time employed workers. *Journal of Vocational Education Research*, 21(3), 13-29.

Hill, R. B. (1997). Demographic differences in selected work ethic attributes. *Journal of Career Development*, 24(1), 3-23.

Hill, R. B., & Rojewski, J. W. (1999). Double jeopardy: Work ethic differences in youth at risk of school failure. *Career Development Quarterly*, 47(3), 267-279

Hill, R. B. & Wicklein, R. C. (2000). Great expectations: Preparing technology education teachers for new roles and responsibilities. *Journal of Industrial Teacher Education, 37* (3).

Hill, R.B. (2001). Survey Research. pp 201-222. In Farmer, E. I. & Rojewski, J. W. Eds. *Research Pathways: Writing professional papers theses and dissertations in workforce education.* New York: University Press of America.

Hill, R. (2003, August). Key attributes of Georgia technical college work ethic instruction. Occupational Research Group Report, College of Education, University of Georgia, Athens, GA 30602.

Hitt, W. D. (1990). *Ethics and leadership: putting the theory into practice.* Columbus; Battelle Press. 59- 67.

Krueger, P. E. (2001). Determining appropriate sample size. Pp247-257 In Farmer, E.I.
    & Rojewski, J. W. Eds. *Research Pathways: Writing professional papers theses and*
    dissertations in workforce education. New York: University Press of America.

Lewis, A. C. (2006). Necessary basic skills. *Tech Directions, 66* (4), 6—7.

Lewis, T. (2001). Designing quantitative research. Pp175-199. In Farmer, E. I. &
    Rojewski, J. W. Eds. *Research Pathways: Writing professional papers theses and*
    dissertations in workforce education. New York: University Press of America.

Lipset, S. M. (1990). 'Work ethic, then and now'. *The Public Interest.* 98 Winter, 61-70.

McCortney, A. L. & Engels, D. W. (2003, December). Revisiting the work ethic in
    America. *The Career Development Quarterly, 52* (2), 132—140.

Miller, P. & Coady, W. (1986). Vocational ethics: Toward the development of an
    enabling work ethic. (Report No. CE 048 966) Illinois State Board of Education,
    Springfield Department of Adult, Vocational and Technical Education. (ERIC Document
    Reproduction Service No. ED 288 062)

Miller, M. J., Woehr, D.J. & Hudspeth, N. (2002). The meaning and measurement of
    work ethic: Construction and validation of a multidimensional inventory. *Journal of*
    Vocational Behavioral. 60, 451-489.

Naylor, M. (1988). Vocational education and the work ethic in a changing workplace.
    ERIC Digest No. 78. Retrieved from the World Wide Web June 12, 2007 at
    www.ericdigest .org/pre-929/ethic.htm.

New American Bible: St. Joseph's Edition (NAB), (1987). Wichita, KS: Devore & Sons.

Osgood, H. L. (1904). *The American Colonies in the Seventeenth Century*. New York:
    Columbia University Press.

Petty, G. C. (1995). Vocational—technical education and the occupational work ethic.
    Journal of Vocational Education Research, 19 (1), 71—89.

Petty, G. C. & Hill, R. B. (1994). Are women and men different? A study of the occupational
work ethic. *Journal of Vocational Education Research*, 19(1), 71-89.

Petty, G. C. & Hill, R. B. (1996). Essentials elements of work: A factor analysis of the
    occupational work ethic.

Petty, G. C. & Hill, R. B. (2005). Work ethic characteristics: Perceived work ethics of supervisors and workers. *Journal of Industrial Teacher Education*, *42* (2).

Pierson, P. N. & Holmes, G. H. (2000). Perceptions of Work Ethic Among College Seniors: A Comparative Study [Electronic Version]. *Journal of College and Character*.

Predmore, S. R. (2005, March). Another positive for career and technical education: A good work ethic. *Techniques*, 52—55.

Stone, J. R. III & Josiam, B. (2000). The impact of school supervision of work and job quality on adolescent work attitudes and job behaviors. *Journal of Vocational Education Research*, *25* (4) 532-574.

Wallis, T. J. (2001). Skills every employer wants. *Career World*. (3), 15.

Wells, J. L. (1998). Teaching vocational work ethics using direct, indirect and self-evaluative methods. *Journal of Vocational and Technical Education*, *14* (2). Retrieved January 26, 2007 from Digital Library & Archives Ejournals.

