Overcoming Barriers of Tradition Through an Effective New Graduate Admission Policy

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Graduate Admissions and Success: Review of Potential Outcome Variables

Admissions criteria at most colleges and universities are based on expectations for traditional students who pursue graduate school shortly after completing their undergraduate education. Grade point average and standardized test scores (e.g., GRE, GMAT) typically determine students' opportunities for admission. With adult learners pursuing higher education, it is important to consider whether or not the same admissions criteria are appropriate for traditional and nontraditional students. Since adult learners have different experiences than traditional students, many educational institutions have begun to adjust admissions requirements in order to consider not only cognitive abilities as measured by standardized tests but also work and life experiences that will allow them to integrate the practical world with their academic pursuits. At Chapman University College, a portfolio admissions option for graduate students was initiated to reach out to adult learners and nontraditional students who do not meet traditional admissions criteria. Chapman University is a private university in Orange, California consisting of seven colleges. One of the colleges, Chapman University College (CUC), has been serving the unique needs of adult learners for 50 years. CUC offers undergraduate and graduate degrees to 6,000 students in arts and sciences, professional studies, and education. In addition, teaching credentials and extended education are offered at campuses throughout California and Washington. This study compares graduate students admitted through the portfolio method to those students admitted through traditional means of graduate exams/grade point average. The intent was to determine if the alternative admissions method predicted graduate school success as well as traditional methods.

Graduate Admissions and Success

While the traditional measure of the GRE is known to be a valid predictor of success for graduate school, GPA, and other performance criteria, it is not proven as a predictor of "real world" success (Edwards & Schleicher, 2004; Kuncel, Hezlett, & Ones, 2001). In a study of over 80,000 students, researchers concurred with many prior studies that the GRE is a valid predictor of performance items such as GPA, comprehensive exams, and faculty ratings (Kuncel et al., 2001). However, performance measures related to interest, independence, and motivation are better assessed by other measurements, such as personal statements and letters of recommendation. It is important to note that these typical predictors such as standardized exams and grades only tell part of the story in predicting graduate school success. For example, writing samples and work experience were also cited as useful predictors of graduate school success (Kuncel et al., 2001; Wagner & Sternberg, 1985). The practical abilities that help students succeed in their work are better predicted by motivation and the ability to apply knowledge. Therefore, it is valuable to consider

measurements that can assess motivation and application of learning.

While the GRE is an admissions requirement or option for many graduate school programs, other standardized tests are used for specialized programs or schools outside of the United States. In a study of admissions requirements for a specialty program, Halberstam and Redstone (2005) investigated which admissions variables best predicted student success for students enrolled in a graduate school program for speech-language pathology. Predictor variables included undergraduate grade point average, undergraduate grade point average for prerequisite courses for the major, age, undergraduate major, status of English as the first language, letters of recommendation, personal essays, and prior work experience. Success was measured by the graduate GPA. A correlational analysis showed that the GPA for program prerequisites, the quality of the personal essay, the undergraduate GPA, and the letters of recommendation were correlated with graduate GPA. In this study, age and work experience were not correlated to the graduate GPA. The implication is that maturity does not contribute to success at least for this major. This study had some limitations that may have affected the results. The sample size was small (23). Additionally, students admitted to the program were accepted based on good undergraduate GPAs, so there is a restriction of range for GPA. This study was also targeted to a very specific graduate program and may not generalize to other graduate work. The study did show the value of letters of recommendation and essays for predicting success. This aspect has implications for the current study, which includes these predictors as part of the portfolio process.

Like Haberstam and Redstone (2005), many studies show that multiple predictors often work together to point to a successful outcome. Overall GPA and standardized test scores appear to be the best predictors of graduate school success, particularly in combination. In a study specific to business school admissions, Sireci and Talento-Miller (2006) studied the predictive validity of the Graduate Management Admissions Test (GMAT). They considered how much GMAT scores and undergraduate GPA contributed to performance in business school, as measured by first-year graduate GPA. Researchers broke down the GMAT scores by verbal, quantitative, and analytical writing. In a regression analysis, they found that verbal and quantitative scores represented 16% of the variance in graduate GPA. When undergraduate GPA was added to the analysis, GPA and the test scores accounted for about 25% of the variation for first-year graduate GPA. The analytical writing score did not help predict GPA. However, only three of the eleven schools participating in the study reported data for this component

of the GRE. Like the Halberstam and Redstone study, this study has a limitation of restriction of range because the students in the study were already accepted to one of the participant universities. They, therefore, must already have acceptable GPAs and GMAT scores for admission. This limitation is a general challenge for studies of admissions criteria.

