Students’ Grade Expectations and Work Ethic In College: Evidence Of The Entitlement Generation

Alexandra C. Landry
A Large International Accounting Firm

Richard A. Bernardi
Roger Williams University

Abstract
This research has two parts; in the first study, we compared the responses of 235 male-and-female, sophomore, business students enrolled in the first introductory-level accounting course at a university in the Northeastern region of the United States. While a 25-year old study found that female students responses to all five statements dealing with attitudes work were significantly higher than those of male students, our data indicate that only one difference was significant. We also had significant findings with respect to responding in a socially desirable manner. In the second study, we added the responses of 26 junior business majors and 22 sophomore-and-junior nonbusiness majors who also took the introductory accounting class to our sample (i.e., an increase of 17 percent). We compared the responses of our 283 students to the responses of 200 students from a 25-year old study. These comparisons suggest that today’s students expect higher grades and were less satisfied by hard work than students were 25 years ago. Finally, the methodology used in the second study suggest a way of comparing data in replication studies when the prior research does not provide complete data for their sample.

Introduction
Individuals have different values and preferences that can differ by gender and can be influenced by society (Clark, 2003; Eccles, 1999; Gneezy et al., 2003; Klein & Hodges, 2001; Polk-Lepson, 2013; Tyson, 1989). For example, Hofstede (1991, p. 112) maintains that a society has a “set of likely reactions of citizens with a common mental programming” and that “reactions need not be found within the same persons, but only statistically more often” within this group. The current study defines society in terms of generations; as a society develops, the characteristics of each generation change (Tapscott, 1999). The literature is full of differences between Generation X and Generation Y (e.g., Alsop, 2008; Blake, 2014; Ellin, 2014; Polk-Lepson, 2013; Safer, 2008).

Polk-Lepson (2013) notes that, compared to prior generations, recent college graduates entering the workforce are seen to be entitled, lack a strong work ethic, abuse information technology, and overall are less professional in the work place. However, Helmreich and Spence (1978) and Tyson (1989) found significant gender differences in attitudes concerning work and competition. Taken together, these findings suggest attitude differences between what professors’ attitudes towards what constitutes an appropriate level of effort and the associated recognition (i.e., course grades) and the beliefs of their students about this association.

1 The Polk-Lepson Research Group at the Center for Professional Excellence at York College of Pennsylvania conducted the research; we use Polk-Lepson (2013) as our reference for this research.
The current research is a continuation and replication of Tyson (1989). Replication studies are important as they provide “the crucial test of the reliability and validity . . . [that] leads, when successful, to generalizable” results (Lindsay, 1995, p. 35) and because “the replicating author shows the original article’s findings are robust to substantial extensions over time” (Burman et al., 2010, p. 789). Consequently, the purpose of this study is to examine the attitudes of the current generation of introductory-accounting students as they relate to achievement, work and competition. The study also compares these attitudes to those of the prior generation of introductory-accounting students (Tyson), which should be a valuable addition to this stream of research. Finally, this study controls for social desirability response bias (Paulhus, 1991) to the survey questions, which was not considered by Tyson. Our data indicate significant gender differences for the current sample as well as generational differences when compared to Tyson’s results. We also had significant findings with respect to responding in a socially desirable manner. Additionally, the generational findings are very similar to those found by Polk-Lepson (2013).

**Literature Review**

**Tyson’s (1989) Findings**

Table 1 provides the 14 questions in Helmreich and Spence’s (1978) “Work and Family Questionnaire” (WOFO) that pertain to Tyson’s (1989) and this research. Tyson found that there were no significant differences between male-and-female students for the questions associated with extrinsic achievement motivation (Panel A). However, there were significant gender differences in the questions associated with intrinsic achievement statements about work (Panel B) and competitiveness (Panel C). While female students’ responses were significantly higher for all five work-oriented statements (Panel B: at the .01 [.05] level for questions 6 and 7 [8 to 10]), male students’ responses were significantly higher for all four competition-oriented statements (Panel C: at the .01 [.05] level for questions 11 and 12 [13 and 14]). This led Tyson (p. 159) to note that female students may tend to have higher course grades “presumably because of they have significantly higher work needs.”

**Achievement expectation**

Adams et al., (1985) and Spence and Helmreich (1983) identified different motivational factors behind individuals’ work ethic that included achievement, which they found was the most prominent driving factor; however; men dominated their sample. Elliott and Harackiewicz (1994) noted that low-achievement individuals were oriented towards mastering goals; whereas, high-achievement individuals set performance goals. Marriott and Marriott (2003) found an association between students’ attitudes towards accounting and their perceptions before and after their lower-level courses in college.

**Motivation**

Motivation can be personal or influenced by outside forces such as speeches, family, friends, or major events (Eccles, 1999). Motivation is task specific (de Brabander & Martens, 2014) as well as being individually specific (Clark, 2003). Individuals use different motivational tools to inspire themselves and others to perform various tasks (Clark); for instance, music is often used by people as they workout, while pay raises are often used in the workplace.

Helmreich and Spence (1978) developed the Work Orientation and Family Orientation (WOFO) questionnaire to analyze both intrinsic and extrinsic motivation achievement methods. Helmreich and Spence defined intrinsic motivational factors as those that come from tasks that are personally enjoyable with no extrinsic gains; whereas, extrinsic motivations come from public acknowledgement and tangible rewards. Elliott and Harackiewicz (1994) note that goals are a way of measuring success; goals are part of intrinsic motivation as they make people feel competent. Using the WOFO, Tyson (1989) found that, while female students were more responsive to questions pertaining to hard-work and self-satisfaction, male students were more responsive to questions pertaining to competition (Gneezy et al., 2003). Gill (1986) also used the WOFO and found that both men and women have

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2 Bracketed data added to the original words cited from the authors.

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similar competitiveness in sports; however, their goal orientations and perceived outcomes are significantly different.

Work Ethic
A contemporary definition of work ethic is “an ethical principle that places greatest value on hard work and diligence” (American Heritage, 2013). Similarly, the American dream holds that the harder a person works, the further they will advance in life and in society (Hochschild, 1996). Tjosvold et al. (2008) suggest that individuals who have positive attitudes and are motivated produce better products and have better outcomes. The more cooperative and optimistic a person is directly associates with their success in both the workplace and life (Boehm & Lyubomirsky, 2009).

A meta-analytic review of the literature (Steel, 2007) revealed a similarity between procrastination and motivation. Steel found that task characteristics, individual differences, outcomes, and demographics affect procrastination. Steel also suggests that procrastination appears to be growing and that procrastination can slow a person’s success. For example, in an academic setting, students often delay working on their schoolwork such as problem sets, practice tests, online quizzes and papers (Cherry, 2014) that could affect their grades.

Consequently, one would anticipate that students who do not procrastinate (Steel) and have a strong work ethic (American Heritage) would report higher beliefs on the WOFO’s questions pertaining to hard-work and self-satisfaction (Spence & Helmreich). Accounting research demonstrates this point with respect to homework; for example, Fogarty and Goldwater (2010) found that female students were more likely to do homework and utilize practice tools (i.e., less likely to procrastinate). Students’ performance in an introductory financial accounting course was found to be associated with the level of student effort in the course (Hill et al., 1996; Eskew and Faley, 1988). Bernardi and Bean (1999, 2002) found a strong association between students’ effort, which they defined as on-time homework, and his/her performance in both intermediate accounting courses. Bernardi and Bean (1999, p. 150) found that effort accounted for approximately 50 percent of the variation explained by the models for test scores in Intermediate Accounting I and was a significantly associated with test scores in Intermediate Accounting II (Bernardi & Bean, 2002). Finally, the probability of an individual passing a section of the CPA examination increases with the level of the student’s preparation (Leathers et al., 1984).