Wollack, S., Goodale, J. G., Witjing, J. P., & Smith, P. C. (1971). Development of the survey of work ethic values. *Journal of Applied Psychology,* 55, 133-338.

Yankelovich, D. & Immerwahr, J. (1984). Putting the work ethic to work. *Society*, *21* (2), 58—76.

APPENDIX A

Hello!

My name is Michael Dincher. In cooperation with the Penn State College of Education, Department of Workforce Education, I am conducting a survey on work ethic in students and instructors in community colleges in Pennsylvania under my advisor, Dr. Edgar Farmer. Your participation in this survey of Pennsylvania community college students would be greatly appreciated.

The purpose of my research is to fill the gap that exists in the research on perceived work ethic of students compared to that of their instructors. The benefits of participation include improving the self-awareness of participants. The project title is Teacher and Student Perceptions of Work Ethic: A Look at Pennsylvania Community Colleges.

The survey will take about 15 minutes to finish. The survey asks questions related to work. The survey assumes your school/course work (assignments, homework, projects, lab activities etc.) is your work. Please answer the questions with this in mind. Your answers will be completely confidential.

Please try to complete the survey in its entirety; however your decision to complete the survey is voluntary. You can stop at any time and do not have to answer any questions you prefer not to answer.

You must be at least 18 years old to participate in this research study. Consent forms will be provided at the time the questionnaire is delivered.

Sincerely,

Michael A. Dincher
Graduate Student PSU
mad301@psu.edu
(570) 745-7641
163 Cross Mountain Lane
South Williamsport, PA 17702

Dr. Edgar Farmer (advisor)
eif1@psu.edu
(814) 863-3858
304 Keller Building
University Park, PA 16802

February 9, 2009

Dr. Judith Gay
Vice President for
Academic Affairs
Community College of Philadelphia
1700 Spring Garden Street
Philadelphia, PA 19130-3991

Dear Dr. Gay:

The purpose of this letter is to request your endorsement and assistance in a major research project regarding a survey of Career and Technical Education (CTE) instructors in Pennsylvania Community Colleges and other postsecondary institutions. This particular project is being conducted by one of my doctoral students, Michael Dincher, an emerging leader, practitioner, and advocate for postsecondary technical instructors. The results of Mr. Dincher's research may be of interest to your faculty and students.

The primary purpose of his research initiative is to acquire a better understanding of the work ethic of CTE students and instructors in community colleges in Pennsylvania. I wholeheartedly support Mr. Dincher's research initiative and trust that we can count on your support as well.

Please be assured that information by the participants will be held in the strictest of confidence. All data will be analyzed and reported as group data only, and in accordance with Penn State University policy for research initiatives.

Soon you will receive more information regarding Mr. Dincher's informative and timely study. However, if you have any questions or need additional information about this study, you may contact me at (814) 863-3858.

I really appreciate your assistance and look forward to enhancing the relationship between your institution and Penn State University. Thank you very much.

Sincerely,

Edgar I. Farmer, Ed.D.
Professor and Department Head

APPENDIX C

Community College *of* Philadelphia

Office of Academic Affairs, M2-34
1700 Spring Garden Street
Philadelphia, PA 19130-3991
215-751-8351 · www.ccp.edu

January 16, 2009

Michael Dincher
Penn State University Graduate Student

Dear Mr. Dincher:

The following information is required of persons requesting to do research at Community College of Philadelphia:

1. Signed approval of the project from an Institutional Research Board or similar group or person responsible for project oversight, including contact information
2. One to two page description of the research project, including basic information on subjects, method, project supervisor, researchers, etc.
3. Copy of informed consent form
4. Copy of any survey, questionnaire or test that will be used
5. Department Head or Supervisor approval (for internal CCP project only)
6. Details of any assistance requested from the College (e.g., use of a room, distribution or copying of materials, posting signs, etc.)
7. Information about how the results will be used
8. Information about feedback (debriefing) for participants
9. Contact information for the person conducting the research project
10. Resume/Curriculum Vitae
11. Clear notice to participants that the project is not a Community College of Philadelphia sponsored project.
12. Acknowledgement that you have read and agree to abide by College policies.