Researchers at the Rand Graduate School of Policy Studies found that the quantitative GRE score was the most important criterion for areas of student success such as GPA and attrition (Vernon, 1996). Quantitative GRE scores also best predicted the average committee rating of an applicant as well as admissions status. However, researchers found that although the absolute variables were sound and true predictors, use of admissions committee ratings enhanced admission predictability. This reflects the benefit of using a combination of absolute measures and relative evaluation.

Brown (2007) noted that while GRE is a good predictor of first year graduate grades and other grades in graduate school, identifying good predictors depends upon the definition success. Brown calls for a broader definition of success which includes success in one's career as opposed to a GPA in graduate school. It is the complex soft skills that capture the true essence of success. These skills are more difficult to quantify, and, therefore, predict with standardized tests.

A summary of studies completed by the Graduate Admissions Council's Validity Study Service supports the findings previously discussed (Sireci & Talento-Miller, 2006; Talento-Miller & Rudner, 2008; Vernon, 1996). Between 1997 and 2004, 273 studies addressing the GMAT as a predictor of graduate school performance were examined (Talento-Miller & Rudner, 2008). The Graduate Admissions Council offers their validity service to any school that would like to determine if the GMAT is a valuable tool for its admissions process. The interquartile range of the validity coefficients for the GMAT scores combined with undergraduate GPAs as predictors of first year GPAs was .45 to .63. Considering the many variables contributing to student performance, these coefficients are impressive. There was variability by type of program. Coefficients were higher for executive MBA programs than for full-time or part-time programs.

In a study of standardized tests for medical school in Australia, researchers used clinical reasoning and diagnostic thinking as outcomes rather than GPA (Groves, Gordon, & Ryan, 2007). They sought to determine if graduate school interviews and scores on the Graduate Australian Medical School Admissions Test (GAMSAT) were associated with test scores on Clinical Reasoning Problems (CRPs), a Diagnos-

tic Thinking Inventory (DTI), and their exam after the end of their second year. They found no association between scores on the GAMSAT and the CRPs. A weak negative correlation was found between the GAMSAT and the DTI as well as between the GAMSAT and the second year exam scores. A weak positive correlation was found between the interview scores and the GAMSAT for one of the schools in the study, and a weak negative correlation was found for these same variables for the other school. Researchers concluded that the GAMSAT is a measure of knowledge that cannot predict skill for reasoning or practicing diagnostics in the context of medical school. This study is unique in that medical schools, in contrast to other schools, are seeking students who can apply knowledge to practice. However, it is an interesting consideration as schools and students are looking for opportunities to apply knowledge rather than demonstrate it on tests. It is more challenging to find predictors of the ability to practice skills, particularly with objective measures.

Nontraditional Students and Admissions

Traditional admissions criteria rely on students' ability to demonstrate knowledge with high undergraduate GPAs and good scores on standardized tests. These requirements limit opportunities for students whose GPAs from undergraduate school may not reflect their true potential at the time of application to graduate school. Since their undergraduate education, adult learners may have gained study skills and focus that may help them achieve high GPAs in graduate school. Experienced or mature students may also have the ability to demonstrate applied knowledge which is not necessarily measured on standardized tests. The following discussion will review adult learners and their unique characteristics along with likely predictors of success. An explanation of admissions criteria for CUC in the study follows. It includes detail about the portfolio alternative available for students who would likely not be admitted through grade point averages or standardized tests.

