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Graduate-level expectations, satisfaction, and outcomes

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GRADUATE-LEVEL EXPECTATIONS, SATISFACTION, AND OUTCOMES

A Thesis

Presented to

The Faculty of the Department of Psychology

San Jose State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science

by

Jon Burton

May 2001

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ABSTRACT

Graduate-Level Expectations, Satisfaction, and Outcomes

By Jon Burton

Qualitative research methods were used to assess former SJSU MS I/O students' expectations of graduate school, impact of program, career outcomes, and program evaluation. Results indicate that former students had an expectation to and did acquire job-related skills. Respondents who have not finished their degree cite lack of faculty support, difficulties with the thesis process, and a commitment to full-time employment as a major reason for their incomplete degree. While respondents liked the faculty, coursework, and applicability of the program, they reported frustration with the thesis process and small number of faculty members. In addition, students noted specific problems with instructors. More than half (54.5%) of students entering the MS I/O program at SJSU have completed their thesis and graduated. Finally, the career objectives of SJSU MS I/O students changed during their internship or within two years of finishing the program because they saw greater opportunity elsewhere.

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DATE: May 24, 2000

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“Scholastic satisfaction and work outcomes for Industrial/Organizational Psychology master’s level students.”

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to any and all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Nabil Ibrahim, Ph.D., immediately. Injury includes but is not limited to bodily harm, psychological trauma and release of potentially damaging personal information. This approval is in effect for one year, and data collection beyond May 24, 2001 requires an extension request.

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Graduate-Level Expectations, Satisfaction, and Outcomes

According to Pace (1984), "studies of college graduates, so-called alumni studies, are usually cited as providing the ultimate proof of the outcomes of higher education" (p. 14). Despite the stated importance of alumni studies, they are conducted relatively infrequently compared to other types of educational assessments such as the end of course survey, thesis, standardized test, and exit interview (Jackson & Griggs, 1995). While over 80% of American colleges and universities have implemented some type of assessment measure (El-Khawas, 1990), relatively few institutions assess their alumni. Nevertheless, it appears that the popularity of alumni studies is on the rise. In 1989 El-Khawas reported that 22% of public 4-year colleges and universities conducted alumni surveys. A decade later Rybacki and Lattimore (1999) found that 45% of graduate and undergraduate Public Relations programs conducted alumni surveys. The increased frequency at which alumni studies are being conducted is encouraging to universities and students alike. As more and more universities study their alumni, universities will be able to tailor their programs to the needs of their students. This paper assesses the educational satisfaction, thesis completion rates, career outcomes, and satisfaction of former Masters-level Industrial/Organizational Psychology graduate students at San Jose State University.

Why Not Assess?

There are many reasons universities do not assess their alumni. As noted by Rybacki and Lattimore (1999), "assessment is important, but it takes resources" (p. 75).

It takes a good deal of time to create a survey instrument, administer it, and analyze results.

College and university professors are already overworked with the responsibilities of teaching, research, professional development, and providing guidance and counseling to students. In addition, graduate-level professors also have the added responsibility of serving on thesis committees. When assessments are conducted at universities, they are often done at the expense of the previously mentioned responsibilities or at the expense of the professor's work and life balance. Until colleges and universities are able to devote more resources to alumni assessments, they are likely to be relatively uncommon compared to other forms of student assessments such as the end of course survey, thesis, standardized test, and exit interview.

Another common reason to not conduct alumni evaluations is the questionable validity of student feedback. According to Aleamoni (1981), student ratings have been described as both "reliable, valid, and useful" and "unreliable, invalid, and useless (p. 111)." As recently as 30 years ago, the prevailing belief among researchers was that student ratings were invalid. Snyder and Clair (1976) stated,

The present evidence, then, supports a notion that a teacher can get a "good" rating simply by assigning "good" grades. The effect of obtained grades may bias the students' evaluation of the instructor and therefore challenges the validity of the ratings used on many college and university campuses (p. 77).

A final reason for not conducting alumni studies is a fear of feedback. Student ratings are increasingly being used in faculty pay, promotion, and tenure decisions. Thus, some departments may avoid feedback they will receive from their students.

Reasons to Conduct Alumni Studies

Despite the reasons not to assess alumni, there are many compelling reasons for colleges and universities to conduct follow-up studies with their alumni. First and foremost, the best way to find out about the quality of college education is to ask directly to the students themselves. Who knows more about the quality of education than the person receiving the education? As noted by Kuh (1981), studies of alumni are thought to be one of the richest sources of information about colleges as students are the group most affected by teaching.

Another key reason to assess alumni are government regulations requiring public universities to be more accountable to taxpayers and to those paying for the education (e.g., the parents of the student and/or the student themselves). These regulations are in part the result of the Department of Education's "A Nation at Risk" (1983) report. This report noted that the United States was losing its place as a leader in the world economy and recommended continuous improvement of our nation's colleges through evaluation. Since this report, over 40 states have passed laws mandating higher education accountability (Ciereszko, 1987; Blumenstyk, 1988; Halpern, 1988; Sheehan, 1994). For some universities and colleges, part of this educational accountability includes alumni surveys. While California has no specific legislative or board mandates requiring student assessment for universities, the California State University system (CSU), of which San Jose State University is a member, has decided to take a preemptive action on an assessment policy rather than waiting for a policy to be politically determined (California State University Institute for Teaching and Learning, 1992).

Additionally, alumni studies are conducted to appease accrediting agencies, such as the American Psychological Association. These agencies require alumni surveys as part of the accreditation process (Halpbern, 1987, 1988; Rybacki & Lattimore, 1999). Thus, assessment forces academic institutions to be accountable. Moreover, alumni surveys are used to provide valuable student feedback to faculty. As part of an ongoing process, alumni surveys can be very useful in department planning and improvement.

Lastly, Stutler and Calvario (1996) cite a practical reason to conduct alumni evaluations. They report that “satisfaction with one’s college experience does determine whether a future graduate has the intent of being a donor or non-donor to one’s alma mater” (p. 12). Considering that alumni donation rates vary between five and sixty percent (Stutler & Calvario, 1996), colleges and universities would be wise to measure and ensure alumni satisfaction.

Validity/Reliability of Alumni Studies

The validity and reliability of alumni surveys is not specifically mentioned in any of the articles reviewed for the present study. Other than content validity, no other type of validity is demonstrated in alumni study research. One reason may be that these surveys simply ask individuals their opinions on various issues/topics. Since the surveys are only soliciting an opinion, the opinion provided by each alumnus is assumed to be valid.

Knight (1990) conducted what can be thought of as one of the most thorough alumni survey validations. Knight validated the alumni survey via a three-step process. Step one involved reviewing the existing alumni survey used by the university. This

survey was tailored to meet the objectives of the university. Step two involved sending the modified survey to various parties throughout the university, including the Vice-Provost for Regional Campuses, Department Deans, and Coordinators of Career Planning and Placement. The survey was once again modified to incorporate the feedback of each of these groups. Finally, a pilot survey was administered to a small group of alumni. While no validity coefficients were established, the steps undertaken by Knight (1990) seem to be the best practice to ensure that alumni surveys meet their objectives and measure what they intend to. Additionally, this process demonstrates content validity.

The reliability, or the consistency of alumni studies over time, has not been discussed in the alumni study literature. This is likely the result of practicality. To date, no researcher has asked a specific alumni population the same set of questions. Busy alumni are not likely to answer the same survey questions multiple times.

Indirect Support for the Reliability and Validity for Alumni Surveys

As noted in the previous section, there is no direct empirical data supporting the reliability and validity of alumni surveys. Since alumni surveys rely on the ratings of former students, the validity and reliability of alumni surveys must be inferred indirectly from research on student ratings. Marsh and Roche (1997) note that there is little evidence to support the validity of peer evaluations, student grades, or comparisons to other faculty members; yet, each of these are commonly used methods of student assessment. Marsh (1984) also notes that student ratings are:

...quite reliable, reasonably valid, relatively uncontaminated by many variables often seen as sources of potential bias, and are seen as useful by students, faculty, and administration....there are few other

indicators of teaching effectiveness whose use is systematically supported by research findings (p. 749).