Sincerely,

Judith Gay
Vice President for
Academic Affairs

Office of Academic Affairs
1700 Spring Garden Street
Philadelphia, PA 19130

Judith Gay
Vice President for
Academic Affairs

Dear Dr. Gay:

The following information was requested by your office in order for me to conduct research at Community College of Philadelphia:

1. This documentation is in process
2. The research project description you requested is attached
3. The research consent form is attached
4. The questionnaire is attached
5. N/A
6. I would like to request the use of your facility (classroom or other) and the cooperation of the Health Sciences and Hospitality personnel at Community College of Philadelphia. The details of material distribution and posting will be handled in the manner you prescribe your participation is appreciated any additional support you can supply will also be appreciated but unnecessary.
7. The results are to be used primarily for the completion of my dissertation however a request to use the raw data was made by Drs. Petty and Hill as described in section 2. This request would be appreciated but is not necessary.
8. Feedback will be provided through the dissertation available through PSU.
9. Contact information for me; e-mail mad301@psu.edu or phone 570-745-7641
10. The resume is attached
11. The letter for recruitment explains the affiliation with PSU however if you require a specific manner of communicating the lack of sponsorship by Community College of Philadelphia I will certainly attempt to accommodate such requests.
12. I agree to abide by the policies presented by Community College of Philadelphia IRB and will if required sign the appropriate form(s).

APPENDIX E

February 9, 2009

Dr. Ron Young, Provost and
Vice President for Academic Affairs
Harrisburg Area Community College
One HACC Drive
Harrisburg, PA 17110

Dear Dr. Young:

The purpose of this letter is to request your endorsement and assistance in a major research project regarding a survey of Career and Technical Education (CTE) instructors in Pennsylvania Community Colleges and other postsecondary institutions. This particular project is being conducted by one of my doctoral students, Michael Dincher, an emerging leader, practitioner, and advocate for postsecondary technical instructors. The results of Mr. Dincher's research may be of interest to your faculty and students.

The primary purpose of his research initiative is to acquire a better understanding of the work ethic of CTE students and instructors in community colleges in Pennsylvania. I wholeheartedly support Mr. Dincher's research initiative and trust that we can count on your support as well.

Please be assured that information by the participants will be held in the strictest of confidence. All data will be analyzed and reported as group data only, and in accordance with Penn State University policy for research initiatives.

Soon you will receive more information regarding Mr. Dincher's informative and timely study. However, if you have any questions or need additional information about this study, you may contact me at (814) 863-3858.

I really appreciate your assistance and look forward to enhancing the relationship between your institution and Penn State University. Thank you very much.

Sincerely,

Edgar I. Farmer, Ed.D.
Professor and Department Head

Mr. Dincher,

The PR office forwarded a note from you regarding a request to perform research using HACC students. I don't have a standard form for this process, but you need to provide the following information to enable me to make a decision on your request.

- an overview of the research project
- exactly what is needed from HACC
- who will be involved/contacted as part of the data collection process
- how will contact be made with our students/staff
- how will the research data be used and disseminated
- what benefit will there be to HACC by participating in the research.

Normally, if these items are addressed, we can move forward. Based on your reply, I may have additional questions.

Ron Young, Provost and VP Academic Affairs

APPENDIX G

Harrisburg Area Community College
Provost and VP Academic Affairs
Ronald Young

Dear Ron Young,

The following is a response to your request for information about my research as a precursor to obtaining permission to gather data from your institution. I have numbered your bulleted items in the order received and have attempted to provide the information requested in that order.