Gender
Men and women also differ in what motivates them (Gneezy et al., 2003; Klein & Hodges, 2001) and are inspired by different factors (Spence & Helmreich, 1983; Tyson, 1989; Adams et al., 1985). Arthur and Everaert (2012) suggest that female students outperform male students due to female students’ higher tendencies for quantitative courses and intrinsic motivations. Tyson found that overall female students received higher grades in courses that included introductory accounting, which corresponded to their higher work needs. This result is similar to Arthur and Everaert’s finding that female students outperform male students on both constructed-response and multiple-choice types of accounting questions. While Fogarty and Goldwater found that female students’ propensity to try harder outside the classroom (i.e., put more effort into homework) resulted in female students having slightly higher grades in an entry-level accounting course, Bernardi and Bean (1999, 2002) found similar associations for both intermediate accounting courses.

Gill (1986) found similar results to Tyson using the WOFO model when she analyzed gender competitiveness in sports. Gill reported that men and women participating in sports scored differently in competitiveness. Gill concludes that male students are more propelled to win-loss outcomes; whereas, women are more interested in their personal goals and standards. Consequently, while both genders work towards success, each may be oriented by

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3 As our study is a replication of Tyson (1989), we focus on gender and generational differences for the remainder of the literature review.
different outcomes or goals. The exploratory results in Tyson lead to our first set of hypotheses (all hypotheses stated in their alternate form):

\[ \text{H1a: Female students will report higher attitudes towards work than male students.} \]
\[ \text{H1b: Male students will report higher attitudes concerning competitiveness than female students.} \]

**Generational Differences**

Tolbiz (2008, p. 1) defines generation as “an identifiable group that shares birth years, age, location, and significant life events.” CRMTrends (2014) defines the last three generations as the Baby-Boomer generation (those born between 1946 and 1964), Generation X (those born between 1965 and 1980) and Millennials/Generation Y (those born between 1981 and 2001). The Millennial/Generation Y has also referred to as the ‘Generation Me’ and the ‘Entitlement Generation’ (Twenge, 2006). Generation Y was also nicknamed the ‘Trophy Generation’ because they received trophies for just participating/showing up and not for excelling (Alsop, 2008). The Entitlement Generation is defined as “the group born between 1979 and 1994 who believe they are owed certain rights and benefits without further justification” (Dictionary.com, 2014).

In the literature, the term ‘entitlement’ has had a growing role; for example, searching the terms ‘self-reliance’ and ‘entitlement’ using Google ngram (2014) resulted in the data in Figure 1. While we do not provide the data between 1800 and 1940 in Figure 1, the terms were used at approximately the same rate as in 1940. However, this similarity ended in about 1945 with the use of ‘entitlement’ growing at an ever increasing rate; this rate substantially increased in 1969 even though the usage of ‘self-reliance’ remained at the same historic level. Ekins (2014) found that “65% of Americans say Millennials are ‘entitled,’ 58% of Millennials agree.”

Blake (2014) notes that 57 percent of Americans believed trophies should be awarded for winning - not for just playing. While this finding was true for older participants, those in the 18-to-24 (i.e., those born between 1990 and 1996) year group disagreed; the belief that trophies should be given for just participation decreases as age increases and is significant as shown in Panels A and B of Exhibit 1. The author suggests that this group be referred to as the ‘Participation-Trophy Generation.’

A potential consequence of receiving trophies for just for just participating/showing up (Alsop, 2008) is that, when students are not allowed to fail in early life, they may become so demoralized by a failure in later life that “they’d rather cheat that risk failing again” (Merryman, 2013). Because of the competition for grades in college, students may see cheating as one way of leveling the playing field (McCabe et al., 2001). Klein et al. (2007) found that, across all professional schools, cheaters typically had lower GPAs and were younger.

In a national survey, Polk-Lepson (2013) examined recent college graduates’ professionalism as they entered the workplace and traced their attitudes and practices in the workplace. Polk-Lepson’s data indicated that new hires: feel more entitled to jobs; have decreased professionalism; abuse information technology; are less focused; and, have a lower work ethic. Major differences noted by Polk-Lepson (p. 13) are that the younger generation:

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4 Consequently, we are comparing Tyson’s ‘Baby Boomers-Generation X’ students (i.e., sophomores and juniors in 1987 would have been born in 1968 and 1969) with our sophomores and juniors belonging to ‘Participation-Trophy Generation’ (i.e., sophomores born in 1993 and 1994).
5 Using time as the independent variable, the adjusted $R^2$ for the data between 1969 (i.e., the inflection point) and 1999 was 0.99.
6 For example, an 18-year old sued her parents for her living expenses even though she moved out of the family’s home when she turned 18. She claims her parents threw her out of the house after she refused to obey family rules - one of which was a 1:30am curfew (FoxNews, 2014).
7 In a univariate analysis, the independent variable age group (Exhibit 1) has an adjusted $R^2$ of 0.82 for the data.
8 While the Polk-Lepson (2013) study provides general workplace differences, this research provides differences specific to students in an introductory-level accounting course.

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1. Is less likely to view text messaging and emailing as an issue, even when direct communication with a coworker would be best.
2. Believes people can multi-task effectively.
3. Believes that professionalism has not changed between the generations and feels that the definition of professionalism should be adapted to reflect their attitudes and behaviors.

Other distinguishing characteristics of Generation Y include being unaccustomed to hard work and putting friends and lifestyle above work (Safer, 2008). Students’ behaviors and attitudes, which are learned throughout the years of their primary and secondary education, are also ingrained in college and continue into their business careers (Lawson, 2004; Lucas & Friedrich, 2005; Nitsch et al., 2005), which lead to our second set of hypotheses:

**H2a:** The current generation of students will have higher grade expectations than the prior generation of students.

**H2b:** The current generation of students will have lower views concerning work than the prior generation of students.

**Social Desirability Response Bias**

Robertson and Anderson (1993) maintain that, if individual can project his/her self into a situation (i.e., a premise of most behavioral and ethics research), they may provide socially desirable responses. Examples of socially desirable responding (i.e., a form of dishonesty) are abundant. Gendall et al. (1992, p. 1) hypothesize that “donations to charities are typically over-reported, while less desirable behaviors such as smoking and drinking are likely to be under-reported.” Kalton and Schuman’s (1982) research indicates that between 35 and 48 percent of persons convicted of drunken driving are not willing to report having been convicted of drunken driving (i.e., undesirable behavior) in questionnaires about their driving records.

One method to reduce over/under reporting is to ask “the research question in the third person [to] provide a reliable measure of what the individual actually believes” (Arnold & Ponemon, 1991, p. 6). Another method of controlling for this bias is to ask questions in both the first (i.e., self) and third (i.e., other) person (Armacost et al., 1991). In a study of international differences in ethical perceptions, Cohen et al. (1995) use a pair of questions (i.e., self and other) in eight vignettes to measure SDRB. Cohen al.’s questions were: “Would you perform the action?” and “Would your colleagues perform the action?” However, Geiger and O’Connell (2000) note that using the third person does not fully control for SDRB. Nyaw and Ng (1994) believe that, when research does not control for social desirability response bias, the results of this research could be questioned. If students overstate (understate) his/her beliefs to socially desirable (undesirable) behaviors, then our third set of hypotheses regarding responding to questions in a socially desirable manner can be stated:

**H3a:** Students who have a higher (lower) propensity to respond in a socially desirable manner will report higher (lower) work attitudes.

**H3b:** Students who have a higher (lower) propensity to respond in a socially desirable manner will report lower (higher) attitudes about competition.