Adult Learners

Adult learners challenge educators as a result of their prior experiences. As compared to traditional students, they have richer personal and professional histories, and that background affects the context in which they learn. Adult learners tend to be more practical about their education because they need to focus while facing competing obligations of their work and family commitment (Sachs, 2001). Nontraditional students typically have more practical

reasons to attend college, and they seek information that will apply to their lives. They also have greater past experience to integrate into their learning process. Additionally nontraditional students tend to maximize the time they are in school to make the most of their interactions with peers and instructors (Bradley & Graham, 2000). The ability to focus and apply their schooling directly to their lives helps to outweigh the barriers that can make education more difficult for nontraditional students. Nontraditional students face challenges such as family responsibilities, work commitments, financial concerns, and lack of opportunity to participate in the social aspects of traditional education. Sometimes colleges are also not as accommodating of nontraditional students in terms of availability of student services (Fairchild, 2003). Students may need to take additional initiative to navigate the administrative aspects of their schooling, such as financial aid and registration procedures.

Adult students often see their schooling as helping them transition from one phase of life to another. Many adult students are already involved in a personal transition such as a career change or divorce (Compton, Cox, & Laanan, 2006). Due to their experience and other life priorities, Sachs (2001) suggests that when compared to traditional students, adult learners are more interested in meeting qualifications for their degrees and in being thought of positively by their peers and colleagues. They are less likely to be afraid of failure than undergraduates, although they may be motivated by fear of embarrassment. Nontraditional learners appear to have different motivation to succeed in their studies than traditional students.

Alternative Predictors of Success

In order to break down the barrier of admissions requirements, it is important to determine alternatives to the GRE and GPA in predicting success in graduate school. One possibility may be tacit knowledge, which is the applied knowledge that is not often stated but rather intuited as a judgment that is understood without formal education (Wagner & Sternberg, 1985). Edwards and Schleicher (2004) hypothesized that tacit knowledge would help to predict graduate school performance and could be used as admissions criteria. In a study of 70 psychology graduate students, they found that tacit knowledge went beyond the GRE in predicting success, which was measured by a performance appraisal system completed by faculty members. Tacit knowledge is a practical construct as compared to an academic construct.

Ridgell and Lounsbury (2004) sought academic success predictors other than general intelligence and found

that work drive, as measured by the Lounsbury and Gibson's work drive measure accounted for up to 14% of the variance in predicting GPA and grade in a single course. Work drive was a significant predictor after factoring in cognitive ability. Work drive can be likened to a students' motivation to succeed.

Gaston-Gayles (2005) studied 235 college student athletes with the intention of measuring academic and athletic motivation of college athletes. The scale included 15 items designed to measure academic motivation and 15 items created to assess athletic motivation. Gaston-Gayles later used the scale to identify the predictive value of academic motivation on college grade point average. Academic motivation was determined to be a significant factor in predicting GPA.

A number of researchers have discovered that there is a relationship between academic self concept and academic performance. Gerardi (2005) found that academic self concept was a better predictor than traditional cognitive skills for minority and low income students in an urban technical college. House (1995) looked at the relationship between student self-concepts and achievement in college math classes. He found that the self-rating of overall academic ability was the best predictor of achievement in calculus. In later research, House (2000) studied the relationship between student involvement and academic self-concept. While there was a weak relationship found, leading only to tentative conclusions, House discussed the scale used to assess academic self-concept. It included ratings on five items: drive to achieve, mathematical ability, writing ability, creativity, and confidence in their intellectual activity.

Academic self-concept is similar to self-efficacy, one of the variables reviewed in Spitzer's (2000) study of predictors for GPA and career decidedness for traditional and nontraditional college students. Based on prior studies, Spitzer suggested that academic self-efficacy, intrinsic motivation, and self-regulation would be the major predictors of academic success as measured by GPA. Spitzer defines academic self-efficacy as "one's confidence to succeed at the academic tasks rather than one's actual ability" (p. 84).

In contrast to emphases on self-efficacy and motivation, Kelly (2004) considered a more unique variable and its relationship to performance and achievement. There has been limited research on time use efficiency at all, and certainly little research addressing time efficiency and academic performance. In a study of 141 undergraduate students at a small public university, Kelly administered surveys and scales to determine grade point average, social desirability (to assure that the self-report GPAs were accurate), and the seven-item Time Use Efficiency Scale

(TUES). Researchers found that individuals with higher time use efficiency scores also produced better GPAs. Time efficiency is likely to come with work experience.