1. Overview of the research project

The Problem
        Through personal communication with the business community and technical institute administrators, Boatwright and Slate (2000) have come to suggest a common perception – 'employees lack a suitable work ethic.' Similar perceptions are reiterated in focus group discussions leading to an increased level of concern by the business community and technical institutes who point to the "incongruity between adequate skill levels and appropriate work ethic" leading to unemployable applicants (Boatwright & Slate, 2000).
        According to Petty & Hill, (2005) 'A better understanding of the occupational work ethic and differences between workers and supervisors in their work ethic perceptions could have implications for improving career and technical education and training with the knowledge of these differences guiding career and technical educators in their development of instructional content designed to prepare people for work' (p. 17). Petty & Hill, (2005) also suggests that ordinal data of work ethic characteristics for workers and supervisors provides information that is valuable in creating curriculum that prepares students/trainees for work.
         Despite the desire of employers to cultivate positive work ethic behavior, few studies on work ethic behavior have investigated the interaction between the work ethics of workers and their supervisors (McCortney & Engels, 2003). Petty and Hill, (2005) compares the work ethic of supervisors and workers in order to gain insight and a better understanding of attitudes in the work place, implying that these insights supply career and technical educators and human resource professionals helpful information to meet their goals through a better understanding of attitudes in the work environment (Petty & Hill, 2005).
        The purpose of this study is to carry over the Petty & Hill (2005) study into the realm of education by comparing the work ethic of 2-year post-secondary career and technical students to that of their instructors in Pennsylvania Community Colleges in order to determine the level of work ethic behaviors that currently exist and to look for similarities in the self-reporting of characteristics in the ESA. This study will provide information for students preparing for work and the instructors preparing them, allowing for a proactive approach to improving the work ethic behavior of workers before they get on the job.
        According to Gray & Herr (1998) the goals of career and technical educators are preparing a 'World Class' Workforce, preventing labor shortages, and making firms competitive. In Gray & Herr (1998) a survey of 2500 firms with 100 or more employees by the National

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Association of Manufacturers demonstrated the rejection of five out of six job seekers is due to the lack of basic skills, occupational skills or a work ethic. A need exists to carry over the research of Petty & Hill (2005) from industry into education. This can be accomplished by studying the compatibility of beliefs about and the interaction between the work ethic of students and their instructors.

This study specifically targets Community Colleges because they provide a significant number of skilled employees to the workforce. Pennsylvania provides a geographic layout that will allow for the data to be collected in urban and rural locations.

Research Question

This study attempts to answer the following question:

4. Is there a significant difference in the Employability Skills of career and technical students enrolled in two year programs in the Community Colleges of Pennsylvania and their instructors?

Scope

The population of this study is approximately 127,000 based on data from the PA Higher and Adult Education Statistics Publication College and Universities Digest 2004-2005. A random sample will be taken from both two-year postsecondary career and technical education students currently enrolled in Community Colleges of Pennsylvania and their instructors. Students and instructors from Harrisburg Area, Montgomery County, Allegheny, and Luzerne County Community Colleges will be surveyed.

The OWEI consists of fifty work ethic descriptors based on a seven point Likert scale for self-reporting (Petty & Hill, 2005). The OWEI's "factors are replicable in different populations and evidence exists for construct validity of this instrument," therefore "others can use these factors with confidence and without fear of population bias in their research" (Brauchle & Azam, 2004). This study will employ the Employability Skills Assessment (ESA), which contains twenty-three descriptors measuring the same constructs as the OWEI, and is not intended to compare demographic variables outside the nominal variables of student and instructor. The effect of gender, age, and other similar variability is not analyzed in this study although will be collected and made available to George Petty and Roger Hill as per their request.

Method for data collection

A letter of recruitment will be sent to the appropriate administrative office. The principal investigator (I) will follow instructions on how and when to proceed. I intend to administer the survey face to face in the form of a printed questionnaire containing 23 Likert type questions and 3 to 5 short answer questions. My project supervisor is Dr. Edgar I. Farmer Department Head for Workforce Education and Development at the Pennsylvania State University.

5. If you decide to allow the process to proceed I will attempt to make this a pleasant and beneficial experience for both parties. A suitable location will be needed for administering the survey. Depending on the exact manner of administering the questionnaire which may be; all at once or by individual classes depending on the availability of your faculty and students.

6. Contact will be done through the appropriate department at your institution and be delivered from PSU by my advisor Dr. Edgar I. Farmer Department Head Work force Education and Development and/or the principal investigator (me). If it is possible at that point details can be worked out by both parties to allow for the best possible scenario.
7. Once the appropriate people are identified through the communication described above details can once again be determined to create the optimum situation for all parties.
8. The research data will be used in house at PSU for the purpose of completing a dissertation. The process will guarantee confidentiality to participants. The raw data has been requested by 2 of the country's foremost experts in the subject matter as explained in #1; however this is not necessarily a requirement but will benefit our field.
9. The benefits of participation would be to the individuals participating by providing self awareness in the area of work ethic. The literature shows that soft skills including work ethic are highly sought after by potential employers. The awareness will benefit individual students and their instructors. The students may gain increased labor market advantage through their improved awareness of what is work ethic characteristics are desired. Faculty may improve their ability to define work ethic descriptors currently used to describe the construct.

