

Assessing Goal Orientations and Success in Introductory College Writing Courses

Research Report

Suzanne L. Pieper

Northern Arizona University

July 30, 2008

Assessing Goal Orientations and Success in Introductory Writing Courses

Introduction

This report describes a pilot study of students' achievement goal orientations that was conducted at Northern Arizona University (NAU) in spring of 2008. The report begins with an explanation of the purpose and value of the study to NAU and the theoretical rationale for examining students' goal orientations. Next, the methods of the study are detailed. Finally, the results are presented and discussed, along with their implications for students and teachers and directions for future research at NAU.

Purpose of the Study

The pilot study focused on students' achievement goal orientations in online and face-to-face introductory writing courses at NAU. Specifically, three "varieties" of introductory writing courses were examined--ENG 105: Critical Reading and Writing in the University Community online, ENG 105: Critical Reading and Writing in the University Community face-to-face, and HON 191: Seminar in Critical Reading and Writing II face-to-face--all of which fulfill the general writing requirement at the University. The purpose of the study was to describe student goal orientations in each course variety, to compare goal orientations among the course varieties, and to determine the influence of student goal orientations on success in each course variety.

Value of the Study to NAU

This study seems especially appropriate at NAU, where "enriching the quality of undergraduate experiences to promote student learning and success" is a strategic planning initiative. Certainly, providing quality instruction—both in online and face-to-face environments—is an essential means to achieving this University goal. The more we know about our students, the better we will be able to provide quality learning opportunities for them.

Information about the motivation of students enrolled in online as well as face-to-face courses will help us to identify the optimal and not-so-optimal motivational goal orientations of our students. Faculty can then implement teaching and learning pedagogy and practices that will promote optimal goal orientations and, ultimately, student retention and success.

Theoretical Framework

Why do students want to achieve in the classroom? Although a number of different theories have attempted to explain students' achievement motivation over the past twenty-five years, goal orientation theory has become an increasingly popular way to conceptualize why students are motivated to learn. Goal orientation theory attempts to explain not only *how much* but *what kind* of motivation a student possesses. Ames (1992) defined goal orientations as an integrated pattern of beliefs that leads to "different ways of approaching, engaging in, and responding to achievement situations" (p. 261).

Studies of students' motivation to achieve in their college classes, using various goal orientation frameworks, have proliferated over the past ten years or so. Student achievement goal orientations have been studied in the United States as well as around the world (Akira, 2005; Albaili, 1998; Wang & Biddle, 2003). Achievement goal orientations have been examined in relation to academic majors (Davis, Pastor, & Barron, 2004; Schmidt, Zdzinski, & Ballard, 2006), individual student demographic characteristics (Burley, Turner, & Vitulli, 1999; Hwang, Echols, & Vrongistinos, 2002), and student personality traits and behaviors (Howell & Watson, 2007; Karabenick, 2003; Vermetten, Y. J.; Lodewijks, H. G., & Vermunt, J.). However, little research has been conducted in the area of achievement goal orientation in face-to-face as well as online courses. A notable exception is a recent study by Owens (2006), who examined achievement goal orientation, learning strategies, and self-regulation in both face-to-face and online classes.

Like Owens's (2006) study, this study examined students' goal orientations in online and face-to-face environments using the 2 x 2 framework tested by Elliot and McGregor (2001) that includes four goal orientations: mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance. Mastery-approach goals have been described as goals in which students focus on attaining positive possibilities such as mastering a new task or improving their competence. Mastery-avoidance goals have been described as goals in which students focus on avoiding negative possibilities such as losing previously acquired skills or knowledge or becoming incompetent. Performance-approach goals have been described as goals in which students focus on attaining positive possibilities such as gaining favorable judgments of their competence from others. Performance-avoidance goals have been described as goals in which students focus on avoiding negative possibilities such as getting negative judgments of their competence from others.

Elliot and McGregor (2001) provided empirical evidence that mastery-approach goals were positively associated with deep processing. In contrast, mastery-avoidance goals were positively associated with disorganization, state test anxiety, worry, and emotionality. Performance-approach goals were positively associated with overall test performance. On the other hand, performance-avoidance goals were positively associated with surface processing, disorganization, state test anxiety, worry, and emotionality.