**Methodology**

**Overview**

The data for this research were gathered in the first week of classes from undergraduate students who were enrolled in the first introductory accounting class (i.e., Financial Accounting) at a private university in the Northeast region...
of the United States. Tyson (1989) did not provide detailed sample demographics such as major and college level (i.e., sophomore or juniors); consequently, we decided to divide our research into two studies. The first study examines differences between male and female students in the current sample (i.e., hypotheses one and two). To avoid confounding factors such as college level and business versus nonbusiness majors, we limited our sample for this study to just sophomore business majors ($n_1 = 235$). The second study examines differences between the current sample and Tyson’s sample (i.e., hypothesis three). As Tyson included sophomores and juniors who were either business or nonbusiness majors, we included the responses of an additional 48 students who took introductory accounting and our survey who were junior business majors and sophomore-or-junior nonbusiness majors ($n_2 = 283; n_1 + 48$).

**Participants – Study One**
The data for study one of this research included 235 undergraduate business students (Panel A of Table 2: 151 male and 84 female students) in their sophomore year. There were three differences in our samples between male-and-female students. The first difference was that the sample sizes differed (i.e., 64.3 percent male students and 35.7 percent female students). The second difference was that the overall GPA for female students was significantly higher ($p < 0.001$) than for male students. The final difference was that female students scored significantly higher ($p < 0.001$) on Paulhus’ Image Management Subscale (i.e., a measure an individual’s propensity to respond in a socially desirable manner) than male students.

**Participants – Study Two**
The data for study two of this research included 283 business and nonbusiness students (Panel B of Table 2: 183 male and 100 female students) in their sophomore-or-junior years. Again, there were three differences in our samples between male-and-female students. The first difference was that the sample sizes differed (i.e., 64.7 percent male students and 35.3 percent female students). The second difference was that the overall GPA for female students was significantly higher ($p < 0.000$) than for male students. The final difference was that female students scored significantly higher ($p < 0.003$) on Paulhus’ Image Management Subscale (i.e., a measure an individual’s propensity to respond in a socially desirable manner) than male students.

**Survey Questionnaires**
Our survey consists of three parts including background information (Appendix A) that asked students their age, gender, major, year in college (i.e., sophomore, junior, etc.), and home country. The second part was the 14 questions from Helmreich and Spence’s (1978) WOFO (Appendix B), and the third part was Paulhus’ (1991) measure of social desirability response bias (Appendix C). Each person who administered of the surveys gave the identical instructions to the students to assure consistency. The instructors of the sections surveyed agreed to leave the classroom while the survey was taken; these instructors were not given access to their class’ responses.

We included questions on age, major, year in college and home country as we wanted a uniform sample of business majors who were taking the introductory accounting course for the first time. Older students typically have different goals than their traditional classmates. We also wanted to identify students who were taking the course as a free elective and students from other cultures. Consequently, older students and international students were not included in either of our samples.

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9 As we collected data during two consecutive fall semesters, we coded the second of these years with an indicator variable and ran multiple univariate regressions to determine whether there were significant differences between the two groups. Our analyses indicated no differences at the 0.05 level for the 14 questions; there were also no differences for gender mix and distribution of majors between the two year groups. Given these similarities, we collapsed the two years of data.

10 Tyson’s sample included 133 (66.5 percent) male students and 67 (33.5 percent) female students (i.e., a similar gender composition).

11 While there are 19 questions on Helmreich and Spence’s WOFO, we only used the first 14 to be consistent with Tyson’s (1989) study.

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Social Desirability Response Bias

The Impression Management Subscale (IMS) of Paulhus’ (1991) BIDR (see Appendix) was used to measure SDRB (i.e., the dependent variable) for two reasons. IMS scores had a .88 correlation with scores on the full BIDR (Randall & Fernandes, 1991, p. 811); the IMS has an internal consistency of .81 in this study. Paulhus’ (1991) Balanced Inventory of Desirable Responding (BIDR) is a questionnaire with two 20-question parts, which measure self-deception (honest positive bias) and impression management (inflated presentation of one’s behavior). Each of the questions is rated on a seven-point Likert scale, which ranges from “not true” (1) through “somewhat true” (4) to “very true” (7). The first two questions on Paulhus’ IMS are: ‘(1) Sometimes I tell lies if I have to’ and ‘(2) I never cover up my mistakes’. As lying is not a socially desirable behavior, indicating one or two (i.e., not true on the Likert scale) would be a socially desirable response. Similarly, as covering up mistakes is not socially desirable behavior, indicating six or seven (i.e., very true on the Likert scale) would be a socially desirable response. The sum of socially desirable responses indicates an individual’s tendency to respond in a socially desirability manner.12

Variables

Our dependent variables were the students’ responses to the first 14 questions on Helmreich and Spence’s (1978) WOFO. Although all 14 questions used a five-point Likert scale, Questions 1 through 3 and 6 through 14 used a scale where 0 represented “Strongly Disagree” and 4 represented “Strongly Agree”. Questions 4 and 5, which dealt with students’ expected grade in the course, were scaled similar to traditional grading where 0 represented an “F” and 4 represented an “A”.

Our independent variables were a student’s gender and their score on Paulhus’ (1991) IMS. As gender was an indicator variable, we coded male students as one and female students as zero. The score on Paulhus’ IMS, which has a range of zero (responds without bias) to 20 (responds in a totally socially desirable manner) measures a student’s propensity to respond in a socially desirable manner.

Finally, we included two control variables in our study – major (ACC) and overall GPA (GPA). The reason for controlling for accounting majors is that one would anticipate a more positive attitude towards the first course in their undergraduate major (i.e., an introductory accounting course) for accounting majors than for other business majors. If the student was (not) an accounting major we coded the ACC variable as one (zero). For our GPA variable, we used each student’s self-reported overall GPA.13

Problems Using Tyson’s (1989) Data

As Tyson’s data are no longer available, two issues exist that created problems for our comparisons.14 The first issue is that Tyson did not report the distribution of his sample by major (e.g., as we do in Table 2). The other issue is that Tyson did not report the variance of his sample for any of the 14 questions he examined.

Distribution of Tyson’s Data

Previous research found some indication that there are differences in responses between accounting majors and other business majors on various aspects of ethics (Giacomo & Akers, 1998; Elias, 2008). Given these findings, it is possible that a different distribution of majors could create different averages and variances for each of the survey questions used in Tyson’s (1989) study. Tyson (p. 155) indicated that his data were collected “on the first day of the 1987 fall semester.” Using Hasselback’s online accounting directories, we determined that Tyson was at a private institution in the fall of 1987 (i.e., similar to our data from a private institution).

12 Social desirability response bias will only be used in study one.
13 We tested for social desirability response bias and found it was not associated (p = 0.328) with a student’s self-reported overall GPA.
14 Tyson indicated that the data for his study were no longer available.
Tyson (p. 155) notes that the students in his sample “were primarily of sophomore-and-junior nonaccounting business majors” who would have graduated in the spring of 1989 or 1990. To determine the approximate distribution of Tyson’s sample, we examined online copies of the 1989 and 1990 yearbooks from that institution. We separated the business graduates by major into accounting majors and other business majors. Accounting majors were approximately 19.0 percent of the business graduates from Tyson’s institution compared to 17.0 percent in our sample.15 As the data in the yearbooks provided only the graduates’ names and majors under their pictures, we could not determine students’ nationality or what year they took their introductory accounting course. Given Tyson’s sample were “primarily nonaccounting business majors”, we suggest that the samples are comparable with respect to their distributions of accounting majors and other business majors.