I hope this information will allow us to proceed however if you need to contact me for further information I can be reached via e-mail at mad301@psu.edu or by telephone at 570-745-7641

<div align="right">

Sincerely,
Michael Dincher

</div>

Michael,
Thanks for the follow-up information. Below is the contact information for your use in proceeding with the survey portion of your research project. Good luck.

Ron Young, Provost

Allied Health & Human Services Chair: Brad Leidich, 780-2315, baleidic@hacc.edu

Hospitality & Toruism Chair: Getachew Kassahun, 780-2495, gwkassah@hacc.edu

>>> Michael Dincher <mdincher@pct.edu> 2/6/2009 10:58 AM >>>
Hello Ronald, sorry for any ambiguity in the research description. I have attached the questionnaire.
This survey is called the Employability Skills Assessment (ESA) and was developed by Dr. Roger Hill at the University of Georgia. There has been extensive work done using the ESA and he has given me permission to use the instrument in my research. It has been tested for validity and reliability and has been found acceptable.   The research from my end is simply to compare the self reported responses of instructors and students provided through the work ethic indicators from the questionnaire. The data will be used and reported statistically within the dissertation document and be available through the college of Education at PSU in a manner consistent with university policy. The IRB letter I forwarded may address this further.   The benefit to HACC will probably be limited to those directly involved in the survey; however the instructors' participation may spill over into classroom delivery if the self awareness element is viewed as valuable by your faculty. The students involved will most likely improve their own self awareness as well as be informed on the current work ethic attributes seen as valuable by contemporary employers.

PENNSTATE
1855

Informed Consent Form for Social Science Research

The Pennsylvania State University

Title of Project: Teacher and Student Perceptions of Work Ethic: A Look at Pennsylvania
Community Colleges
Principal Investigator: Michael Dincher, Graduate Student
163 Cross Mountain Lane
South Williamsport PA 17702
(570) 745-7641; mad301@psu.edu

Advisor: Dr. Edgar Farmer
304 Keller Building
University Park, PA 16802
(814) 863-3858; eif1@psu.edu

1. **Purpose of the Study:** The purpose of this research study is to explore how both students and
   instructors in Pennsylvania community colleges perceive work ethic.

2. **Procedures to be followed:** You will be asked to answer 23 Likert –type and 5 short answer
   questions about your perceptions of work ethic.

3. **Duration:** It will take about 15 minutes to complete the survey.

4. **Statement of Confidentiality:** Your participation in this research is confidential. In the event of
   a publication or presentation resulting from the research, no personally identifiable information
   will be shared.

5. **Right to Ask Questions:** Please contact Michael Dincher at (570) 745-7641 with questions or
   concerns about this study.

6. **Voluntary Participation:** Your decision to be in this research is voluntary. You can stop at any
   time. You do not have to answer any questions you do not want to answer.

You must be 18 years of age or older to take part in this research study. If you agree to take part in
this research study and the information outlined above, please sign your name and indicate the date
below.

You will be given a copy of this form for your records.

_____   _____
Participant Signature   Date

_____   _____
Person Obtaining Consent   Date

Introduction Information

**Pennsylvania Postsecondary –
Career & Technical
Student/Faculty Survey**

Rationale. You have been selected to participate in a survey of Pennsylvania students and faculty in postsecondary technical programs in community colleges. This survey will provide important information about student and faculty perceptions of work ethic. *This survey is voluntary and your participation will be kept confidential. Individuals will not be identified, and only group data will be reported.*

Directions. Please read and answer each question carefully. For each answer mark the appropriate response.