The work of Overall and Marsh (1980) adds more legitimacy to reliability of alumni surveys. This study found a large positive correlation ($r = +.83$) between students' end of term ratings of their instructor and retrospective ratings by students one to three years later. Thus, it seems that students are able to recall their educational experiences over time, suggesting that alumni studies are indeed reliable.

Alumni Studies

Alumni studies have examined a wide variety of topics, including educational experiences, career outcomes, and variables that predict evaluation of education. Additionally, studies have noted that women and men have differences in their assessment of their education and career outcomes. A common theme among alumni studies is to assess the student's educational experiences. Knight (1990) surveyed alumni from each of the regional junior college campuses of Ohio's Kent State University to measure their opinions regarding the overall effectiveness of academic and student services. The study used alumni who graduated between the years of 1987 and 1989. Over three-quarters of survey participants (76%) reported overall satisfaction with their education and student services; however, numerous respondents used the open-ended portion of the survey to report inadequacies with the college's career placement and planning services. Additionally, only one in five survey respondents reported earning their Associate degrees in the allotted two-year time period of an Associate degree. In other words, 80% of respondents took more than two years to obtain a two-year degree. In order to maintain a high level of overall alumni satisfaction, the regional campuses of

Kent State University would be wise to improve their career placement and planning services and to redefine their two-year associate degree.

As alluded to by Knight's (1990) research, the topic of career outcomes is quite common with alumni studies. Frequently, alumni are asked to report their current job and the relatedness of their degree to their current job. For instance, the Alumni-Faculty Feedback For Curriculum Revision Report ("Alumni-faculty feedback," 1976) surveyed health care graduates (a specific applied science) from the Tulane School of Public Health and Tropical Medicine and found that an astounding ninety-six percent were employed in health-related jobs. Additionally, over eighty-one percent of Harper College nursing alumni described their education as relevant to their career (Lucas & Meltesen, 1994). In contrast, a study by Gallucci (1996) found that sixty-five percent of Psychology undergraduate majors (a less focused social science) reported being in jobs that related well to their degrees. Finally, Adams (1995) found that fifty-four percent of Macomb Community College graduates reported being employed in a field directly related to their educational or certificate program. It seems that the specialization of degree may have a positive correlation with one's future job. Thus, a highly specialized degree such as health care may result in a greater likelihood of being employed in a related field, than a less specialized Associate degree or certificate from a community college.

Differences between male and female undergraduates have been noted by Pace (1979) and Adelman (1991). More specifically, these studies found that women were more satisfied with college than men. In fact, Adelman (1991) noted that women were

more satisfied with their college education, despite the fact that they were likely to earn less and had less opportunity for promotion than their male counterparts. Adams (1995) also noted that male junior college alumni have higher mean hourly salaries than women.

To follow up on these findings, Pike (1993) examined gender differences among undergraduate students. All 1989 seniors at the University of Tennessee, Knoxville participated in an in-class survey assessing satisfaction with undergraduate education. Two years later another survey focusing on job outcomes was mailed to the same population. Approximately 50% of the original participants took part in the follow-up study. Overall, the sample consisted of 51% female and 49% male. Based on a four point Likert scale (1=Poor, 4=Excellent), Pike (1993) found that males were more likely to harshly rate their experiences of their senior year of college (15%) compared to women (10%). Conversely, females were more likely to moderately rate their experiences as a senior (55%) compared to men (50%).

Similar to Pike (1993), Lam (1994) surveyed 1992 undergraduate alumni of Canada's Brandon University and noted gender differences among undergraduate students. Similar to Pike (1993), Lam (1994) found that women tended to rate their undergraduate experience as very positive. However, unlike Pike (1993), Lam (1994) also found that women were more likely to harshly rate their undergraduate experiences than men, and that men were more likely to be moderate in their undergraduate assessments than women. The population used by Lam (1994) consisted of alumni from a small university (less than 3,000 students), while the sample used by Pike (1993) consisted of alumni from a large university (over 26,000 students). This may suggest that

the educational experiences of alumni at a small university may differ from those at a large university.

Lam (1994) also investigated variables that predicted alumni outcomes. Stepwise multiple regression analyses revealed that gender ($R^2=.04$, $p<.01$) and degree ($R^2=.02$, $p<.05$) accounted for roughly six percent of the variance associated with alumni assessment of academic and student services. Specifically, male graduates were found to provide moderate assessments, while female graduates clustered around positive and negative extremes. Additionally, students completing a 2 year teaching certification program rated their education more positively than those completing their first degree or those completing a second professional development degree. Pike (1993) also examined the relationship between satisfaction with education and current work and pay. The study found that alumni dissatisfied with their jobs were likely to be dissatisfied with their education. Alumni dissatisfied with their jobs were more likely to report dissatisfaction with their education (29%) than alumni satisfied with their jobs (14%). Conversely, alumni satisfied with their jobs were more likely to be satisfied with their education (48%) than those dissatisfied with their jobs (31%).

Additionally, Pike (1993) found that alumni satisfied with their pay were more likely to be satisfied with their education (19%) compared to dissatisfied alumni (9%). Finally, a smaller percentage of those dissatisfied with their pay (30%) reported satisfaction with their undergraduate education than those dissatisfied with their education (40%). This research suggests that alumni satisfaction with education may be related to satisfaction with work and pay. Does the current job/salary situation of alumni

affect their rating of their college experience? Further research is needed to better understand this relationship. Who should be responsible for conducting this research?

Should Psychology Departments Take the Lead?

One key problem with the quality of alumni studies is that individuals who are not trained in research design frequently conduct them. Unlike other fields of study, psychologists specialize in learning, assessment, survey design and validation, and advanced statistical techniques. As such, it seems as though psychologists could be expected to take the lead in developing program assessments. This seems to be the case. Among the 15 alumni studies reviewed for the present study, a total of eight (53%) come from Psychology departments. Even more interesting is the fact that of the eleven peer-reviewed journal articles, eight (73%) of the articles focus on Psychology departments. While it appears as though Psychology departments were doing their part to add to the body of research focusing on alumni studies, Jackson and Griggs (1995) report that only one in three Psychology departments in the United States conducts some type of evaluation.

Psychology Department Alumni Studies

Similar to their non-Psychology counterparts, Psychology alumni studies have examined topics such as educational experiences, gender differences, career outcomes, and variables that predict evaluation of education. In addition, Psychology alumni studies have explored diverse topics such as student expectations, job preparation of Psychology versus non-Psychology majors, cohort differences, and the educational satisfaction of graduate-level alumni.

Similar to their non-Psychology department alumni studies, Psychology department alumni studies have examined the educational experiences of Psychology majors. In today's fast-paced economy, students may be more dependent on career advice than ever before. Yet, many Psychology majors are not satisfied with the quality of career counseling at their schools. Ogletree (1998) and Sheehan and Granrud (1995) note that Psychology undergraduates report high dissatisfaction with career counseling services. According to Gallucci (1997), part of this dissatisfaction may be the result of students' unrealistic expectations of the job market. Gallucci also found that clinical and counseling Psychology students overestimated the mean salary of practicing clinical and counseling psychologists by as much as thirty-eight percent. Additionally, clinical and counseling Psychology students underestimated the time it would take them to complete their dissertation by an average of one year. Thus, it may be in the best interest of universities to apprise students of the realities and career prospects for Psychology majors.