In a review of literature addressing graduate student success, there were two clear conclusions. First, the majority of research addresses undergraduate students. Second, the outcome variable used to measure success is almost exclusively GPA. In graduate school, the only passing grades are "A" and "B;" therefore, using GPA as the outcome variable risks limited conclusions due to restriction of range. For this reason, the current study includes additional outcome variables to compare students. One variable is the pace of credit accumulation, which relates to the time efficiency. While Kelly (2004) applied it as a predictor, this study considers it as an outcome variable. This study also considers the use of motivation and self-concept applied as predictor variables in prior research (Gaston-Gayles, 2005; Haimov & Lavie, 1996; Michie, Glachan, & Bray, 2001; Reeves, 2005; Ridgell & Lounsbury, 2004; Spitzer, 2000). These concepts may relate to the components of the scoring rubric, and they were included as another variable to support the comparison of the two groups of students.

Statement of the Problem

The use of standardized tests and grade point averages emphasize prior educational experience as the primary measure for admission to graduate school. For nontraditional students, formal education may be in their distant past. However, informal experiential education is ongoing and occurs through work experiences and life experiences that are not easily measured by grades or tests. The challenge for graduate programs is to develop admissions criteria that allow qualified students to enroll even if their undergraduate grades and/or standardized test scores do not meet requirements set for traditional students. However, without "cutoff" numbers for admissions, how do programs determine if the candidates are qualified? Several studies suggest that graduate school success can be predicted by subjective measures such as committee reviews and writing samples (Kuncel et al., 2001; Vernon, 1996; Wagner & Sternberg, 1985). This study considers the use of a portfolio option to assess students' qualifications, and it compares students admitted through this option with students who are admitted using traditional criteria. The items assessed in the portfolio are scored using rubrics developed by the institution. Details of the portfolio admissions process are described in the Methods section.

Prior to 2003, Chapman University College followed the inherited traditional campus criteria of undergraduate GPA and GRE scores for admission to graduate school. Though the premise may be debated, the purpose of criteria for graduate admissions was to accurately predict success in graduate school. However, for adult learners who may have completed their undergraduate degree 20 years ago, use of undergraduate GPA may not reflect one's readiness for graduate school. In addition, the predictability of standardized tests for adult learners was suspect. For these reasons, a portfolio option for admission to graduate programs was adopted.

Research Questions

Researchers compared students admitted through the portfolio option with students admitted based on GPA or GRE scores. Outcome variables included GPA, self-concept, rate of earning credits, and qualitative attitudes. The specific research questions are as follows:

1) Do portfolio students significantly differ in age and GPA at entry?
2) Do portfolio students significantly differ in academic self-concept?
3) Do portfolio students significantly differ in graduate GPA?
4) Do portfolio students significantly differ in credits earned at the time of measurement?
5) Do traditionally admitted students show qualitative differences in attitudes toward school when compared with portfolio students?

The overall purpose of the study is to determine if the portfolio option is as effective as the traditional admissions options in predicting the success of graduate students.

Methods

The current study compares the success of graduate students who were admitted based on traditional predictors, such as the GRE, to students who were admitted based on personal statements, recommendations, and evidence of work application at Chapman University College. This evidence is submitted in the form of a portfolio demonstrating their readiness for graduate school. The Graduate Admissions Committee then reviews the portfolio and uses a scoring rubric to render admission status. The methodology is a quasi-experimental comparison group design.

Admissions Options

Chapman University College has four different admissions options for graduate study. The first three options are traditional methods. Option 1 requires a 3.0 GPA in primarily undergraduate work. Option 2 requires a GPA between 2.5 and 2.99 and a satisfactory score on a graduate exam such as the GRE or GMAT. Option 3 requires a 3.5 GPA on an advanced degree. The fourth option is designed for a more nontraditional admit who is likely choosing to attend graduate school later in life and/or did not excel in prior GPA records or on graduate exams. These prospective students may choose to be admitted by submitting a portfolio that contains work products showing their experience.