Sample Variance
As Tyson (1989) did not report his samples’ variances, we tested the data using multiple levels of variance for his sample starting with the assumption that the variances of Tyson’s sample and the current sample were the same. To test how sensitive our finding were to the assumption of equal sample variance, we increased the variance for Tyson’s data by multiples of two (i.e., twice our sample’s variance, then four times our sample’s variance, etc.) to determine the questions that were consistently significant.

Analysis

Gender differences in current sample

Extrinsic achievement motivation (questions 1 to 5)
The data in Table 3 show the average responses of both male-and-female students to the survey questions from the WOFO survey and the results of multiple regressions for the significant variables.16 Our regression models took on the structure (Formula 1):

DepVar = constant + Gender + SDRB + ACC + GPA .................. (1)
Where: DepVar - students’ responses to each of the 14 survey questions;
Gender - male (female) students coded as 1 (0);
SDRB – students’ score on Paulhus’ 20 item survey;
ACC - accounting majors coded as 1 with all others coded as 0; and,
GPA - student’s self-reported overall GPA.

The data in Panel A show that, consistent with Tyson’s (1989) findings, there are no significant differences at the 0.05 level between male-and-female students’ average responses and for SDRB (highlighted data) for four of the first five questions on the WOFO. However, for question 3, which was about the course helping a student in other courses, Gender and SDRB were significant. Male students had higher responses than female students (p = 0.035) (i.e., footnote 16: 0.069/2). As a student’s propensity to respond in a socially desirable manner increased, his/her response to this question was higher (p = 0.011). Our control variable for accounting majors (ACC) was significant in the regression models for questions: 2 (p = 0.000), 3 (p = 0.000), 4 (p = 0.03), and 5 (p = 0.02). Additionally, a student’s self-reported overall GPA was significant in the models for questions 4 and 5 (i.e., grade expectation questions: p = 0.000 and p = 0.003 respectively). Accounting majors and those individuals with higher overall GPAs reported higher grade expectations for the course.

15 There is no reason to assume that any one business major had a higher attrition rate between the first semester of their sophomore year and graduation.
16 As the probability of t in regression models is for a two-tailed test, we will indicate the one-tailed significance levels (e.g., half the two-tailed significance level) for our directional tests of hypotheses concerning gender and social desirability response bias differences. The partial adjusted R² and total adjusted R² in Table 3 are for a reduced model that included only the significant variables.
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Intrinsic motivation – work (question 6 to 10)
The data in Panel B show that, contrary to Tyson’s findings, the only significant difference between male-and-female students was for question 7 that concerned ‘staying busy all the time.’ Male students had a significantly lower (p = 0.000) average response to this question than female students. SDRB (highlighted data) was significant for questions: 7 (p = 0.014), 8 (p = 0.000), and 10 (p = 0.001). As a student’s propensity to respond in a socially desirable manner increased, his/her response to each of these question was higher (i.e., working hard is a socially desirable trait). While major was not significant in any of the five models in Panel B, a student’s overall GPA was significant for questions 8 (p = 0.024) and 10 (p = 0.013). Students who find satisfaction in working as well as they can and like to work hard had higher self-reported overall GPAs. However, we found only partial support for hypotheses H1a that dealt with gender concerning work attitudes (question 7) and H3a that dealt with SDRB (questions 7, 8, and 10).

Intrinsic motivation - competitiveness (questions 11 to 14)
Panel C shows that, consistent with Tyson’s findings, there are significant differences between male-and-female students’ average responses for all of the last four WOFO questions. While the signs for the differences between the average responses for male-and-female students are all positive (i.e., the average responses for male students were higher), the significance levels differ. While Tyson found the differences for questions 11 and 12 (13 and 14) were significant at the 0.01 (0.05) level, our data indicate that all of the differences for these questions were significant at the 0.000 (0.001) level for questions 11 and 12 (13 and 14). Additionally, students’ propensity to respond in a socially desirable manner (SDRB - highlighted data) was also significant in the models for questions: 12 (p = 0.010), 13 (p = 0.001) and 14 (p = 0.001). As a student’s propensity to respond in a socially desirable increased, his/her response to each of these question was lower (i.e., doing better when in competition is not a socially desirable trait). While a student’s overall GPA was not significant in any of the four models in Panel C, a student’s major (ACC) was significant for question 13 (p = 0.043). Accounting majors reported a higher average for being ‘annoyed when other students perform better than they do.’ Consequently, our data fully support hypothesis H1b and partially support H3b (questions 12 through 14).

Current Sample versus Tyson’s Sample (H3)
Procedures Used in the Analyses
We compared the current data and Tyson’s data for both male students (Table 4) and female students (Table 5). When comparing the average response difference for each question, the responses for Tyson’s students were subtracted from those of our students. Consequently, a positive (negative) difference indicates that the current students’ average response was higher (lower) than the average response for Tyson’s students. In our comparison with Tyson’s sample, we used confidence intervals (Formula 2) assuming unknown and unequal population variances (Madsen & Moeschberger, 1986, p. 328) to determine whether the value of zero was included in the range (i.e., no difference if zero is part of the range). As our hypotheses are directional in nature, we did not divide the level of significance (0.05) by two that would be the procedure if one was testing for an unspecified difference.

\[(\bar{X}_1 - \bar{X}_2) \pm t_{1-\alpha} \left[ \left( \frac{S^2_1}{n_1} \right) + \left( \frac{S^2_2}{n_2} \right) \right]^{\frac{1}{2}} \]  
\[(2)\]

There were also differences in sample sizes: current male (n = 183) versus Tyson’s male (n = 133) students and current female (n = 100) versus Tyson’s female (n = 67) students. We used Formula 3, which was suggested by Madsen and Moeschberger (p. 327), to determine the \(\nu\) value to enter the Student’s T distribution. Consequently, we used \(\nu\) values of 120 (i.e., the highest value before infinity) when comparing the current male to Tyson’s male students and 66 when comparing the current female with Tyson’s female students.

\[17\] Univariate analyses that used just gender as the independent variable yielded identical results as our regression models except for questions 3 and 6. While gender was not significant in the univariate analysis for question 3 (p = .22), it was significant (p = 0.07) in our multiple regression model. The opposite was true for question 6; gender was significant in our univariate analysis (p = 0.07) but not in the multiple regression model (p = 0.28).
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Because Tyson did not provide his sample’s variances, we used Formula 2 for confidence intervals (Madsen & Moeschberger) to derive Formula 4; the results of this formula were used to determine the Student’s T value supported by the data. Formula 4 provides the minimum T value necessary to have a value of zero included in the computed confidence interval at a specified level of significance, which provides the basis for our analyses.

\[
    v = \left[ \text{minimum} \ (n_1 \ or \ n_2) \right] - 1 \ \\
    \ \\
    \left( \frac{X_1 - X_2}{\sqrt{\left( \frac{S^2_1}{n_1} + \frac{S^2_2}{n_2} \right)}} \right) = t_{v; -a} \ \\
    \ \\
    \text{(4)}
\]

We started by testing for differences between the two samples by assuming that the variances of Tyson’s and the current sample were the same. To test how sensitive our finding were to the assumption of equal sample variance, we increased the variance for Tyson’s data by multiples of two (i.e., twice our sample’s variance, then four times our sample’s variance, etc.) to determine the questions that were consistently significant.

**Differences for Male Students**

The data in Table 4 provide the significant differences between the samples of male students at increasing levels of variance (Var). Comparisons of the two sample’s responses for male students indicated that there were significant differences in both panels of Table 4. For the questions dealing with grade expectations (Panel A), the responses for the current sample of male students to questions 4 and 5 were significantly higher than those reported by Tyson through ten times the current sample’s variance (p = 0.05 through p = 0.000) for question 4 and eight times the current samples’ variance (p = 0.05 through p = 0.000) for question 5. Our hypothesis H2a was supported by the data.