Keyes and Hogberg (1990) and Quereshi (1988) have focused their studies on gender differences among Psychology alumni. Using undergraduate Psychology alumni from Albion College, Keyes and Hogberg (1990) found that women (59%) were more likely to hold advanced degrees compared to men (41%). Similarly, Quereshi (1988) surveyed undergraduate Psychology alumni from Marquette University. The survey focused on a 10-year period (1973-1983). Based on a four point Likert scale, women were found to have significantly higher GPAs compared to men. Women were also found to have significantly higher occupational utility for their Psychology degree

compared to men. Additionally, women reported significantly higher confidence about entering graduate school and higher career focus. Nevertheless, when looking at career outcomes, Quereshi (1988) found that men were more likely to work full time compared to women who were more likely to work part time or be unemployed.

Additionally, Quereshi (1988) explored variables related to alumni satisfaction. This study found that alumni satisfaction was best predicted by a graduate's perception of the degree to which the department contributed to their overall career goals. Once again, it appears as though career outcomes were related to alumni satisfaction (Knight, 1990; Pike, 1993). While Quereshi (1988) found that women had higher GPAs, greater confidence about entering graduate school, and more career focus than men, men were more likely to secure full time employment than women. Could this be the result of the social responsibility of males to be the breadwinner? Further research should explore the relationship between gender, undergraduate performance, ambition, and career outcomes. It is important to note that unlike Adams' (1995) research, pay differences between gender were not examined. Rather, Quereshi (1988) chose to focus on the employment status of alumni.

Continuing to explore variables related to overall alumni satisfaction, Finney, Snell, and Sebbey (1989) surveyed undergraduate Psychology alumni at Southeast Missouri State University. Using a multiple regression analysis, Finney et al. (1989) found alumni satisfaction with one's program could be predicted by the respondent's decision to select a Psychology degree with a specific career in mind, preparation for graduate school, job preparation, job status, and salary ($R^2=.79$, $p<.05$). More

specifically, the more prepared alumni were for graduate school and their jobs the more likely they were to be satisfied with their undergraduate education. Additionally, higher job status and higher salary seemed to be related to higher alumni satisfaction with education. Similar to Knight (1990) and the above mentioned studies, Finney et al. (1989) seem to indicate that career outcomes are a key predictor variable of alumni satisfaction.

Finney et al. (1989) also examined the job preparation of Psychology versus non-Psychology majors. One way ANOVA revealed several statistically significant differences between Psychology and non-Psychology majors. Based on a five-point Likert scale, Psychology majors reported being less prepared for their current jobs ($M = 2.70$) than non-Psychology majors ($M = 3.63$, $p < .001$). Based on these results, one may assume that the skills being developed in undergraduate Psychology courses are not preparing students for their future jobs.

Keyes and Hogberg (1990) investigated cohort differences in post-baccalaureate education and career outcomes for undergraduate Psychology alumni from Albion College. This study examined cohort differences over a 20-year period (1967-1986). As a result of the extended period of time some alumni had been out of school, the survey asked very general questions, such as degree obtained and job status.

Survey respondents were divided into two groups: cohort 1 (1967-1976), cohort 2 (1977-1986). Members of cohort 2 (57%) were more likely to obtain a non-Psychology related advanced degree than members of cohort 1 (43%). Cohort 2 (79%) was much more likely to work in a Psychology-related field including clinical work, human

services, and research in Psychology, than cohort 1 (29%). Thus, it appears that advanced degrees in Psychology became less common as the 1980's began, while opportunities for working in Psychology-related fields increased. Nevertheless, overall respondents with Psychology related degrees reported that their degrees were less related to their jobs (30%).

In summary, like their non-Psychology counterparts, Psychology department alumni studies have found high dissatisfaction levels with career counseling services. According to Gallucci (1997), this may be the result of unrealistic job expectations by students. Additionally, Psychology department alumni studies have examined gender differences, noting that women are more likely to hold advanced degrees, have greater confidence about entering graduate school, and report a higher career focus than males. Nevertheless, Quereshi (1988) reports that men are more likely to be employed full-time compared to women. Similar to Knight (1990) and Pike (1993), Quershi (1988) and Finney et al. (1989) find that career outcomes such as full-time employment and the degree to which one's current job relates to his/her intended career are related to overall alumni satisfaction. Finally, cohort studies of Psychology alumni suggest that the new-found wealth of entry-level Psychology-related jobs may be causing fewer Psychology students to pursue graduate degrees.

Alumni Study Focusing on Graduate Students

At this point, it is important to note that all of the studies discussed previously focus on undergraduate alumni. It is important to conduct alumni studies with a graduate

level population. After all, graduate-level education differs from undergraduate-level education in that graduate school is much more focused on a chosen topic.

Morton and Worthley (1995) surveyed Psychology department graduate level alumni from California State University, San Bernardino. The goal of their study was to provide descriptive data about the educational experiences of graduate students, examine cohort differences, and to analyze variables related to satisfaction. Each student class was considered a separate cohort. The study focused on a twenty-year period (1973-1992) and used a total of twenty cohorts. Students from the following programs were examined: General Experimental (MA), Life Span Development (MA), Industrial-Organizational (MA), and Clinical/Counseling (MS).

Morton and Worthley (1995) found that 61% of respondents completed their Masters Degrees, and an additional 21.5% pursued a Ph.D., although no statistics were given for doctoral completion rates. Additionally, respondents reported taking 2.7 years ($SD=1.4$) to complete their masters degrees. Average cohort differences were noted for time to complete degree, thesis chair satisfaction, job relevance to graduate education, and overall program satisfaction. Results suggest recent and past alumni have their own distinct advantages. More specifically, recent alumni were more satisfied with their thesis chair and more likely to find a job related to their degree than past alumni. However, past alumni reported finishing their thesis faster and being more satisfied with their graduate education than recent alumni. The study did not explore whether or not these differences were the result of the demographics of students or faculty or possible

differences in perception between the cohorts. Further research needs to be conducted to explore these relationships.

Morton and Worthley (1995) also examined variables related to alumni satisfaction. Significant correlations were noted between advising satisfaction and overall satisfaction with the program ($r = .36$), and thesis chair satisfaction and overall satisfaction with the program ($r = .23$), suggesting that increases in advising and thesis chair satisfaction are accompanied with increases in overall satisfaction with the program. These results suggest that universities wishing to maximize the satisfaction of their graduate students need to ensure that these students have adequate advising services and are satisfied with their thesis chair. Additionally, a positive correlation was noted between time to degree and thesis chair satisfaction ($r = .31$), suggesting that as time to degree increases, so too does satisfaction with one's thesis chair. One may conclude that as graduate students spend a great deal of time working on their degree with their thesis chair a bond forms resulting in increased satisfaction.

Summary

In summary, alumni studies are key to understanding the ultimate outcomes of alumni. While there are many reasons that universities do not assess their alumni, reasons to assess are undeniably powerful. The increased requirements of state and federal regulations and accrediting agencies, along with the financial benefits of providing a quality education, ensure that the number of colleges and universities conducting alumni studies will continue to increase. While the reliability and validity of

alumni studies have not been demonstrated, numerous studies have demonstrated the reliability and validity of student ratings.

Previous research suggests that alumni consistently report problems with time to degree and advising services, and use their career outcomes as a key indicator when evaluating their education. Studies examining the career outcomes of alumni suggest that alumni with specialized degrees are more likely to be employed in areas related to their degree than those with less specialized degrees. Also, studies examining gender effects suggest that men are more likely to secure full-time employment and higher pay than women. Inconsistent results exist regarding male and female undergraduate ratings. Some studies find that women rate their education more harshly than men do, while other studies find that men rate their education more harshly than women do. While Psychology departments appear to be taking the lead with alumni studies, Psychology alumni report lower career preparation and salary than non-Psychology alumni. Finally, research shows that alumni studies focusing on graduate students are extremely rare.

Limitations of Current Research

Despite a variety of studies on alumni satisfaction, there are many limitations to the current body of research. For instance, most studies focus on the student outcomes and program improvements of undergraduate programs. As noted by Gallucci (1997), less than ten percent of Psychology majors will be admitted into graduate school; however, researchers seem to ignore this population. Other than a single study on program completion and employment outcomes of graduate students by Morton and Worthley (1995), there is a paucity of research focusing on graduate students in general

and, graduate students in Psychology in particular. The present study relies on data solely from graduate level students.