Data of students admitted to graduate school through the portfolio option ($N = 128$) have revealed interesting results. Students' strongest skills were found in Degree Expectation and weakest abilities were in Graduate Level Writing. All five of the areas of the scoring rubric were significantly related to Graduate GPA. Most noteworthy is the lack of significance found between entry level GPA and graduate level GPA ($r = -.085$, ns) (Dodge, Graham, & Derwin, 2007). The researchers wished to extend these results to explore whether or not these students were as prepared as students who were admitted via traditional criteria.

Portfolio Process

Students who select option 4 submit their portfolio to the admissions office. Each committee member reviews the portfolio, and the committee discusses the applicant's fit for graduate school. Special consideration is given to a student's work experience and writing skills. The profile of skills on the rubric is used as the basis for committee discussion of each student's strengths and weaknesses. Following discussion, committee members individually score each portfolio on a five-point scale in the following categories: field relevant experience, degree expectations, general experience, graduate level writing, and analytical/conceptual ability. Each category ranged from 1 to 5, with 1 showing poor evidence of skills and 5 demonstrating the best evidence of the skills being assessed. Table 1 shows the description, category, and score for one of the categories of the scoring rubric: Field Relevant Experience. The detailed description in the rubric assists the committee members in reliable scoring. The committee's rich discussion and the student's profile of skills are used to render the final decision of admissions.

Table 1. Sample Scoring Rubric: Field Relevant Experience

Description	Category	Score
Candidate has extensive post-baccalaureate professional experience in related field. Indicators of excellence in field.	Absolutely Supportive	5
Candidate has some post-baccalaureate professional experience in related field. Indicators of success in the field.	Very Supportive	4
Candidate has little post-baccalaureate professional experience in related field. Candidate may demonstrate some success in unrelated field.	Moderately Supportive	3
Candidate lacks post-baccalaureate professional experience in related field. However, candidate demonstrates some success in unrelated field.	Mildly Supportive	2
Candidate lacks post-baccalaureate professional experience in related field or unrelated field.	Clearly Not Supportive	1

Participants

All option 4 (portfolio admission) students were included in this study. Students admitted through options 1-3 were randomly selected because of the large number of students in this group. The groups are expected to be similar, but it cannot be assured that the two groups being compared are equivalent (Stangor, 2007).

Completed surveys from 99 students were returned. The response rate was 31% for the traditional admits (N=39) and 46% for the Portfolio Admits (N=60). Participants were graduate students at Chapman University College, with 30 academic campuses/sites located in California and Washington. Programs are designed for nontraditional adult learners who are returning to higher education after being away for a period of time or those who did not attend college immediately after high school and are seeking to begin their higher education. Students were admitted to one of twelve graduate programs, including emphases in psychology, counseling, education, human resources, organizational leadership, health administration, and criminal justice.

Outcome Variables

The Academic Self-Concept Scale (ASCS) designed by Reynolds (1988) was selected by the researchers as an outcome variable. In developing the scale, Reynolds estimated an internal consistency reliability of .91. He determined the validity by correlating the ASCS with GPAs and their scores on the Rosenberg Self Esteem scale (Michie et al., 2001). The survey included 40 Likert scale questions slightly adapted with permission from the original survey. The only adaptation was a change from the word, "parents" to "family" in a question addressing the family's satisfaction of the student's grades to better represent this nontraditional sample.

The survey also included six open-ended questions developed by the researchers in order to gather quantitative data. The questions addressed (a) students' reason for attending graduate school, (b) when students consider themselves to be successful, (c) how students could have been more prepared for school, (d) what students' top three priorities in life are, (e) the activities that interfere with school, and (f) why earning good grades is important to students.

The open-ended questions were analyzed using SPSS text analysis. Responses to each question were entered into an Excel spreadsheet by group (Option 4 and Options 1-3). They were then imported into SPSS Text Analysis for Surveys (version 2.0), a program released in 2006 designed for analyzing short written responses to surveys. Key terms emerged from the data analysis in the form of frequencies. The program actually counts the number of times key words are stated by group. For instance, all of the responses to participants' top three priorities in life were imported into the program. The frequency count will display words like "family" and a count of how many times family was mentioned for portfolio students as well as how many times it was stated by traditionally admitted students. Words with similar definitions were merged into one category. For example, "job" and "work" were considered to be the same. This type of qualitative analysis allows the researcher to interpret the meaning of participants' responses.