The responses for the current sample of male students to questions 6 through 9 that dealt with attitudes concerning work (Panel B) were significantly lower (i.e., not as satisfied by hard work) than for Tyson’s male students. While question 6 (i.e., work as well as I can even if it isn’t popular) was only significant at twice the current sample’s variance (p = 0.05 through p = 0.025), the sign was positive - the opposite of what we anticipated. Question 7 (i.e., staying busy) was significant at four times the current sample’s variance (p = 0.05 through p = 0.000). The difference for question 8 (i.e., being satisfied in doing as well as I can) was significant at ten times the current sample’s variance (p = 0.025 through p = 0.000). Question 9 (i.e., being satisfied with exceeding one’s previous performance) was significant at two times the current sample’s variance (p = 0.025 and p = 0.000). Question 10 (i.e., liking to work hard) was not significant. Consequently, our hypothesis H2b was partially supported by the data; however, while questions 7, 8, and 9 had negative signs (e.g., what we anticipated), question 6 had a positive sign (e.g., what we did not anticipate).\(^{18}\)

**Differences for Female Students**

The data in Table 5 provide the significant differences between the samples of female students at increasing levels of variance (Var). Comparisons of the two sample’s responses for female students indicated that there were significant differences in both panels of Table 5. For the questions dealing with grade expectations (Panel A), the responses for the current sample of female students to question 4 was significantly higher than those reported by Tyson through eight times the current sample’s variance (p = 0.05 through p = 0.000) and for question 5 through ten times the current sample’s variance (p = 0.025 through p = 0.000). Our hypothesis H2a was supported by the data.

The responses for the current sample of female students to all questions in Panel B (e.g., those questions dealing with attitudes concerning work) were significantly lower (i.e., not as satisfied by work) than for Tyson’s female

---

\(^{18}\) As there were no significant differences between the two samples for either male-or-female students concerning the four computation statements, we did not report the data in either Table 4 or 5.
students. While question 6 (e.g., work as well as I can even if it isn’t popular) was only significant under the assumption of equal sample variance \( (p = 0.025) \), question 7 (e.g., staying busy all the time) was significant through twice the current sample’s variance \( (p = 0.02 \text{ through } p = 0.01) \). Question 8 (i.e., being satisfied in doing as well as I can) was significant through ten times the current sample’s variance \( (p = 0.05 \text{ through } p = 0.000) \), and question 9 (i.e., being satisfied with exceeding one’s previous performance) was significant through four times the current sample’s variance \( (p = 0.05 \text{ through } p = 0.000) \). Finally, question 10 (e.g., liking to work hard) was only significant under the assumption of equal sample variance \( (p = 0.025) \). Our hypothesis H2b was supported by the data.

Discussion

Overview

The purpose of this research was to determine whether the differences Tyson (1989) found between genders were still present in our current students. Unlike Tyson’s analysis, which only tested for gender differences, we used regression analysis and controlled for social desirability response bias and both a student’s major and overall GPA. For the current students, our findings of differences between male-and-female students differ from those reported by Tyson. We also examined the data to determine if there were generational differences between Tyson’s and the current students. We noted significant generational differences in grade expectations and in willingness to work between the two studies, which support Polk-Lepson (2013) findings.

Comparison of Male-and Female Students in the Current Sample

While Tyson found significant gender differences in all five of the intrinsic work oriented questions, the only indication that current sample of female students were intrinsically motivated by work-oriented factors (Table 3) was for question 7. For the other four questions, female students’ responses with respect to attitudes concerning work were similar to those of male students. However, male students remain more intrinsically motivated by work-competitiveness factors than female students.

Male students’ average responses to all of the questions in the competition area (i.e., Table 3: questions 11 through 14) were significantly higher than female students’ responses. This finding is similar to Rammstedt and Rammsayer’s (2002) and Tyson’s findings that men are more driven by competition. Consequently, we believe that our replication of Tyson’s (1989) study shows that his “findings are robust to substantial extensions over time” (Burman et al., 2010, p. 789), which leads to more generalizable results (Lindsay, 1995).

A contribution we made to the literature was directly controlling for social desirability response bias (SDRB). We found that SDRB (a student’s overall GPA) was significant in three (two) of the five questions on work attitudes (e.g., questions five through ten). Female students scored significantly higher on Paulhus’ (1991) measure of SDRB (i.e., more likely to respond in a socially desirable manner) and had a higher average overall GPA than male students. By not controlling for SDRB and overall GPA, gender might have served as a partial surrogate for other variables (e.g., SDRB and overall GPA) in Tyson’s research - confounded the results. Had this been the case, the results would have been to increase the significance of gender differences.

Comparison with Tyson’s Sample

When our data for male-and-female students were compared to Tyson’s (1989) data, we found that both male-and-female students in the current sample expected significantly higher grades (questions 4 and 5). We also found that female (male) students in the current sample had significantly lower averages than their counterparts in Tyson’s sample for all five (four of the five) questions concerning work attitudes. We found mixed results for the four questions concerning competitiveness. The significant differences in grade expectations together with lower work ethic responses suggest a belief that our Expectation Generation students higher grades than their Generation X

---

19 SDRB was also a significant variable in three of the four questions concerning competitiveness. A student’s major was significant for four of the five extrinsic motivation questions, none of the extrinsic motivation questions concerned with work and only one of the extrinsic motivation questions dealing with competition.
counterparts in Tyson’s study. While one could attribute the differences in grade expectations to grade inflation over
time, this does not explain the significant differences in students’ lower responses concerning their attitudes towards
work. As Blake (2014) and Alsop (2008) suggest this phenomena could be the result of the current generation grew
up with that believed everyone should get a trophy in grade-and-high-school sports for just participating (i.e., do not
want anyone to feel bad).

Our sample for study two was primarily sophomore business majors (83 percent); the other 17 percent were junior
business majors or sophomore-and-junior nonbusiness majors. While Tyson (1989, p. 155) notes that the students in
his sample “were primarily sophomore-and-junior nonaccounting business majors”, what Tyson meant by “primarily
sophomore-and-junior nonaccounting business majors” remains unanswered. Consequently, there is the possibility
of differences in sample composition between the current data and Tyson’s data could confound our data.20 Finally,
we were not able to determine whether Tyson’s sample included any international students; however, we believe
that Tyson would have taken similar precautions to remove international students from his sample so as not to
confound his analyses.

Research Limitations
Our research has five limitations. The first limitation is that the sample comes from one private institution located in
the Northeast region of the United States; consequently, the sample may not represent the attitudes of all students.
The second limitation is that the data were collected in an introductory-accounting class, which may or may not
accurately reflect generational differences. The third limitation is that the term ‘generation’ has quite a few
meanings; we choose one that targets age differences – in this case the 25 years between our sample and Tyson’s
research (i.e., Tyson’s students could easily be the parents of our students). Our fourth limitation is that the
interpretations of the questions over time might have changed. For example, what does being “busy” mean in
today’s interconnected world compared to the world of 25 years ago? Our final limitation is that differences in
sample composition between our data in study two and Tyson’s data could confound our findings.

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20 To address the potential of confounded data due to sample composition, we eliminated the junior business majors
and sophomore-and-junior nonbusiness majors from our sample for study two (i.e., a sample reduction of 48 or 17
percent). The results of our additional comparisons resulted in no significant differences in our findings in either
Table 4 or 5 (i.e., our data were not sensitive to a 17 percent change in sample composition).
References


APPENDIX A
Demographic Questions

Gender (please circle): Male Female

Age: ____________

College GPA: ____________

Home Country: _______________________

Year in College: _______________________

Major: _______________________________

APPENDIX B
Beliefs and Aspirations Questions

Please circle the comment on the scale below each question when responding to the question about how you feel.