In addition, little research has been done relying on open-ended questions. As noted by Wenner and Larson (1989), open-ended questions are rarely used because they are difficult to interpret and can be very time consuming to summarize. Most alumni surveys rely on four or five point Likert scales (Finney et al, 1989; Gallucci, 1997; Keyes & Hogberg, 1990; Ogletree, 1998; Quereshi, 1988; Sheehan, 1994; Sheehan & Granrud; 1995, Morton & Worthley, 1995). While Likert scales are easier for the researcher and the respondent, they limit the response to typically four or five choices. Likert scales “force” a response and may not allow people to truly express themselves. When open-ended questions are used, they generally ask the respondent “Is there anything you would like to add that you haven’t said already?” or “What course would be helpful to future students?” In addition, “open-ended” questions may ask the respondent to provide information on their final GPA, current job title, and salary. These types of open-ended questions may not be focused enough to obtain critical information from the respondent. The present study relies heavily on specific open-ended questions.

Finally, there is no research on students who do not receive their Psychology degrees. Not everyone who enters college leaves with a degree; however, previous studies only include students who have completed their degree. Students who do not finish the degree are never heard from again. In the case of graduate students, the difficulty of completing the degree compounds as students try to complete a thesis. Morton and Worthley (1995) note that there can be many problems with completing a

thesis. A few of the most commonly cited reasons include difficulties in the mentoring process and changes in student long-term goals. What kind of information are academic institutions missing by not collecting this type of data? Specifically, since learning assessments are a natural outgrowth of the many areas within Psychology such as learning and Psychometrics, shouldn't Psychology departments take the lead on this issue?

The Program

San Jose State University's Master of Science Industrial/Organizational (MS I/O) program is one program taking the lead on learning assessments. Located in the heart of Silicon Valley, SJSU was the first public institution of higher education on the West Coast. Today it serves nearly 27,000 students and offers more than 130 bachelors and masters degrees. As one of three masters programs offered by SJSU's Psychology department, the mission of the MS I/O program is to provide students with a fundamental grounding in theory, research, and application in the field of I/O Psychology.

After a period of dormancy, SJSU's MS I/O program was resurrected in the mid 1980's. During the past 15 years, the program has grown and seen numerous faculty member changes. It is important to note that the program currently consists of four full-time tenure-track professors. However, all students included in this study went through the program with two to three full-time professors.

SJSU's I/O program admits between 10-12 students per year. Since it is a terminal Masters program, its goals are to instill the value of the scientist-practitioner into each student while preparing them for professional practice. Past students are employed

in a wide range of areas, including personnel selection, training, organizational development, research design, statistical analysis, survey design, job analysis, and performance measurement.

SJSU's MS I/O program requires 30-units of graduate level work, consisting of both required and elective courses. The required courses are designed to give students a comprehensive overview of critical issues and topics in I/O Psychology, while electives provide an opportunity for students to explore their areas of interest. The classes are designed to provide an effective balance of theory, methodology, and application, often involving guest speakers and class-wide projects with local organizations. The program consists of four required courses, three elective courses, a supervised internship, and culminates with a thesis.

The Seminar in Industrial Organizational Psychology course focuses on psychological theory, research, and practice in organizations. Topics emphasized include motivation, job satisfaction, communication, leadership, group processes, decision-making, conflict, cooperation, power, and organization change. The Seminar in Personnel Psychology course provides an in-depth introduction to relevant methodology, research, applications, and issues. Topics include legal issues in personnel, training and development, test validation, selection, job analysis, and performance appraisal.

The Multivariate Analysis course introduces the student to multivariate techniques used to analyze social science data with emphasis on multiple regression, multivariate analysis of variance, factor analysis, discriminant analysis and canonical correlation. The Research Design and Applied Psychometrics course provides students

with an advanced introduction to issues in psychological research (experimental, quasi-experimental, and survey research) and measurement and test construction (item analysis, validity and development of norms, and test reliability).

During their second and third semester, students have the opportunity to take elective courses. Elective courses may come from the I/O program or via other SJSU departments identified with the assistance of program faculty. Courses typically offered within the I/O program include Organizational Development, Training, and Diversity. Students have taken elective courses from outside of the I/O program from the Business, Communication Studies, Education, and Instructional Technology departments.

The Field Work in Industrial/Organizational Psychology (internship) course provides students with a supervised experience for applying psychological and organizational theory and practice in business, industrial, and other organizational settings. During the course of the semester, students are required to work a minimum of 180 hours. Finally, the Master's Thesis or Project requires the student to conduct an original empirical research project based on university and Psychology department guidelines.

Purpose

The present study was designed to address some of the weaknesses associated with the current state of Psychology alumni surveys. The present study assessed the satisfaction of former graduate students at SJSU using an open-ended survey. This study included students who have and have not graduated. While studies by Lam (1994), Pike (1993), Quereshi (1988), Finney, et al (1989), and Morton and Worthley (1995) have

examined the relationship between satisfaction and student outcomes, this study used open-ended questions to assess former students of SJSU's MS I/O program. Specifically, this study addressed student's expectations of graduate school, completion of degree, impact of program, suggestions, career outcomes, and evaluation of program.

Method

Participants

This study included both alumni and students who have not graduated the MS I/O program at SJSU between the years of 1990 and 1999. No demographic data was collected from participants; however, the researcher did note the gender of each participant to create comparison groups. The choice not to collect demographic data was made in an attempt to assure the participant's anonymity and increase their willingness to provide candid data. A total of 51 students were invited to participate in the study, with 33 subjects electing to participate in this study for an overall response rate of 65%. A total of twenty-five women and eight men participated. The high response rate of this survey may be the result of the close knit community of SJSU MS I/O alumni.

Materials

This study used a survey created by the investigator. The survey was created after a thorough review of relevant research and was checked for face validity by each faculty member in the I/O Psychology department along with the Psychology department chair from SJSU. A pilot study was conducted with three alumni, with no changes being made to the survey instrument. This survey construction process is very similar to the best practice "validation" process noted by Knight (1990) in that a pilot instrument was

created, feedback was obtained from relevant parties, and modifications were made to the instrument. The survey looked at satisfaction with education, expectations of graduate school, status of education, and career outcomes. See Table 1 for a list of questions from the survey.

Procedures

All participants were recruited via an e-mail letter. The e-mail asked potential participants to take part in a brief telephone survey at their leisure (see appendix A). Participants were also given the option of submitting an electronic copy of the survey. The e-mail was sent out to those included in a contact list of former MS I/O students. As a former student of SJSU's MS I/O program, the researcher asked the contact list owner to use the list to contact students for research purposes. In this e-mail students were informed that responses were strictly confidential and that participation in the study would have no effect with their relationship with SJSU. Between the dates of May 31, 2000 and July 7, 2000, 20 telephone interviews were conducted. Another 13 former students submitted an electronic copy of the survey. The survey consisted of questions that often allowed students to provide more than one response to survey questions.

Analysis

Qualitative data were placed into broad categories based on similarities. For instance, when asked to provide their job title, some students mentioned the job title of HR manager, Benefits coordinator, and HR Generalist. These job categories were combined by the researcher into the category Human Resources. All of the data were coded by the researcher (experimenter). Once the data were coded, it was entered into an

SPSS database. Frequency tables allowed the researcher to analyze the data. During the course of data analyses, subsequent categorization occurred. For instance, the researcher categorized job titles as I/O related and non-I/O related based on his knowledge of I/O Psychology. Finally, bivariate correlations explored potential relationships between gender, salary, and job satisfaction.

Results

Student's expectations of graduate school

What were expectations entering graduate school? As noted in Table 2, expectations of graduate school were differentiated into professional, personal, or academic related categories. Professionally, 60.6% of students expected to obtain skills for a job. Personally, 42.4% of students expected to increase their knowledge of I/O related topics. To a lesser degree, students had personal expectations for networking opportunities (12.1%) and difficult coursework (9.1%). Academically, 15.2% of students expected faculty support.