Data were collected on each participant for the following variables: GPA at entry, GPA at time of measurement, credit earned, gender, major, campus, age, and term start date. An independent samples t-test was computed to determine statistical significance for each variable. While the

proposed study explores GPA, it is not an ideal outcome variable due to the restriction of range with grades being "A" and "B" only. Therefore, researchers added the academic self-concept scale, open-ended questions, and number of units completed in a finite period of time.

Procedure

The College Attitude Survey (Reynolds, 1988) was mailed to 256 students, although one was later determined to be a duplicate. Half of the group were students admitted through Option 4. Half were randomly selected from students admitted through options 1-3. Participants were admitted during a three year period. The survey included a letter describing the project and an informed consent form to be returned with the survey. Prior to implementation, the project was approved by the University Research Board.

Results

The results for the quantitative questions are stated below and shown in Table 2. The results for the qualitative attitudes toward school are described in the following section as well.

group on the College Attitude Survey (t= -.774, p=.194). The portfolio group mean was 128.98, and the control group mean was 126.71. This result indicates that portfolio and traditionally admitted students have similar views on the perceptions of themselves as college students, their workload, their study habits and other attitudes.

GPA at Measurement

Results showed a significant difference between the portfolio group and the traditional admit group in the GPA at the time of measurement. The mean GPA for the portfolio group was 3.74, and the mean GPA for the traditional admit group was 3.85 (t= -4.05, p<.01). The effect size for the t-test was .54, showing that the difference, though significant, was small and not meaningful.

Earned Credits

Was there difference in the number of credits earned by the portfolio group vs. the traditional admit group at the time of measurement? There was no significant difference between the two groups (t=1.18, p=.76). The mean earned credits for the portfolio group was 24.22, and the mean for

Table 2. Portfolio vs. Traditional Admissions

	Portfolio		Traditional		
	Mean	Standard Deviation	Mean	Standard Deviation	T-test
Age	41.50	9.49	36.70	9.96	2.39*
GPA Entry	2.60	.30	3.45	.25	15.13**
Academic Self-concept	125.98	13.17	126.71	14.88	-.77
GPA at Measurement	3.74	.23	3.85	.27	-4.05**
Earned Credits	24.22	12.80	22.16	15.02	-1.18

* p<.05. **p<.01.

Age and GPA at Entry

Are portfolio students significantly different in age and GPA at entry? The portfolio group had a significantly higher average age than the traditional admit group. The portfolio age was 41.5, and the traditional admit group's age was 36.7 (t=2.39, p<.05).

The portfolio group had a significantly lower GPA at entry than the traditional admit group's GPA. The portfolio GPA mean was 2.60, and the traditional admit group's GPA mean was 3.45 (t=15.13, p<.01).

Academic Self-Concept. There was no significant difference between the portfolio group and the control

the control group was 22.16. The result indicates that each group maintained the same pace in accumulating graduate credits.

Attitudes toward school. SPSS Text Analysis was used to group responses into categories and compare the results for the qualitative responses. Several similarities between the two groups emerged. For example, both groups felt that they were prepared to succeed in school. Additionally, both groups expressed that the main activities that interfered with their school work were their jobs and family. Each group primarily stated that earning good grades is important because they received recognition and

felt a sense of accomplishment. Both groups cited the same priorities in the same order. Family and friends were the first priority followed by career and then education.

In terms of noticeable group differences, the portfolio students most often cited reaching goals and career development as the most important reason to be in graduate school. The traditional admits most often cited reaching goals and earning a degree as the most important reason to be in graduate school.

When asked how they define success in graduate school, the portfolio students defined success as learning with achieving good grades and completing the program as secondary, while the traditional admits most often stated that achieving good grades and completing the program defined success with learning mentioned less frequently.