Unlike Owens's study (2006), this study also examined a possible fifth goal orientation: work-avoidance. Results of a study by Pieper (2004) provided strong evidence for work-avoidance as a fifth goal orientation. Work-avoidance goals, or academic alienation goals as they are often referred to by goal theorists, have been described as goals where students' main concern is not to develop their competence or demonstrate their competence to others but to "complete academic tasks with a minimum of effort" (Archer, 1994, p. 432). Work-avoidance has been associated with a number of maladaptive outcomes, including little use of effective study strategies, a negative attitude toward learning, and a preference for easy tasks over hard ones (Archer, 1994).

Method

Participants and Procedure

Five NAU instructors agreed to solicit participation in this study from students enrolled in their courses. Following approval by the Institutional Review Board, students enrolled in the two sections of each variety of introductory writing course--ENG 105: Critical Reading and Writing in the University Community online, ENG 105: Critical Reading and Writing in the University Community face-to-face, and HON 191: Seminar in Critical Reading and Writing II face-to-face--were invited to participate in the study in spring 2008. All students were provided with an Informed Consent form and, if they agreed to participate in the study, were administered the 24-item Attitude Toward Learning and Performance Questionnaire. Both the consent form and the questionnaire were embedded in the Blackboard Vista online course management system.

The questionnaire was administered via Flashlight, a web-based survey tool. Student responses were stored in a secure data file. Students were asked to provide their NAU ID for purposes of linking questionnaire data to demographic data, entering ACT/SAT scores, and final grades in the course that were collected from the student information system. A master data file was constructed from the two data sets: the questionnaire data and the student information system data. Only the principal investigator and key personnel had access to data from the questionnaire, the student information system, and the master data file. Course instructors did not have access to any data files.

Measures

Students were asked to complete a modified version of Elliot and McGregor's (2001) Achievement Goal Questionnaire (AGQ), retitled the Attitude Toward Learning and Performance Questionnaire. (See Appendix A of this report.) The original version of the Elliot and McGregor instrument consisted of three items representing each achievement goal orientation—mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance—for a total of twelve items.

The modified version of the AGQ includes revisions to the instrument incorporated by Finney, Pieper, and Barron (2004) and Pieper (2004, 2002). Specifically, Pieper added an item to each of the four goal orientation subscales to increase the reliability of the instrument as well as included four work-avoidance items in order to assess a possible fifth goal orientation. As stated previously, this revised twenty-item version of the AGQ was tested by Pieper (2004) and the results of this study provided substantial validity evidence to support a five-factor model of goal orientation: mastery-approach, mastery-avoidance, performance-approach, performance-avoidance, and work-avoidance. Additionally, four items were piloted in this study that are designed to assess academic engagement, a sixth possible goal orientation identified by Pieper (2004). Pieper argued that we should consider extending the goal orientation framework to include not only *why* students are motivated but also *how* or *at what level* they are motivated. While work avoidant or academically alienated students want to complete academic tasks with a

minimum of effort, academically engaged students give their full effort to and find pleasure in academic tasks.

Data Analyses

Three research questions were initially posed this study:

- 1) What kinds of goal orientations are held by students in each course variety?
- 2) Will students' goal orientations differ among the three course varieties?
- 3) What is the influence of students' goal orientations on success in each course variety?

It was expected that descriptive statistics would tell us about what kinds of goal orientations are held by students enrolled in each course variety. A series of one-way ANOVAs would allow us to look at differences in students' goal orientations among the three varieties of courses. Finally, simultaneous multiple regression, with entering ACT/SAT used as a control for cognitive ability, would show us the influence of students' goal orientations on student success in each course variety as measured by the final grade in the course.

Results

Measurement Properties

Prior to analyzing student performance on the Attitude Toward Learning and Performance Questionnaire (ATL), the reliability and validity of the instrument were examined. The total group of 57 NAU students who participated in the study was used for this analysis in order to maximize the number of usable cases.