Were expectations met? As noted in Table 3, a majority of students (51.5%) reported that their expectations of graduate school were met, 12.1% reported that some of their expectations were met, while 21.2% of students reported that their expectations of graduate school were not met.

Completion of degree

Did students finish? A total of 54.5% of students reported finishing their degrees. The remaining 45.5% of students have completed all their course work but not their thesis. It seems as though SJSU's MS I/O program does a good job of meeting the

expectations of students; however, nearly half of participants report not finishing their degree to date. This is cause for alarm, as it seems reasonable that an unspoken expectation for anyone entering graduate school is to obtain a degree. It is important to note that this number is slightly lower than the 61% of students Morton and Worthley (1995) reported finishing their degree.

Why do some students complete their degree while others do not? When asked why they had not finished their degree, 15 students reported a status of all but thesis (ABT). Among these students, 13 (87%) note that they are in progress with their thesis, while 13% of students were not able to complete their degrees as the result of full-time employment.

Impact of program

What aspects of the program impacted students personally? As indicated in Table 4, students most commonly reported that their education affected them personally through increased confidence (30%), increased social contacts with fellow students (21.2%), increased knowledge (18.2%), high stress (18.2%), and provided them with a sense of accomplishment (18.2%). Sadly, some students noted that their education did not affect them personally, while others noted that it gave them a lot of stress. Additionally, one student noted that her education shattered their illusions of truly mastering a subject and lowered her expectations of university professors.

What impacted students professionally? A follow-up question asked students how their education affected them professionally. Table 5 shows that respondents most commonly reported increased professional credibility (61%), increased professional

confidence (36.4%), a good job (30.3%), and a high salary (27.3%). Two students noted that their education led them to pursue another degree (6%).

Career outcomes

What are students doing now? Former graduate students from San Jose State's Industrial/Organizational Psychology program are employed in a wide variety of settings. As noted in Table 6, the majority of students are employed in I/O related fields (88%). The most common areas of employment include human resources (24.3%) and training (15.2%). Students also report diverse job titles from manager of facility and safety services, account manager (sales) to full-time mom.

What are the salaries of former students? Nearly one in three former students report earning between \$61,000 and \$85,000, while 27% of students report earning between \$46,000 and \$60,000. More impressively, four out of five former students are earning more than \$46,000 per year (see Table 7).

Do students who complete their degree report higher salaries than those who do not? Crosstabulations examined the relationship between completion of degree and salary. As noted by Table 8, students who have completed their degrees were more likely to earn more than \$61,000 (33%) than students who reported to have not finished their degree (21.2%). Conversely, students who did not finish their degree were more likely to earn less than \$60,000 (24.2%) than students who completed their degrees (12.1%).

Are former students satisfied with their jobs? An overwhelming majority of former students report satisfaction with their job (82%), while 9% of respondents report

that they are somewhat satisfied with their job and another 9% report being dissatisfied with their jobs.

Do students who complete their degree report higher job satisfaction than those who do not? Crosstabulations examined the relationship between completion of degree and job satisfaction. As noted in Table 9, job satisfaction was very similar for students who had completed their degree and those who had not. More specifically, 42.4% of students who had completed their degree reported satisfaction with their job while 39.4% of students not completing their degree reported satisfaction with their job. Additionally, students who had completed their degree were slightly more likely to report dissatisfaction with their job (6.1%) than those who had not completed their degree (3%).

Why are former students satisfied/not satisfied with their jobs? A follow up question asked students why they were or were not satisfied with their jobs. As shown in Table 10, students most commonly reported being satisfied as the result of intrinsic (81.9%), rather than extrinsic motivators (18.1%). The most common intrinsic motivators were simply liking the job one performs and finding one's job challenging. Surprisingly, only 6.5% of students reported satisfaction with their job as the result of their pay. Conversely students reported being dissatisfied with their job because they were not happy with their company or were looking for growth.

Are there gender differences with salary and job satisfaction? To follow up the work of several studies that examined alumni gender differences, (e.g., Pace, 1979; Quereshi, 1988; and Snell, et al, 1989), gender differences were examined for salary and job satisfaction. Surprisingly, no significant correlations were noted between gender and

salary ($r = -.24$) or job satisfaction ($r = -.02$). This may be the result of the small sample size or the predominantly female population found at SJSU's graduate level I/O program.

When did career objectives change? During the course of one's education, one might expect to change career objectives. Over half of respondents (51.5%) report a change in career objectives. As noted in Table 11, respondents changed their career objectives during their internship (15.2%), 0 to 6 months after they finished the program (12.1%), or 2 years after they finished the program (12.1%). Among total respondents, 24.2% noted that their career objectives changed as a result of greater opportunity elsewhere (see Table 12). To a lesser degree, students changed their career objectives because of their internship, education, increased confidence, and a desire not to consult. Approximately 9% of students changed their career objectives as the result of a bad job market.

Evaluation of program

What do students like most about the program? As noted in Table 13, when former students were asked what they liked most about the program, they most frequently reported liking the classes (39%), applicability of the program (33%), and faculty (24.2%). To a lesser degree, students strongly liked other students in the program (18.2%), class size (15.2%), and the internship (6.1%).

What do students like least about the program? When asked what they liked least about the program, respondents most commonly reported frustration with the thesis process (48.5%), lack of/problems with instructors (27.3%), an unclear focus of the program (12.1%), and lack of clear objectives and disorganization within the department

(12.1%) (see Table 14). Students also reported frustration with the brevity of the program, inexperience of fellow students, lack of course variety, and lack of research opportunity.

What is the impact of the internship program? A key part of San Jose State's Industrial/Organizational Psychology program is the internship. The internship requires students to gain real world employment and apply their newfound knowledge to the business world. Seventy nine percent of students felt that their internship contributed to their career goals. A follow-up question revealed that the internship most commonly contributed to career goals by helping students get a job and by giving them valuable real world experience (see Table 15). Approximately one in five students (21%) reported that their internship did not contribute to their career goals. It seems like the internship is helping former students achieve their career goals.

Did thesis contribute to career goals? Among students who have completed their thesis, over half (58%) of students note that their thesis has helped contribute to their career goals by helping with their job, while one in four (26%) of students note that their thesis did not help them with their career goals (see Table 16). Respondents also noted that their thesis contributed to their career goals by increasing their perseverance and time management skills. Despite its status as a terminal masters program, two respondents reported pursuing their Ph.D. after completing their thesis.

How related are students degrees to their jobs? In order to assess the relatedness of the Industrial/Organizational degree to one's current job, frequencies were calculated for number of courses used on the job. A total of seven courses are offered through the

Industrial/Organizational Psychology program: Industrial/Organizational Psychology Seminar, Psychometrics, Multivariate Statistics, Field Work, two department specific electives, and one general elective. As noted by Table 17 respondents most commonly noted that they used two (33%) or three (39%) courses from their education in their current job. Eleven percent of respondents used all of their course work on the job, while 6% of respondents reported that none of their courses were being utilized on the job. The mean number of graduate-level courses used on the job was 2.97.

What courses are used on the job? When asked about the specific graduate-level courses used on the job, respondents most typically cited the Psychometrics (60.6%), Organizational Development (45.5%), Multivariate Statistics (42.4%), Personnel Psychology (39.4%), and Training courses (30.3%) (see Table 18).

What courses do you wish were available? As noted in Table 19, students requested courses covering human resources (e.g., HR specific course, Compensation, Recruiting, and HRIS), organizational development, training, business-related topics, and statistics. Specifically, the most commonly requested courses by students were HR specific courses, a consulting course, and an OD course. Thirteen percent of respondents believed that no additional topics needed to be covered, while nearly one in ten (9.3%) of students requested more specific course work. As noted by one student, “We need more depth and less breadth.”