1. It is important to my future satisfaction in life to have a job or career that pays well.
2. I believe this course will be helpful to me in my professional career.
3. I believe that this course will help me in other courses I plan to take.
4. The grade I think I will receive in this course is:
5. The lowest grade that will satisfy me in this course is:
6. It is important to me to do my work as well as I can even if it isn’t popular with my fellow students.
7. I like to be busy all the time.
8. I find a great deal of satisfaction in working as well as I can.
9. I find satisfaction in exceeding my previous performance even if I don’t outperform others.
10. I like to work hard.
11. I enjoy working in situations involving competition with others.
12. I feel that winning is important in both work and games.
13. It annoys me when other people perform better than I do.
14. I try harder when I’m in competition with others.

NOTE: All 14 questions on the WOFO used a five-point Likert scale; responses were coded from 0 through 4.

Questions 1 through 3 and 6 through 14 used this scale with these descriptions:

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>

Questions 4 and 5 used this scale with these grades:

<table>
<thead>
<tr>
<th>F</th>
<th>D</th>
<th>C</th>
<th>B</th>
<th>A</th>
</tr>
</thead>
</table>
**APPENDIX C**

**Paulhus’ Image Management Subscale**

Using the scale below as a guide, write a number beside each statement to indicate how much you agree with it.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not True</td>
<td></td>
<td></td>
<td></td>
<td>Somewhat True</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>True</td>
<td></td>
<td></td>
<td></td>
<td>True</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. Sometimes I tell lies if I have to.  
2. I never cover up my mistakes.  
3. There have been occasions when I have taken advantage of someone.  
4. I never swear.  
5. I sometimes try to get even rather than forgive and forget.  
6. I always obey laws, even if I am unlikely to get caught.  
7. I have said something bad about a friend behind his/her back.  
8. When I hear people talking privately, I avoid listening.  
9. I have received too much change from a salesperson without telling him or her.  
10. I always declare everything at customs.  
11. When I was young, I sometimes stole things.  
12. I have never dropped litter on the street.  
13. I sometimes drive faster than the speed limit.  
14. I never read sexy books or magazines.  
15. I have done things that I don’t tell other people about.  
16. I never take things that don’t belong to me.  
17. I have taken sick leave from work or school even though I wasn’t really sick.  
18. I have never damaged a library book or store merchandise without reporting it.  
19. I have some pretty awful habits.  
20. I don’t gossip about other people’s business.
Exhibit 1
Support for ‘trophies for participation’ by age group

Panel A: Graphical depiction of data

Panel B: Regression model for the support of ‘trophies for participation’

<table>
<thead>
<tr>
<th>Model</th>
<th>$R^2$</th>
<th>Adjusted $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>0.818</td>
<td>0.772</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>Sum of Squares</th>
<th>F Factor</th>
<th>Prob F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>1</td>
<td>212.6</td>
<td>17.9</td>
<td>0.013</td>
</tr>
<tr>
<td>Error</td>
<td>4</td>
<td>47.4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>5</td>
<td>260.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Term</th>
<th>Coefficient</th>
<th>T Stat</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>52.2</td>
<td>16.29</td>
<td>&lt;0.000</td>
</tr>
<tr>
<td>Age Group</td>
<td>-3.49</td>
<td>-4.24</td>
<td>0.013</td>
</tr>
</tbody>
</table>

Where:

<table>
<thead>
<tr>
<th>Group</th>
<th>Age Range</th>
<th>Birth Years</th>
<th>Approximate Generation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>18 to 24</td>
<td>1990 to 1996</td>
<td>Participation-Trophy Generation</td>
</tr>
<tr>
<td>2</td>
<td>25 to 34</td>
<td>1980 to 1989</td>
<td>Generation Y/Millennials</td>
</tr>
<tr>
<td>3</td>
<td>35 to 44</td>
<td>1970 to 1979</td>
<td>Generation X</td>
</tr>
<tr>
<td>4</td>
<td>45 to 54</td>
<td>1960 to 1969</td>
<td>Baby Boomers-Generation X</td>
</tr>
<tr>
<td>5</td>
<td>55 to 64</td>
<td>1950 to 1959</td>
<td>Baby Boomers</td>
</tr>
<tr>
<td>6</td>
<td>65+</td>
<td>1949 and Earlier</td>
<td>Greatest Generation-Baby Boomers-</td>
</tr>
</tbody>
</table>

Developed from Blake (2014)
Figure 1
Entitlement versus self-reliance in the literature

Where: Entitlement is the solid line
Self reliance is the dashed line

From Google ngram (2014)
Table 1
Beliefs and Aspirations Questions

Panel A: Extrinsic Achievement Motivators
1. It is important to my future satisfaction in life to have a job or career that pays well.
2. I believe this course will be helpful to me in my professional career.
3. I believe that this course will help me in other courses I plan to take.
4. The grade I think I will receive in this course is:
5. The lowest grade that will satisfy me in this course is:

Panel B: Intrinsic Achievement Statements - Work
6. It is important to me to do my work as well as I can even if it isn’t popular with my fellow students.
7. I like to be busy all the time.
8. I find a great deal of satisfaction in working as well as I can.
9. I find satisfaction in exceeding my previous performance even if I don’t outperform others.
10. I like to work hard.

Panel C: Intrinsic Achievement Statements - Competitiveness
11. I enjoy working in situations involving competition with others.
12. I feel that winning is important in both work and games.
13. It annoys me when other people perform better than I do.
14. I try harder when I’m in competition with others.

All 14 questions on the Work and Family Orientation Questionnaire used in Tyson’s (1989) and this study provided participants with five-point Likert scales that were coded from 0 through 4. Questions 1 through 3 and 6 through 14 used scale descriptions of: 0 – Strongly disagree; 1 – disagree; 2- neutral; 3 – agree; and, 4 – strongly disagree. Questions 4 and 5 used scale descriptions of grades where: 0 – F; 1 – D; 2- C; 3 – B; and, 4 – A.
Table 2  
Sample demographics (Current male versus Current female students)

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel A: Study One (Current sample comparisons)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>151</td>
<td>84</td>
<td>235</td>
</tr>
<tr>
<td>Average Level</td>
<td>2.0</td>
<td>2.0</td>
<td>2.0</td>
</tr>
<tr>
<td>Age</td>
<td>19.1</td>
<td>19.0</td>
<td>19.0</td>
</tr>
<tr>
<td>SDRB</td>
<td>5.4</td>
<td>6.4</td>
<td>5.7</td>
</tr>
<tr>
<td>Overall GPA</td>
<td>3.1</td>
<td>3.3</td>
<td>3.2</td>
</tr>
<tr>
<td>Distribution by major</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting</td>
<td>28</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>(18.5)</td>
<td>(14.3)</td>
<td></td>
<td>(17.0)</td>
</tr>
<tr>
<td>Nonaccounting</td>
<td>123</td>
<td>72</td>
<td>195</td>
</tr>
<tr>
<td>(81.5)</td>
<td>(85.7)</td>
<td></td>
<td>(83.0)</td>
</tr>
<tr>
<td>Panel B: Study Two (Current sample vs. Tyson)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>183</td>
<td>100</td>
<td>283</td>
</tr>
<tr>
<td>Average Level</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Age</td>
<td>19.3</td>
<td>19.1</td>
<td>19.2</td>
</tr>
<tr>
<td>SDRB</td>
<td>5.2</td>
<td>6.4</td>
<td>5.6</td>
</tr>
<tr>
<td>Overall GPA</td>
<td>3.1</td>
<td>3.3</td>
<td>3.1</td>
</tr>
<tr>
<td>Distribution by major</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounting</td>
<td>28</td>
<td>12</td>
<td>40</td>
</tr>
<tr>
<td>(15.3)</td>
<td>(12.0)</td>
<td></td>
<td>(14.1)</td>
</tr>
<tr>
<td>Nonaccounting - sophomores</td>
<td>123</td>
<td>72</td>
<td>195</td>
</tr>
<tr>
<td>(67.2)</td>
<td>(72.0)</td>
<td></td>
<td>(68.9)</td>
</tr>
<tr>
<td>Nonaccounting - juniors</td>
<td>18</td>
<td>8</td>
<td>26</td>
</tr>
<tr>
<td>(9.8)</td>
<td>(8.0)</td>
<td></td>
<td>(9.2)</td>
</tr>
<tr>
<td>Nonbusiness</td>
<td>14</td>
<td>8</td>
<td>22</td>
</tr>
<tr>
<td>(7.7)</td>
<td>(8.0)</td>
<td></td>
<td>(7.8)</td>
</tr>
</tbody>
</table>