Cronbach's coefficient alpha was calculated for each of the six subscales—mastery-approach, mastery-avoidance, performance-approach, performance-avoidance, work-avoidance, and academic engagement—in order to assess the internal consistency reliability of the subscales. Internal consistency reliability is an indication of whether the items in a subscale appear to measure the same construct.

Based on a previous study (Pieper, 2004), it was expected that the Cronbach's alphas for the five subscales—mastery-approach, mastery-avoidance, performance-approach, performance-avoidance, and work-avoidance—will be above .70, an acceptable level for making group interpretations. As expected, the Cronbach's alphas for all five subscales were above .70. Similar to Pieper's earlier findings, the internal consistency for the mastery-avoidance and performance-avoidance subscales was a bit lower than that of the other subscales. The internal consistency for the pilot academic engagement subscale was solid at .87. Cronbach's alphas for all six subscales are shown in Table 1 below.

Pearson's product-moment coefficient was used to compute the correlations among the six subscales in order to assess discriminant validity. Discriminant validity is an

indication of whether a subscale is theoretically related to but not redundant with other subscales that make up an instrument.

Table 1 shows the correlations between the six subscales. It was anticipated that results would be similar to those reported previously by Pieper (2004), with six out of ten correlations between the five subscales—mastery-approach, mastery-avoidance, performance-approach, performance-avoidance, and work-avoidance—being below .30, showing evidence that the five subscales are distinct. As predicted, six out of ten correlations were below .30. Moreover, the pattern of relationships between the subscales was very similar to Pieper's earlier study. Most notably, the work-avoidance subscale, as expected based on Pieper's previous study, was fairly strongly negatively correlated with the mastery-approach subscale at $-.70$. The pilot subscale measuring academic engagement was strongly positively related to the mastery-approach subscale at $.86$, indicating that the two subscales may, in fact, be measuring the same constructs.

Table 1

Correlations and Reliability for the Five Goal Orientations and Academic Engagement for Total Group

Variable	Mastery-approach	Mastery-avoidance	Performance-approach	Performance-avoidance	Work-avoidance	Academic Engagement
Mastery-approach	1.0	—	—	—	—	—
Mastery-avoidance	.16	1.0	—	—	—	—
Performance-approach	.12	.16	1.0	—	—	—
Performance-avoidance	-.22	.36**	.44**	1.0	—	—
Work-avoidance	-.70**	-.09	-.07	.32*	1.0	—
Academic Engagement	.86**	.15	.19	-.22	-.77**	1.0
Cronbach's Coefficient α	.87	.77	.87	.78	.79	.87

($N = 57$) * $p < .05$ ** $p < .01$

Response Rates

The number of students who responded to the request by their instructors to take the ATL was low overall and particularly low in the online course variety. Table 2 shows the number of students enrolled as of the first day of classes, the number of students who responded to the questionnaire, the response rate, and the number of usable cases for the group as a whole as well as for each course variety. Usable cases were those students who responded to all 24 items on the ATL.

Table 2

Number of Students Enrolled, Number of Respondents, Response Rates, and Number of Usable Cases by Group

	Total Group	Face to Face	Online	Face to Face Honors
# of Students Enrolled	133	46	51	36
# of Respondents	63	38	7	18
Response Rates	47%	83%	13%	50%
Usable Cases	57	34	7	16

Research Questions

Because there were fewer than 20 usable cases in the online and face-to-face honors course varieties and only 34 usable cases in the face-to-face courses, the number of research questions that could be answered was limited. The first research question, What kinds of goal orientations are held by students in each course variety? was answered with descriptive statistics with the caution that the online and face-to-face honors course samples were too small to make any generalizations based on their scores. The second question, Will students' goal orientations differ among the three course varieties? was not addressed. The third question, What is the influence of students' goal orientations on success in each course variety? was also not examined.

An additional analysis was conducted with some demographic variables of responders and non-responders within the online course variety in order to better understand what variables differentiated these two groups of online students. The online courses had the lowest student participation of the three course varieties.