When asked what course or topic they would like to cover, two students asked for a thesis preparation course. To summarize, students reported high satisfaction with general aspects of the program (courses, applicability of program, and faculty) and noted

that it increased their confidence and networking ability, but noted frustration with more specific aspects of the program (thesis process and lack of problems with instructors).

Do you have any additional comments you'd like to share? At the close of the survey, students were asked if there were any final comments they wanted to share (see Table 20). The responses of students fell into four categories: thesis, positive program issues, negative program issues, and suggestions. Nearly one in four students (24%) asked for a more structured thesis process. To a lesser degree, students asked to cut the thesis and have the thesis occur prior to the internship. Students noted the following positive program issues: applied experience of the program was great, appreciation that the department encouraged students to take classes from other departments, and great support and guidance during the thesis process.

The most common negative program issue mentioned by students was the poor follow through of Industrial/Organizational Psychology department faculty members. This comment was noted by 15.2% of students. To a lesser degree, students mentioned a need for clearer goals, improved communication between Psychology office and Graduate Studies office, and more professors. One student also shared that she felt she should have gotten a grade for a Training class, rather than credit for the course. Finally, respondents offered the following suggestions: Better marketing would increase the prestige of the school, an increase in professor's salary would help retain them, students need to put a lot into the program to get things out of it, a request for more guest speakers working in the field, and a request to increase the number of courses students need to take for graduation.

Discussion

The goal of this study was to use open-ended questions to assess former students of SJSU's MS I/O program. Specifically, the present study assessed the expectations of students upon entering graduate school. Secondly, it analyzed the impact of the I/O program. Next, it identified the career outcomes of former students. Finally, this study provided an evaluation of the I/O program.

This study achieved each of its goals. The sample used in this study is one of a handful of alumni studies that targets graduate-level students. Unlike previous research, this study included both students who have and have not graduated. It was key to solicit the opinions of students who have not completed their degrees as these students were able to suggest several potentially actionable plans to help SJSU's MS I/O program. Next, unlike existing research, this study used a primarily open-ended questionnaire to collect its data. This provided a richness of data that would have been unobtainable with a closed-ended format. Finally, this study examined each of the six issues posed in the Introduction section of this paper. Each of these issues will be discussed separately below.

Student's expectations of graduate school

By far, the most commonly cited expectation of graduate school was to acquire job-related skills. Students also expected to increase their knowledge. Based on the fact that 61% of students noted that all of their expectations were met and 86% noted that some of their expectations were met, one may reasonably conclude that SJSU's MS I/O program meets the needs of students. By becoming more knowledgeable, students

acquire job-related skills. Nevertheless, SJSU does more than simply provide theoretical knowledge. It helps students prepare for the business world.

Responses suggest that the applied focus of SJSU's MS I/O program help former students acquire job-related skills. It seems as though the internship requirement helps many students get their "foot in the door" with local employers. Additionally, as one student noted, "The most valuable learning experiences came from real life experiences such as creating and using a survey on live participants and going into training organizations to perform a training exercise... For those looking to work outside of academia, I can't think of a better education program."

Completion of degree

During the past nine years, over half (54.5%) of students entering the MS I/O program at SJSU have completed their thesis and graduated. Once again, this number is somewhat lower than the 61% of students Morton and Worthley (1995) reported finishing their degree. The majority of SJSU MS I/O students completed their thesis between the years 1996 and 1998. During this time period, the program consisted of three full time faculty members. Between May 1998 and December 1999, the program consisted of two full-time faculty members only. As one student noted, "We need three people on our thesis committee; yet the program only has two professors" (Note from author: the program now has four full-time faculty members).

This recent lack of staff members is likely a major contributor to the 45.5% of students who have not completed their theses. Between 1998 and 2000, only 12% of former students reported completing their theses. Another contributing factor to students

not completing their theses is limited faculty guidance and unclear expectations about the thesis process. It is interesting to note that the least liked aspect of the program by former students is the thesis process and that when given the opportunity to add final comments, the most common statements asked for a more structured thesis process and noted the poor follow through of faculty members.

It seems as though SJSU is taking steps to address these problems. Two new faculty members were hired in the fall of 2000, bringing the total number of full-time faculty members to four. An often cited suggestion from former students was to implement a thesis course. As one student noted, "We're paying for the units. We should have a class." Numerous students also suggested a format for a thesis course. Students thought a biweekly or monthly course that had one faculty member available to answer questions would help future students understand the thesis process and provide a formal support group to students.

Crosstabulations found that students who had completed their degrees were more likely to earn more than students who had not completed their degrees. Nevertheless, crosstabulations did not show differences in job satisfaction between students who completed their degrees and students who did not complete their degrees. These results suggest that completing one's thesis may be related to higher salary, but not to higher job satisfaction. Thus, it is in the best interest of students to complete the last phase of their graduate education.

Impact of program

According to respondents, SJSU's MS I/O program seems to have a positive impact on their personal and professional lives. By increasing confidence and increasing social contacts with fellow students, many students note that the program had a positive influence on their personal lives. On the other hand, some students noted that their education did not affect them personally or resulted in a lot of stress. Additionally, one student noted that their education shattered her illusions of truly mastering a subject and lowered her expectations of university professors. Professionally, respondents most typically noted that their education has provided them with increased professional credibility, increased professional confidence, a good job, and a high salary. It seems reasonable to conclude that SJSU's MS I/O program has an extremely positive impact on its students. One may conclude that the increased personal confidence respondents report leads to increased professional credibility, increased professional confidence, a good job, and a high salary.

Career outcomes

The responses of former MS I/O students indicate that they are quite successful. Students are employed in a diverse range of job titles, including human resources, training, organizational development, account management, and manager of facility and safety services. Additionally, former students report being relatively well compensated for their work efforts. While the mean salary of the Bay Area is \$45,204 ("Average annual pay," 1999), nearly nine out of ten students earn more than \$46,000. Over half of students (54.6%) earn more than \$61,000. Additionally, 82% of students reported being

satisfied with their jobs. It is interesting to note that students most typically report satisfaction with their jobs because they like what they do and because they like the challenge of their job. It seems as though respondents are not primarily motivated by money, as less than 7% of students report being satisfied with their job as a result of their pay. Thus, not only is SJSU preparing students for careers, it is preparing them for relatively well-paying, satisfying careers.

Evaluation of program

The results of the present study indicate the internship requirement for SJSU's MS I/O program helps students achieve their career goals. As discussed previously, the most frequently cited expectation of students entering SJSU's MS I/O program was to obtain job skills. Roughly eight out of ten former students noted that their internship contributed to their career goals. Respondents stated that their internship benefited them by helping them get them a job, giving students real world experience, and provided them with an opportunity to practice their skills. To quote one former student, "My internship gave me access to parts of the organization an entry level job wouldn't provide." Another student noted, "During my internship, I was teamed up with a great mentor who exposed me to a breadth of organizational experiences." According to respondents, career objectives most typically changed during their internship or within two years of finishing the program. Former students noted that they were changing careers as they saw greater opportunity elsewhere. As a result of an incredibly robust economy, less than one in ten students reported changing their career objective as a result of a bad job market.

Many respondents requested more specific human resources, organizational development, and training courses. Since the goal of SJSU's MS I/O program is to provide students with a fundamental grounding in theory, research, and application in the field of I/O Psychology, this suggestion seems impossible to address without increasing the number of courses offered. I/O Psychology is a broad topic. Two years of coursework is not enough to address each sub-specialty with this field of study. Lastly, it will be interesting to note how SJSU's MS I/O program addresses suggestions directed towards the thesis process.

Finally, as noted by the last question on the survey, when students were given an open forum to provide final comments, they frequently requested a more structured thesis process along with a frustration with the follow through of faculty members. Conversely, students conveyed great appreciation for the applied nature of SJSU's I/O program. These results suggest that while the program has its flaws (thesis process, faculty follow through) students do well in their careers, due in part, to the applied nature of the program.