Data in parentheses are percentages.
SDRB - Social Desirability Response Bias Score.
Table 3
Modeling survey responses by gender, SDRB, accounting major, and GPA

Panel A: Extrinsic achievement motivation questions

<table>
<thead>
<tr>
<th></th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3.54</td>
<td>3.25</td>
<td>3.09</td>
<td>3.45</td>
<td>2.87</td>
</tr>
<tr>
<td>Female</td>
<td>3.42</td>
<td>3.15</td>
<td>2.98</td>
<td>3.47</td>
<td>2.90</td>
</tr>
<tr>
<td>Difference</td>
<td>0.12</td>
<td>0.10</td>
<td>0.11</td>
<td>-0.02</td>
<td>-0.03</td>
</tr>
<tr>
<td>Regression</td>
<td>Prob t</td>
<td>Part $r^2$</td>
<td>Prob t</td>
<td>Part $r^2$</td>
<td>Prob t</td>
</tr>
<tr>
<td>Gender</td>
<td>0.156</td>
<td>--</td>
<td>0.260</td>
<td>--</td>
<td>0.069</td>
</tr>
<tr>
<td>SDRB</td>
<td>-0.517</td>
<td>--</td>
<td>0.090</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>ACC</td>
<td>0.618</td>
<td>--</td>
<td>0.000</td>
<td>0.139</td>
<td>0.000</td>
</tr>
<tr>
<td>GPA</td>
<td>0.511</td>
<td>--</td>
<td>0.748</td>
<td>--</td>
<td>0.172</td>
</tr>
<tr>
<td>Adj $R^2$</td>
<td>N/A</td>
<td>0.139</td>
<td>0.130</td>
<td>0.115</td>
<td>0.115</td>
</tr>
</tbody>
</table>

Panel B: Intrinsic motivation statements - Work

<table>
<thead>
<tr>
<th></th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3.38</td>
<td>2.05</td>
<td>3.27</td>
<td>3.17</td>
<td>3.14</td>
</tr>
<tr>
<td>Female</td>
<td>3.52</td>
<td>2.70</td>
<td>3.40</td>
<td>3.28</td>
<td>3.15</td>
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<tr>
<td>Difference</td>
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<td>-0.65</td>
<td>-0.13</td>
<td>-0.11</td>
<td>-0.01</td>
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<td>Regression</td>
<td>Prob t</td>
<td>Part $r^2$</td>
<td>Prob t</td>
<td>Part $r^2$</td>
<td>Prob t</td>
</tr>
<tr>
<td>Gender</td>
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<td>--</td>
<td>-0.000</td>
<td>0.112</td>
<td>-0.604</td>
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<tr>
<td>SDRB</td>
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<td>--</td>
<td>0.027</td>
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<td>--</td>
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<tr>
<td>GPA</td>
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<td>--</td>
<td>0.120</td>
<td>--</td>
<td>0.047</td>
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<td>Adj $R^2$</td>
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<td>0.129</td>
<td>0.073</td>
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</tr>
</tbody>
</table>

Panel C: Intrinsic motivation statements - Competitiveness

<table>
<thead>
<tr>
<th></th>
<th>Q11</th>
<th>Q12</th>
<th>Q13</th>
<th>Q14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>3.09</td>
<td>3.14</td>
<td>2.36</td>
<td>3.09</td>
</tr>
<tr>
<td>Female</td>
<td>2.36</td>
<td>2.40</td>
<td>1.93</td>
<td>2.65</td>
</tr>
<tr>
<td>Difference</td>
<td>0.73</td>
<td>0.74</td>
<td>0.43</td>
<td>0.44</td>
</tr>
<tr>
<td>Regression</td>
<td>Prob t</td>
<td>Part $r^2$</td>
<td>Prob t</td>
<td>Part $r^2$</td>
</tr>
<tr>
<td>Gender</td>
<td>0.000</td>
<td>0.144</td>
<td>0.000</td>
<td>0.157</td>
</tr>
<tr>
<td>SDRB</td>
<td>-0.372</td>
<td>--</td>
<td>-0.019</td>
<td>0.016</td>
</tr>
<tr>
<td>ACC</td>
<td>-0.658</td>
<td>--</td>
<td>-0.538</td>
<td>--</td>
</tr>
<tr>
<td>GPA</td>
<td>0.457</td>
<td>--</td>
<td>-0.693</td>
<td>--</td>
</tr>
<tr>
<td>Adj $R^2$</td>
<td>0.144</td>
<td>0.173</td>
<td>0.098</td>
<td>0.092</td>
</tr>
</tbody>
</table>

ACC Coded as 1 (0) for accounting (all other business) majors.
Gender Coded as 1 (0) for male (female) students.
GPA Student’s self-reported overall GPA.
SDRB Social Desirability Response Bias Score.
Q1 It is important to my future satisfaction in life to have a job or career that pays well.
Q2 I believe this course will be helpful to me in my professional career.
Q3 I believe that this course will help me in other courses I plan to take.
Q4 The grade I think I will receive in this course is:
Q5 The lowest grade that will satisfy me in this course is:
Q6 It is important to me to do my work as well as I can even if it isn’t popular with my fellow students.
Q7 I like to be busy all the time.
Q8 I find a great deal of satisfaction in working as well as I can.
Q9 I find satisfaction in exceeding my previous performance even if I don’t outperform others.
Q10 I like to work hard.
Q11 I enjoy working in situations involving competition with others.
Q12 I feel that winning is important in both work and games.
Q13 It annoys me when other people perform better than I do.
Q14 I try harder when I’m in competition with others.
Table 4
Differences between Tyson (1989) and current data for male students