Discussion

With the higher age of the portfolio students, one could consider classifying different levels of nontraditional students. The portfolio students seem to demonstrate the characteristics of nontraditional students more than the adult students who chose options 1, 2, or 3. It is not surprising that older students chose the portfolio option 4 since they were likely away from school the longest and were more likely not to have the sufficient scores or grades to be admitted more traditionally. Chapman University College requires that portfolio students have career and life experiences prior to admission, which may also account for the age difference. It is not surprising that the portfolio group had a significantly lower GPA at entry than the traditional admit group's GPA. Since their entry level GPA was not high enough to allow them admission through another option, their scores were likely to be lower.

Due to the restriction of range, the difference in GPA at the time of measurement was significant but not meaningful. Therefore both groups were enjoying similar success as measured by GPA, showing that the portfolio method was valuable in predicting students' success. Similarly, based on the credits earned, each group was maintaining a successful pace in progressing through their programs. These results reinforce the university's continued use of the portfolio.

Both groups showed similar views on the perceptions of themselves as college students, their workload, their study habits, and other attitudes. It is encouraging that both groups were similar in their self-concept. There were also several similarities in the quantitative measure using open-ended questions. The groups were similar in their distractions from school, their perception of their preparation for graduate school, and their desire for

external recognition as well as the internal feeling of accomplishment. The similarity of outcomes for both groups reinforces the value of the portfolio admissions criterion.

The differences between both groups when reviewing the open-ended questions were consistent with previous research. Responses showed that the goals of the portfolio students were more career oriented and focused on practical career success than those admitted traditionally. Since this group likely is older than the control group and has larger gaps between high school and higher education, this result supports the expectation that nontraditional students focus on practical needs (Edwards & Schleicher, 2004; Kuncel et al., 2001). In terms of noticeable group differences, the portfolio students most often cited reaching goals and career development as the most important reason to be in graduate school.

When asked how they define success in graduate school, the portfolio students defined success as learning, with achieving good grades and completing the program as secondary. The traditional admits most often stated that achieving good grades and completing the program defined success with learning mentioned less frequently. This result shows the portfolio students are more intrinsically motivated by enjoyment of the learning than traditional students. Prior research supports the higher incidence of intrinsic motivation among nontraditional students when compared to traditional students (Bye, Pushkar, & Conway, 2007). Although both groups can be defined as "adult" or "nontraditional," the students who chose option 4 are more likely to match closely to adult learner characteristics as they are older and likely to have more work experience than those who chose a more traditional option.

Conclusion

The current research showed that portfolio submissions predict success, as measured by GPA and credit accumulation, as well as more traditional admissions criteria. With nontraditional students focusing on the application of learning to career goals, it would also be valuable to implement additional research to determine if tacit knowledge and practical knowledge can predict success. The current scoring rubric seems to address these measures, but further research could determine if the portfolios address these skills sufficiently. Are there additional criteria needed to assure predictability of student success? Since motivation and drive are also cited as predictors of success, it would be valuable to review the portfolio requirements to determine if evidence of these characteristics is being collected and weighted as part of the portfolio process.

It would also be helpful to continue to seek appropriate measures of success, since GPA and credit counts are limited in range. Perhaps there should be rubric oriented success measures similar to the rubric oriented predictors that are completed by faculty who oversee cumulative projects and that are completed by employers. The researchers could consider the model used by Edwards and Schleicher (2004) to determine if there is an appropriate application. Self assessments could also be completed by students to attempt to measure their success longitudinally after graduation. However, it is much more difficult to track success once a student is no longer enrolled.

Overall, it is quite encouraging that the portfolio admissions options appears to be admitting students who are equally prepared to those admitted traditionally. Students admitted by portfolio were found to be more alike then different from students admitted through more traditional approaches. The portfolio option appears to be a good predictor of success in graduate school for adult learners. The small university studied was indeed able to overcome barriers of time, placed and tradition in order to encourage lifelong learning, thereby implementing CAEL's outreach principle (http://www.cael.org/alfi/principle.html).

Continued research and data collection can help to assess if there are opportunities to improve the rubric and portfolio review process by focusing on known predictors of success. Additionally, researchers should continue to pursue appropriate measures of success such as faculty or self assessments and longitudinal surveys.**JCHE**

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