Implications

This study adds to the small but growing body of research about the outcomes of graduate students. The research community has ignored graduate students for far too long. Secondly, this study also adds to the body of research about college alumni in general. Next, unlike existing research, this study primarily relied on open-ended questions and was able to gather rich data beyond what could have been collected by a closed-ended survey. As a result, the researcher was able to provide SJSU's MS I/O

program with specific recommendations about improving the most troublesome aspect of their program -- the thesis process. Other academic institutions would be wise to follow suit and assess their respective programs, and use the results to tailor their program to meet the specific needs of their students. Finally, this study is the first to examine students who have not graduated. This opens up a new chapter for alumni studies. Examining the differences between those who graduate and those who don't graduate will allow programs to tailor their programs to better meet the needs of all students.

Future Research

This study is the first to explore students who have not completed their degrees. Future research should further explore differences between those who graduate and those who do not graduate. Are there discernable differences between these groups? Can institutions implement policies to help these students be successful? This study found that students did not graduate because of the commitment of full-time employment. However, since only two students surveyed had not and did not plan to finish their degrees, larger populations should be used for future research.

Additionally, future graduate level studies need to further explore the concept of time to degree. Why do some students finish before others? Again, can academic institutions implement policies to decrease time to degree? To follow up the work of Lam (1994) and Pike (1993), future research should examine graduate level alumni from a relatively small university to assess potential differences of alumni at a small university and see how they may differ from those at a large university, such as SJSU. Perhaps students attracted to smaller universities rate their education differently than those at

large universities. By understanding these relationships, professors may be able to tailor their programs to the needs of their students. Additionally, future research should further explore Morton and Worthley's (1995) finding that as time to degree increases, so too does thesis chair satisfaction. At first glance, these findings seem counterintuitive as one may assume students would be most satisfied working with thesis chairs who were able to help them get their degree quickly (decrease time to degree). Finally, future research should include a larger and more diverse population. This study surveyed a total of 33 former students, 76% of which were female. In order to make meaningful comparisons between male and female former students, the ratio of females to males must be more balanced; however, replicating the open-ended nature of this study may make a large sample size impractical.

Conclusion

In conclusion, this study is the first to examine graduate level students who have and have not graduated and to rely primarily on open-ended questions. According to this study, former student typically expected to acquire job-related skills, which a majority of respondents reported doing. Additionally, this study found that former students reported not finishing their degree because of lack of faculty support, difficulties with the thesis process, and because of their commitment to full-time employment. Participants in this study reported liking the faculty, coursework, and applicability of the program, while not liking the thesis process and lack of and problems with instructors. Additionally, the results of this study indicate that nearly half of SJSU's MS I/O students during the past ten years have not graduated. This is the most alarming trend unearthed by the present

study. The present study makes recommendations to help address this problem.

Additionally, recent additions to the faculty should help alleviate this problem. Finally, the present study shows that the career objectives of SJSU MS I/O students changed during their internship or within two years of finishing the program because they saw a greater opportunity elsewhere. Since alumni studies are often cited as providing the ultimate proof of the outcomes of higher education, one may reasonably conclude that former students of SJSU's MS I/O are generally satisfied with their program. Former students find the program very applicable to the "real world" and feel that it prepares them well for future careers. However, the program must address the concerns of students who are having difficulties graduating. This will help ensure long-term success.

Table 1. Survey questions

-
1. What were your expectations of graduate school?
 2. Were your expectations of graduate school met?
 3. In what ways were these expectations met?
 4. How did your graduate education affect you personally?
 5. How did your graduate education affect you professionally?
 6. What is your job title?
 7. What is your salary range? (0 – 15; 16 – 30; 31 – 45; 46 – 60; 61 – 85; 86+)
 8. Are you satisfied with your current job? Why/why not?
 9. Did your career objectives change after you left SJSU? If so, how/when?
 10. What factors do you feel contributed to your career change?
 11. What aspects of the program would you say you liked most? Why?
 12. What aspects did you like you like least? Why?
 13. Did your internship contribute to your career goals? Why/why not?
 14. Did you finish graduate school?
 15. If you didn't finish graduate school, why not? How far did you go?
-
- If thesis was completed:
16. How did your thesis contribute to your career goals?
 17. When did you finish your thesis?
-
18. What courses from your education are you using on your job?
 19. Looking back, are there any specific courses or topics you wish were covered but were not?
 20. Is there anything else you would like to add to what you've said already?

Table 2. What were your expectations of graduate school?

Expectations of school	N	Percent (out of 33)
<i>Professional expectations</i>		
Obtain skills for a job	20	60.6%
Hands on experience	1	3.1%
Make a career change	1	3.1%
<i>Personal expectations</i>		
Increase knowledge	14	42.4%
Networking	4	12.1%
Difficult coursework	3	9.1%
Get through quickly	1	3.1%
Get degree	1	3.1%
Flexible program	1	3.1%
A program tailored to working people	1	3.1%
<i>Academic-related expectations</i>		
Faculty support	5	15.2%
Decide if wanted Ph.D.	1	3.1%
Guidance for thesis	1	3.1%
Get into another program	1	3.1%

Table 3. Were your expectations of graduate school met?

Expectations of school met	N	Percent
Yes	17	51.5%
No	7	21.2%
Some met	4	12.1%
No answer	5	15.2%
Total	33	100%

Table 4. How did your education affect you personally?

How education affected personally	N	Percent (out of 33)
<i>Personal</i>		
Increased confidence	13	30.0%
Social contacts	7	21.2%
Increased knowledge	6	18.2%
High stress	6	18.2%
Sense of accomplishment	6	18.2%
Improved goal setting	1	3.0%
Better writing skills	1	3.0%
Personal growth	1	3.0%
Increased perseverance	1	3.0%
Saw role models	1	3.0%
Shattered illusions of truly mastering a subject	1	3.0%
Lowered expectations of university professors	1	3.0%
Allowed to perform more interesting work	1	3.0%
Made more research oriented	1	3.0%
Increased critical thinking	1	3.0%
Ability to look at things in a structured way	1	3.0%
Openness to new ideas	1	3.0%
<i>Other</i>		
Didn't	3	9.1%

Table 5. How did your education affect you professionally?

How education affected professionally	N	Percent (out of 33)
Increased professional credibility	20	61.0%
Increased professional confidence	12	36.4%
Good job	10	30.3%
High salary	9	27.3%
Promotions	6	18.2%
Other	3	9.1%
Increased networking	2	6.0%
Led to pursue another degree	2	6.0%

Table 6. What is your job title?

Current job	N	Percent
<i>I/O related</i>		
Human resources	8	24.3%
Training	5	15.2%
Organizational development	4	12.1%
Research	4	12.1%
Project management	4	12.1%
Staffing	2	6.1%
Information analyst	1	3.0%
Business analyst	1	3.0%
College programs manager	1	3.0%
<i>Non I/O related</i>		
Doctoral student	1	3.0%
Manager of facility and safety services	1	3.0%
Account manager	1	3.0%
Mom	1	3.0%
Total	33	100%

Table 7. What is your salary range?

Salary	N	Percent
0 – 15k	1	3.0%
31 – 45k	3	9.1%
46 – 60k	9	27.3%
61 – 85k	12	36.4%
86k +	6	18.2%
No response	2	6.0%
Total	33	100%

Table 8. Do students who complete their degree report higher salaries than those who do not?

Salary	Percent finishing degree	N	Percent not finishing degree	N	Total N
0 – 15k	5.5%	1	0%	0	1
31 – 45k	5.5%	1	13.3%	2	3
46 – 60k	16.7%	3	40.0%	6	9
61 – 85k	44.4%	8	26.7%	4	12
86k +	16.7%	3	20.0%	3	6
No response	10.2%	2	0%	0	2
Total	100%	18	100%	15	33

Table 9. Do students who complete their degree report higher job satisfaction than those who do not?