Total Group and Course Variety Performance

Table 3 below shows total group and course variety performance on the ATL. As a whole, NAU students' performance conformed to results reported in previous studies of university students (Elliot and McGregor, 2001; Finney, Pieper, & Barron, 2004; Pieper, 2004). NAU students scored highest in the mastery-approach goal orientation. At the same time, similar to results of previous studies (Archer, 1994; Harackiewicz et al., 1997; Harackiewicz et al., 2000; Meece et al., 1988; Nolen, 1988; Pieper, 2004), NAU students scored lowest in the work-avoidance goal orientation. The mean score for academic engagement was the second highest score.

For the mastery-approach goal orientation, online students scored highest, followed by face-to-face honors students and face-to-face students. Face-to-face honors students scored highest on mastery-avoidance, followed by face-to-face students and online

students. Face-to-face honors students were highest in performance-approach, followed by face-to-face students and online students. Face-to-face students scored highest in performance-avoidance, followed by face-to-face honors students and online students. Face-to-face students scored highest in work-avoidance, followed by face-to-face honors students and online students. Online students scored highest in academic engagement, followed by face-to-face honors students and face-to-face students.

Table 3

Means and Standard Deviations for the Five Goal Orientations and Academic Engagement by Group

Variable	Possible Range	Total Group (<i>N</i> = 57)		F to F (<i>N</i> = 34)		Online (<i>N</i> = 7)		F to F Honors (<i>N</i> = 16)	
		M	SD	M	SD	M	SD	M	SD
Mastery-approach	4 - 28	23.49	3.99	23.09	4.20	24.57	4.58	23.88	3.38
Mastery-avoidance	4 - 28	11.56	5.18	11.41	5.08	10.14	4.98	12.50	5.61
Performance-approach	4 - 28	17.18	6.23	17.12	6.51	15.71	5.41	17.94	6.19
Performance-avoidance	4 - 28	14.80	6.07	15.47	5.89	11.71	6.05	14.75	6.42
Work-avoidance	4 - 28	12.33	5.28	12.88	5.52	10.00	5.57	12.19	4.64
Academic Engagement	4 - 28	21.07	4.88	20.71	5.20	22.00	5.77	21.44	3.88

Online Responders and Non-responders

An examination of the demographic characteristics of responder and non-responder students in the online course variety showed some differences between the two groups. Most notable were differences in age, gender, academic level, and first-generation status. The responders were older than the non-responders, with a mean age of 33, a minimum age of 25, and a maximum age of 53. Additionally, a greater percentage, 47%, of responders were males. The responders were also lower in academic level than the non-responders, with 57% of responders being freshmen or sophomores. Finally, fewer responders were first-generation college students compared to non-responders, with 14% being first-generation college students. Table 4 shows demographic characteristics for the two groups of online students.

Table 4

Demographic Characteristics of Online Responders and Non-responders

	Responders	Non-responders
Mean Age	33	29
% Male	43%	27%
% Underclassmen	57%	43%
% First Generation	14%	39%

Discussion and Implications

The Attitude Toward Learning and Performance Questionnaire showed good reliability and validity, based on the Cronbach's alphas for the five subscales as well as the correlations between the five subscales. Additionally, results from this study were similar to the results of previous studies using the mastery-approach, mastery-avoidance, performance-approach, performance-avoidance, and work-avoidance subscales of the ATL. For the pilot academic engagement subscale, the Cronbach's alpha was solid at .87. However, the high correlation of .86 between the academic engagement and the mastery-approach subscales may indicate that the two subscales are measuring the same construct. Further research will be needed with a larger student sample to determine if these two subscales are indeed redundant.

Regarding response rates for the questionnaire, the students in the face-to-face courses had a higher response rate (83%) than students in either the face-to-face honors (50%) or the online courses (13%). A possible explanation for these variations in response rates might be the method in which the ATL was introduced and administered in the three course varieties. In the face-to-face courses the instructors invited students to participate in the study during one of the computer lab sessions of the course. Students could then take the questionnaire at the lab computer, if they chose to do so. The fact that the instructors were in the lab with the students and the students were conveniently seated in front of a computer may have contributed to a higher response rate from the face-to-face course variety.