Questions concerning this project should be directed to:
Mr. Michael A. Dincher
Graduate student
Workforce Education & Development
The Pennsylvania State University
163 Cross Mountain Lane
Williamsport, PA 17702
(570) 745 – 7641
Email: mad301@psu.edu

Demographic Information

1. **(For Students Only)** please write the number of semesters enrolled in your current program. _____

2. **(For Faculty Only)** please write in the number of years teaching experience._____

3. Indicate the Program in which you are enrolled/teaching

   Hospitality/Culinary Arts

   Health Sciences

   Other_____

4. Circle the appropriate Gender

   Female   Male

5. Circle the appropriate Race/Ethnic Background (Mark only one.)
   American Indian/Alaskan Native
   Asian/Pacific American
   African/Black American
   Latino/Hispanic American
   White American
   Foreign (Non-Immigrants)

6. Age (write your age _____)

7. Marital Status
   Single
   Married
8. Are you a military veteran
   Yes
   No
9. Circle your approximate grade point average (GPA) in high school?
   A   B   C
   below C
   Completed GED
   Do not know
10. Circle your approximate grade point average (GPA) currently?
   A   B   C
   Below C
   Do not know

APPENDIX L

Employability Skills Assessment
© 1995 by R. B. Hill

Directions:

For each item listed below, CIRCLE THE NUMBER that most accurately describes your actions and attitudes for that question. There are seven possible choices for each item:

Never	Almost Never	Seldom	Sometimes	Usually	Almost Always	Always
1	2	3	4	5	6	7

THERE ARE NO RIGHT OR WRONG ANSWERS. There also is no time limit, but you should work as rapidly as possible. Please respond to every item on the list.

Items:

Never   Always

1. Are you a happy person?...1 2 3 4 5 6 7

2. Are you eager to be successful?..1 2 3 4 5 6 7

3. Do you waste time?..1 2 3 4 5 6 7

4. When you say you will do something, do you do it?.........................1 2 3 4 5 6 7

5. Are you thoughtful of others?...1 2 3 4 5 6 7

6. Are you aware of what is going on around you? 1 2 3 4 5 6 7

7. Do you like to be with other people?...1 2 3 4 5 6 7

8. Are you committed to doing good work?.......................................1 2 3 4 5 6 7

9. Do you work well with others? 1 2 3 4 5 6 7

10. Do you take your time and avoid making careless mistakes? 1 2 3 4 5 6 7

11. Do you have good manners?..1 2 3 4 5 6 7

12. Do you do things right the first time? 1 2 3 4 5 6 7

13. Are you good at following instructions?..1 2 3 4 5 6 7

14. Do people like you?..1 2 3 4 5 6 7

15. Do you look for ways to help other people? 1 2 3 4 5 6 7

16. Is it difficult for you to find solutions to problems on your own?......1 2 3 4 5 6 7

17. Do you tell the truth? 1 2 3 4 5 6 7

18. Are you eager to complete the work that you have to do? 1 2 3 4 5 6 7

19. Do you ever disappoint people? 1 2 3 4 5 6 7

20. Do you follow the rules even if you disagree with them?................1 2 3 4 5 6 7

21. Do you accomplish your goals? 1 2 3 4 5 6 7

22. Do you do more than is required or expected of you?....................1 2 3 4 5 6 7

23. Do other people enjoy being with you? 1 2 3 4 5 6 7

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PHONE 570-745-7641 • E-MAIL MDINCHER@PCT.EDU

MICHAEL A. DINCHER

OBJECTIVE

To serve as a vita for doctoral candidates in the Workforce Education and Development Program at the Pennsylvania State University

QUALIFICATIONS

Employed in a vast array of positions throughout the workforce. Teaching students preparing to go into the workforce. Preparing students to enter the workforce as a student advisor

EDUCATION

1996-2000   Bloomsburg University   Bloomsburg, PA
M.S./Biology

1986-1989   Lock Haven University   Lock Haven, PA
B.S./Education

1985-1986   WACC   Williamsport, PA
A.A.A./General Studies

1983-1985   WACC   Williamsport, PA
A.A.S./Forest Technology

PROFESSIONAL EXPERIENCE

1992-Present   Pennsylvania College of Technology   Williamsport, PA
Assistant Professor Horticulture

- Instruct students in the areas of Urban Forestry, Landscape Nurseries Technology, Floral Design/Interiorscape, and Forest Technology
- Advise students in employment opportunities and scheduling of curriculum

PROFESSIONAL MEMBERSHIPS AND CERTIFICATIONS

- International Society of Arboriculture/ISA Certified Arborist
- Pennsylvania Dept. of Agriculture/Certified Applicator
- American Society of Consulting Arborists/Academy Graduate
- International Concrete Paving Institute National Concrete
- Masonry Association/Certified Paver/SRW Installer