Job Satisfaction	Percent finishing degree	N	Percent not finishing degree	N	Total N
Satisfied	77.8%	14	86.7%	13	27
Not satisfied	11.1%	2	6.7%	1	3
Somewhat satisfied	11.1%	2	6.7%	1	3
Total	100%	18	100%	15	33

Table 10. Why are you satisfied with your job?

Why satisfied with job	N	Percent (out of 33)
<i>Intrinsic motivators</i>		
Like what do	12	36.3%
Challenging	10	30.3%
Freedom	5	15.2%
Opportunity to grow	5	15.2%
High visibility	3	9.1%
Good at what do	2	6.1%
Like working for small company	1	3.0%
Feel like making a difference	1	3.0%
Variety of tasks	1	3.0%
<i>Extrinsic motivator</i>		
Pays well	3	9.1%
Good management	1	3.0%
Fast paced environment	1	3.0%
Good company	1	3.0%
Total	46	100%

Table 11. When did your career objectives change?

When career objectives changed	N	Percent
Did not change	16	48.5%
During internship	5	15.2%
0 – 6 months after program	4	12.1%
6 months – 1 year after program	2	6.1%
2 years	4	12.1%
More than 5 years	1	3.0%
Constantly evolving	1	3.0%
	33	100%

Table 12. How did your career objectives change?

Factors affecting career objective change	N	Percent (out of 33)
Saw more opportunity elsewhere	8	24.2%
Internship	2	6.1%
Bad job market	2	6.1%
Education itself	2	6.1%
Greater confidence	2	6.1%
Didn't want to consult	2	6.1%
Had baby	1	3.0%
Job experience	1	3.0%
Personal reasons	1	3.0%
Burned out of previous job	1	3.0%

Table 13. What aspects of the program did you like most?

Like most about program	N	Percent (out of 33)
Classes	13	39.0%
Applicability of program	11	33.0%
Faculty	8	24.2%
Students in program	6	18.2%
Class size	5	15.2%
Internship	2	6.1%
Reputation	1	3.0%
NUMMI trip	1	3.0%
Night classes	1	3.0%
Location in Silicon Valley	1	3.0%
Autonomy	1	3.0%

Table 14. What aspects of the program did you like least?

Like least about program	N	Percent (out of 33)
<i>Processes</i>		
Thesis	16	48.5%
Internship	2	6.1%
Difficulty actually getting business classes	1	3.0%
<i>Lack of opportunities</i>		
Lack of/problem with instructors	9	27.3%
Lack of mentoring	1	3.0%
Lack of research opportunity	1	3.0%
Lack of course variety	1	3.0%
<i>Program objectives</i>		
Focus of program	4	12.1%
Lack of clear objectives/disorganization	4	12.1%
Program too short	1	3.0%
<i>Other</i>		
Inexperience of fellow students	1	3.0%

Table 15. How did your internship contribute to your career goals?

How internship contributed to career goals	N	Percent
Got a job	12	38.5%
Gave real world experience	8	26.0%
Did not contribute	8	26.0%
Gave opportunity to practice skills	2	6.5%
No answer	2	6.5%
Did not do internship	1	3.0%
Total	33	100%

Table 16. How did your thesis contribute to your career goals?

How thesis contributed to career goals	N	Percent (out of 20)
Helped with job	11	58.0%
Didn't relate	5	21.0%
Led to pursue Ph.D.	2	10.4%
Increased perseverance	1	5.3%
Increased time management skills	1	5.3%
Total	20	100%

Table 17. How many courses from your education are you using on your job?

Number of courses used on job	N	Percent
None	2	6.0%
One	3	9.2%
Two	9	27.2%
Three	13	39.4%
Four	2	6.0%
Five	2	6.0%
Six	2	6.0%
Total	33	100%

Table 18. What courses from your education are you using on your job?

Courses	N	Percent (out of 33)
Psychometrics	22	60.6%
Organizational Development	17	45.5%
Multivariate Statistics	16	42.4%
Personnel Psychology	15	39.4%
Training	12	30.3%
Diversity	5	9.1%

Table 19. Looking back, are there any specific courses or topics you wish were covered, but were not?

Courses wanted	N	Percent (out of 33)
<i>Human Resources courses</i>		
HR specific course	7	21.1%
Compensation	2	6.0%
Staffing/recruitment	2	6.0%
HRIS course	2	6.0%
<i>Organizational Development courses</i>		
OD course	3	9.1%
Consulting	3	9.1%
Facilitation	1	3.0%
Career counseling	1	3.0%
Group dynamics	1	3.0%
Conflict resolution	1	3.0%
<i>Training courses</i>		
Instructional design	2	6.0%
Training evaluation	1	3.0%
Adult learning theory	1	3.0%
<i>Business related courses</i>		
Project management	2	6.0%
Business management	1	3.0%
Marketing	1	3.0%
Accounting	1	3.0%
Management philosophy	1	3.0%
<i>Statistics courses</i>		
SAS	2	6.0%
Advanced statistics	1	3.0%
<i>Other</i>		
None	7	21.1%
More specific	5	15.2%
Thesis preparation	2	6.0%
Course simulating real world project	2	6.0%
More selection of courses	1	3.0%
Anthropology	1	3.0%

Table 20. Is there anything else you would like to add to what you've said already?

Final comments	N	Percent (out of 33)
<i>Thesis related</i>		
More structured thesis process	7	21.2%
Cut the thesis	1	3.0%
Have thesis come before internship	1	3.0%
<i>Positive program issues</i>		
Applied experience of program is great	2	6.1%
Like that department encouraged students to take classes from other departments	1	3.0%
Great support and guidance during thesis process	1	3.0%
<i>Negative program issues</i>		
Poor faculty follow through	5	15.2%
Department needs clearer goals	1	3.0%
Improve communication between Psychology office and Graduate Studies office	1	3.0%
Need more professors	1	3.0%
Should have gotten grade for Training class	1	3.0%
<i>Suggestions</i>		
Better marketing would increase prestige of school	1	3.0%
Increase professors salaries to retain them	1	3.0%
Students need to put a lot into the program to get things out of it	1	3.0%
Would like to hear more guest speakers working in the field	1	3.0%
Increase number of classes students have to take	1	3.0%

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Appendix A

(Note: this was an e-mail)

Hello:

The Masters of Science Industrial/Organizational Psychology Program at San Jose State University needs your opinion. As a former Industrial/Organizational Psychology graduate student, you have been selected to participate in a brief telephone survey about your graduate education.

The survey will take approximately 20 minutes to complete and will ask you a variety of questions about your satisfaction with your graduate education, the status of your education, and your career outcomes.

This survey will allow you to provide your feedback and suggestions for improvement to the Industrial/Organizational Psychology Program, improving the department for future generations of students. Please note that some subjects may experience psychological stress when recalling their graduate education experience at San Jose State University.

Participation in this survey is voluntary and will not affect your relationship with San Jose State University or its faculty members in any way. Your results will only be known by myself (the researcher). Please note that the results of this study may be published and/or may be used for future studies; however no information to identify you will be reported.

Please be aware that you may withdraw from the study at any time. Your results WILL BE TREATED AS STRICTLY CONFIDENTIAL and will be used for RESEARCH PURPOSES ONLY.

Should you decide to participate in the study, please reply to this e-mail and provide me with a convenient time to talk. Or, if you would like an electronic copy of this survey, feel free to reply to this e-mail or contact Jon Burton at (415) 625-4020. In order to protect your identity, the email attachment will be saved to my hard drive and your original email will be deleted.

If you would like to obtain the results of this study or have any questions about the purpose of the study or the survey, please contact Jon Burton by replying to this message. If you have any complaints regarding this research, please contact Dr. Howard Tokunaga at (408) 924-5649.

Questions or complaints about the research, subject's rights, or research related injuries may be presented to the Associate Vice President for Graduate Studies and Research, Nabil Ibrahim, Ph.D., at (408) 924-2480.

Thank you for your consideration.

Sincerely,

Jon Burton