In the face-to-face honors courses students were introduced to the study both in class and via University e-mail and reminded periodically to take the questionnaire if they hadn't done so already. Students took the questionnaire online on their own time. Similarly, in the online course, students were invited to participate in the study via e-mail embedded in Blackboard Vista, sent periodic reminders, and were responsible for taking the questionnaire on their own. In both of these course scenarios, the instructors were not with the students and the students were asked to participate in the study on their own time. These factors may have contributed to the low response rates in these course varieties.

Examining the means for the total group of participating face-to-face, online, and face-to-face honors students, it appears that these students have a beneficial achievement goal profile. Similar to the results of previous studies with university students, NAU students scored highest in the mastery-approach orientation and lowest in work-avoidance orientation. What do these findings tell us about these students? First, they tell us that

these students are endorsing achievement goals that are connected with a number of desirable in-school and beyond-school outcomes. In school, mastery goals are related to students holding more positive attitudes towards learning, possessing intrinsic motivation, using deeper processing strategies, and choosing more personally challenging tasks (Pintrich & Schunk, 1996). Even more importantly, intrinsic motivation has been shown to relate to a willingness to go on learning throughout life (Ramseier, 2001).

Second, these findings tell us that these students do not strongly endorse work-avoidance goals. Again, this is desirable because work-avoidance goals are associated with a number of maladaptive outcomes, including negative attitudes towards learning (Archer, 1994), attributing success to luck rather than effort (Nicholls et al., 1985), lower engagement in learning activities (Meece et al., 1988; Meece & Holt, 1993), and little use of effective study strategies (Archer, 1994). Researchers have also found that students who endorse work-avoidance goals received the lowest grades in introductory and capstone psychology courses (Harackiewicz et al., 1997; Harackiewicz et al., 2000; Barron & Harackiewicz, 2003).

Interestingly, the students in online courses had the most optimal achievement goal profile, scoring higher on mastery-approach and lower on work-avoidance than students in the other two course varieties. However, with only 7 students responding to the questionnaire in the online group, it is difficult to make any generalizations based on these results.

Regarding mastery-avoidance goals, face-to-face honors students scored higher than the other two groups. These findings were not surprising when we consider the characteristics of the typical mastery-avoidant student: a “perfectionist” who strives to avoid making mistakes or doing anything incorrectly (Elliot and McGregor, 2001). These qualities are likely to correspond well with those of a student enrolled in the honors program at NAU. Face-to-face honors students also scored highest of the three groups on performance-approach goals. These results likewise make sense given that previous research studies have found that performance-approach goals are related to earning high grades in a class. It should be noted that with only 18 students responding from the face-to-face honors group, it is difficult to make generalizations based on these results. Face-to-face students scored higher than the other two groups on performance-avoidance. Performance-avoidance goals are generally associated with maladaptive outcomes, such as disorganized studying, poor retention of information, and reduced intrinsic motivation (Elliot, 1999). Further research will need to be conducted in order to validate these results.

Taken as a whole, this pilot study supported the reliability and validity of the ATL. The response rates of the total group and the three course variety groups were also reported, noting the particularly low response rate for the online group, and an additional demographic analysis was conducted with responders and non-responders in the online group. The first research question regarding what kinds of goal orientations are held by students in each course variety was addressed. The means of the goal orientations endorsed by all NAU students who participated in the study as well as smaller groups of

face-to-face, online, and face-to-face honors students were described. However, other analyses comparing the three different course varieties on each goal orientation could not be conducted. Additionally, the third research question examining the influence of students' goal orientations on success in each course variety could not be answered. Although some preliminary findings were discussed, no generalizations could be made to the larger student population because of the small student sample. Further study of NAU students' achievement goals with a larger student sample will need to be conducted in order to validate the results of this small pilot. A major consideration for future research will be the use of multiple strategies involving both instructors and students in order to motivate more students to participate in the study.

For now, how can we promote beneficial achievement goals among all NAU students? Unfortunately, very few studies exist that provide effective teaching strategies to promote optimal goal orientations in college students. However, research by Ames (1989) at the elementary school level did take the important step of connecting goal orientation research and theory with practical applications for classroom teachers. Ames used a framework of six facets of classroom management—task, authority, recognition, grouping, evaluation, and time (TARGET)—developed over the years with colleagues (Ames, 1990; Ames & Maehr, 1988; Powell, Ames, & Maehr, 1990; Tracey, Ames, & Maehr, 1990).