Panel A: Extrinsic achievement motivation questions

<table>
<thead>
<tr>
<th></th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current sample</td>
<td>3.52</td>
<td>3.21</td>
<td>3.04</td>
<td>3.42</td>
<td>2.81</td>
</tr>
<tr>
<td>Tyson's sample</td>
<td>3.43</td>
<td>3.19</td>
<td>3.06</td>
<td>3.13</td>
<td>2.53</td>
</tr>
<tr>
<td>Difference</td>
<td>0.09</td>
<td>0.02</td>
<td>-0.03</td>
<td>0.29</td>
<td>0.28</td>
</tr>
<tr>
<td>T factor: Same Var</td>
<td>1.60</td>
<td>0.37</td>
<td>-0.37</td>
<td>5.94†</td>
<td>4.98†</td>
</tr>
<tr>
<td>2 X Var</td>
<td>1.14</td>
<td>0.27</td>
<td>-0.26</td>
<td>4.24†</td>
<td>3.56†</td>
</tr>
<tr>
<td>4 X Var</td>
<td>0.82</td>
<td>0.19</td>
<td>-0.19</td>
<td>3.02***</td>
<td>2.54***</td>
</tr>
<tr>
<td>6 X Var</td>
<td>0.67</td>
<td>0.16</td>
<td>-0.15</td>
<td>2.47***</td>
<td>2.08**</td>
</tr>
<tr>
<td>8 X Var</td>
<td>0.58</td>
<td>0.14</td>
<td>-0.13</td>
<td>2.14**</td>
<td>1.80*</td>
</tr>
<tr>
<td>10 X Var</td>
<td>0.52</td>
<td>0.12</td>
<td>-0.12</td>
<td>1.92*</td>
<td>1.62</td>
</tr>
</tbody>
</table>

Panel B: Intrinsic motivation statements - Work

<table>
<thead>
<tr>
<th></th>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current sample</td>
<td>3.39</td>
<td>2.07</td>
<td>3.25</td>
<td>3.18</td>
<td>3.15</td>
</tr>
<tr>
<td>Tyson's sample</td>
<td>3.24</td>
<td>2.35</td>
<td>3.60</td>
<td>3.38</td>
<td>3.05</td>
</tr>
<tr>
<td>Difference</td>
<td>0.15</td>
<td>-0.28</td>
<td>-0.35</td>
<td>-0.20</td>
<td>0.10</td>
</tr>
<tr>
<td>T factor: Same Var</td>
<td>2.88***</td>
<td>-3.67†</td>
<td>-6.54†</td>
<td>-3.19†</td>
<td>1.61</td>
</tr>
<tr>
<td>2 X Var</td>
<td>2.06**</td>
<td>-2.64***</td>
<td>-4.67†</td>
<td>-2.28***</td>
<td>1.22</td>
</tr>
<tr>
<td>4 X Var</td>
<td>1.47</td>
<td>-1.88*</td>
<td>-3.33†</td>
<td>-1.63</td>
<td>0.87</td>
</tr>
<tr>
<td>6 X Var</td>
<td>1.20</td>
<td>-1.54</td>
<td>-2.73***</td>
<td>-1.34</td>
<td>0.71</td>
</tr>
<tr>
<td>8 X Var</td>
<td>1.04</td>
<td>-1.34</td>
<td>-2.37***</td>
<td>-1.16</td>
<td>0.62</td>
</tr>
<tr>
<td>10 X Var</td>
<td>0.93</td>
<td>-1.20</td>
<td>-2.12**</td>
<td>-1.04</td>
<td>0.55</td>
</tr>
</tbody>
</table>

Significance [T values] for $\nu = 120$: * 0.05 [1.66]; ** 0.025 [1.98]; *** 0.01 [2.36]; † 0.001 [3.16]

Q1 It is important to my future satisfaction in life to have a job or career that pays well.
Q2 I believe this course will be helpful to me in my professional career.
Q3 I believe that this course will help me in other courses I plan to take.
Q4 The grade I think I will receive in this course is:
Q5 The lowest grade that will satisfy me in this course is:
Q6 It is important to me to do my work as well as I can even if it isn’t popular with my fellow students.
Q7 I like to be busy all the time.
Q8 I find a great deal of satisfaction in working as well as I can.
Q9 I find satisfaction in exceeding my previous performance even if I don’t outperform others.
Q10 I like to work hard.
Table 5  
Differences between Tyson (1989) and current data for female students

Panel A: Extrinsic achievement motivation questions

<table>
<thead>
<tr>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
<th>Q4</th>
<th>Q5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current sample</td>
<td>3.41</td>
<td>3.09</td>
<td>2.87</td>
<td>3.48</td>
</tr>
<tr>
<td>Tyson’s sample</td>
<td>3.43</td>
<td>3.19</td>
<td>3.06</td>
<td>3.13</td>
</tr>
<tr>
<td>Difference</td>
<td>-0.02</td>
<td>-0.11</td>
<td>-0.19</td>
<td>0.35</td>
</tr>
<tr>
<td>T factor: Same Var</td>
<td>-0.23</td>
<td>-1.17</td>
<td>-1.89*</td>
<td>5.22†</td>
</tr>
<tr>
<td>2 X Var</td>
<td>-0.17</td>
<td>-0.84</td>
<td>-1.36</td>
<td>3.73†</td>
</tr>
<tr>
<td>4 X Var</td>
<td>-0.12</td>
<td>-0.60</td>
<td>-0.97</td>
<td>2.66***</td>
</tr>
<tr>
<td>6 X Var</td>
<td>-0.10</td>
<td>-0.49</td>
<td>-0.80</td>
<td>2.18**</td>
</tr>
<tr>
<td>8 X Var</td>
<td>-0.08</td>
<td>-0.43</td>
<td>-0.69</td>
<td>1.89*</td>
</tr>
<tr>
<td>10 X Var</td>
<td>-0.08</td>
<td>-0.39</td>
<td>-0.62</td>
<td>1.66</td>
</tr>
</tbody>
</table>

Panel B: Intrinsic motivation statements - Work

<table>
<thead>
<tr>
<th>Q6</th>
<th>Q7</th>
<th>Q8</th>
<th>Q9</th>
<th>Q10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current sample</td>
<td>3.52</td>
<td>2.70</td>
<td>3.40</td>
<td>3.28</td>
</tr>
<tr>
<td>Tyson’s sample</td>
<td>3.66</td>
<td>2.97</td>
<td>3.81</td>
<td>3.56</td>
</tr>
<tr>
<td>Difference</td>
<td>-0.13</td>
<td>-0.27</td>
<td>-0.40</td>
<td>-0.27</td>
</tr>
<tr>
<td>T factor: Same Var</td>
<td>-2.04**</td>
<td>-2.74***</td>
<td>-5.50†</td>
<td>-3.76†</td>
</tr>
<tr>
<td>2 X Var</td>
<td>-1.46</td>
<td>-1.98*</td>
<td>-3.67†</td>
<td>-2.69***</td>
</tr>
<tr>
<td>4 X Var</td>
<td>-1.04</td>
<td>-1.42</td>
<td>-2.62***</td>
<td>-1.92*</td>
</tr>
<tr>
<td>6 X Var</td>
<td>-0.86</td>
<td>-1.17</td>
<td>-2.15**</td>
<td>-1.58</td>
</tr>
<tr>
<td>8 X Var</td>
<td>-0.74</td>
<td>-1.02</td>
<td>-1.86*</td>
<td>-1.37</td>
</tr>
<tr>
<td>10 X Var</td>
<td>-0.67</td>
<td>-0.91</td>
<td>-1.67</td>
<td>-1.23</td>
</tr>
</tbody>
</table>

Significance [T values] for v = 66:  * 0.05 [1.69];  ** 0.025 [2.00];  *** 0.01 [2.39];  † 0.001 [3.22]

- Q1 It is important to my future satisfaction in life to have a job or career that pays well.
- Q2 I believe this course will be helpful to me in my professional career.
- Q3 I believe that this course will help me in other courses I plan to take.
- Q4 The grade I think I will receive in this course is:
- Q5 The lowest grade that will satisfy me in this course is:
- Q6 It is important to me to do my work as well as I can even if it isn’t popular with my fellow students.
- Q7 I like to be busy all the time.
- Q8 I find a great deal of satisfaction in working as well as I can.
- Q9 I find satisfaction in exceeding my previous performance even if I don’t outperform others.
- Q10 I like to work hard.