As Maehr and Midgley (1991) illustrate, classroom teachers define the nature of academic tasks. Tasks that provide students with challenging and engaging learning experiences promote optimal goal orientations. Teachers also make decisions about how authority will be handled in the classroom. When teachers distribute authority and share the responsibility for teaching and learning with students, they foster beneficial goal orientations. Teachers reward students for different reasons, and those who recognize students for progress or improvement support optimal goal orientations. Teachers also group students for different purposes. Teachers who emphasize group cooperation, collaboration, and problem-solving promote beneficial goal orientations. Teachers evaluate in various ways using various criteria, and those that give students opportunities to set goals for improvement and provide support for them to improve their performance foster optimal goal orientations. Finally, teachers choose to use classroom time in certain ways. Those that encourage flexible scheduling, personal goal setting, and individual progress support beneficial goal orientations.

In the college classroom, the TARGET framework can be adopted for both online and face-to-face classroom environments. For example, an online instructor might focus on the authority facet of the framework by incorporating an online discussion where students can ask questions of each other. A colleague of mine calls this "The Coffee Shop," and describes his discussion group as "a good place to post any general questions you might have." The instructor monitors the group, but it is more of a space for students to converse with each other. Thus, the responsibility for learning is shifted to the students. In a face-to-face classroom, an instructor might incorporate the grouping facet, for example, by building in group work and assessing not just student performance but also cooperation and collaboration. Another colleague assesses group work in her classroom

using a rubric. The rubric not only evaluates skills like problem-solving and critical thinking, but also group dynamics and conflict resolution.

Future Research Directions

This pilot study of students' achievement goal orientations and success in online and face-to-face introductory writing courses provides a basis for deepening and also broadening the study of achievement goal orientations at NAU. Within the English discipline, we might want to study additional student variables, such as course-taking histories, learning strategies, and self-regulation, and their relationship to achievement goal orientations and student success.

We may want to expand this study to other academic disciplines beyond English. Perhaps math and science gateway courses known for high DFW rates (that is, courses where a high percentage of students earn a grade of D or F or a high percentage of students withdraw) could be studied. Information regarding students' achievement goals in these classes would effectively complement previous studies of students and teachers in high DFW gateway courses (Benford & Newsome, 2006). We might also want to survey faculty regarding their perceptions of achievement goal orientations, their teaching philosophies, and their teaching practices.

A more ambitious research study could be designed as a three-semester project. The first semester would focus on developing and piloting a series of workshops for faculty based on the TARGET principles and designed to teach faculty practical strategies for promoting optimal goal orientations in students. Participating faculty would be assessed pre and post workshops to determine their attitudes towards achievement goal teaching practices.

The second semester would involve working cooperatively with a cadre of instructors of online and face-to-face courses across diverse disciplines—for example, English, biology, and art—and administering the ATL to students at the beginning and near the end of selected courses. At the same time, faculty would attend the previously developed workshops throughout the semester.

The third semester, students in these courses would once again take the ATL at the beginning and near the end of the course. During the course, however, instructors would incorporate into their classes the teaching strategies learned the previous semester. A number of research questions might be asked: How do students' changes in goal orientations during these two semesters compare? How do goal orientations of online students change compared to face-to-face students? How do changes in students' goal orientations compare across disciplines?

Such a study would allow us to “close the loop” in terms of assessing student achievement goal orientations. By examining the effectiveness of interventions designed to foster optimal student motivation, we would be able to make targeted improvements to

our courses and curriculum. As a result, we would be one step closer to achieving our University goal of improving student learning and success.

References

- Akira, N. (2005). Testing a hypothesized model of English language learning: Japanese university students' goal orientation, beliefs, and learning strategies. *Journal of Educational Psychology, 53* (3), 320-330.
- Albaili, M. (1998). Goal orientations, cognitive strategies, and academic achievement among United Arab Emirates college students. *Educational Psychology, 18* (2), 195-203.
- Ames, C. (1989) *School-home strategies to enhance motivation*. Unpublished manuscript, University of Illinois, Department of Educational Psychology, Urbana-Champaign.
- Ames, C. (1990). Motivation: What teachers need to know. *Teachers College Record, 91* (3), 409 – 421.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261-271.
- Ames, C., & Maehr, M. L. (1988). *Home and school cooperation in social and motivation development* (Project DE-H023). Washington, D. C.: U. S. Department of Education.
- Archer, J. (1994). Achievement goals as a measure of motivation in university students. *Contemporary Educational Psychology, 19*, 430-446.
- Benford, R., & Gess-Newsome, J. (2006). *Factors affecting student success in gateway courses at Northern Arizona University*. Unpublished manuscript, Northern Arizona University.
- Burley, R. C., Turner, L. A., & Vitulli, W. F. (1999). The relationship between goal orientation and age among adolescents and adults. *Journal of Genetic Psychology, 160* (1), 84-88.
- Davis, S. L., Pastor, D. A., & Barron, K. E. (2004, April). *Examining Goal Orientation Similarities and Differences Among College Majors*. Paper presented at the annual meeting of the American Educational Research Association, San Diego, CA.
- Elliot, A. J. (1999). Approach and avoidance motivation and achievement goals. *Educational Psychologist, 34* (3), 169-189.
- Elliot, A. J., & McGregor H. A. (2001). A 2 x 2 achievement goal framework. *Journal of Personality and Social Psychology, 80* (3), 501-519.
- Finney, S. J., Pieper, S. L., & Barron, K. E. (2004). Examining the psychometric properties of the achievement goal questionnaire in a general academic context. *Educational and Psychological Measurement, 64* (2), 365-382.

- Howell, A. J., & Watson, D. C. (2007). Procrastination: Associations with achievement goal orientation and learning strategies. *Personality and Individual Differences, 43* (1), 167-178.
- Hwang, Y. S., Echols, C., & Vrongistinos, K. (2002). Multidimensional academic motivation of high achieving African American students. *College Student Journal, 36* (4), 544-554.
- Karabenick, S. (2003). Seeking help in large college classes: A person-centered approach. *Contemporary Educational Psychology, 28* (1), 37-58.
- Maerh, M. L., & Midgley, C. (1991). Enhancing student motivation: A schoolwide approach. *Educational Psychologist, 26* (3&4), 399-427.
- Owens, K. (2006). Cyberspace versus face-to-face: The influence of learning strategies, self-regulation, and achievement goal orientation. (Doctoral dissertation, James Madison University, 2005). *Dissertation Abstracts International Section B: The Sciences and Engineering, 66*, 6288.
- Pieper, S. L. (2004). Refining and extending the 2 x 2 achievement goal framework: Another look at work-avoidance. (Doctoral dissertation, James Madison University, 2003). *Dissertation Abstracts International Section A: Humanities and Social Sciences, 64*, 4436.
- Pieper, S. L. (2002). *Understanding student motivation: A confirmatory factor analysis of the attitude toward learning questionnaire*. Unpublished manuscript, James Madison University.
- Powell, B., Ames, C., & Maehr, M. L. (1990, April). *Achievement goals and student motivation in learning disabled and at-risk children*. Paper presented at the annual meeting of the American Educational Research Association, Boston.
- Schmidt, C. P., Zdzinski, S. F., & Ballard, D. L. (2006). Motivation orientations, academic achievement, and career goals of undergraduate music education majors. *Journal of Research in Music Education, 54* (2), 138-153.
- Tracey, C. B., Ames, C., & Maehr, M. L. (1990, April). *Attitudes and perceptions of competence across regular, at-risk, and learning disabled students*. Paper presented at the annual meeting of the American Educational Research Association, Boston.
- Vermetten, Y. J., Lodewijks, G. G., & Vermunt, J. D. (2001). The role of personality traits and goal orientations in strategy use. *Contemporary Educational Psychology, 26* (2), 149-170.

Wang, C. K. J., & Biddle, S. J. H. (2003). Intrinsic motivation towards sports in Singaporean students: The role of sport ability beliefs. *Journal of Health Psychology, 8* (5), 515-524.

23. I look forward to working really hard in this class.
24. I'm afraid this class will be too challenging for me to master.