

GRADUATE STUDENTS' LEARNING EXPERIENCES

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There is great demand from private and government institutions for statisticians and many individuals are interested in post graduate education to enhance their career prospects. However, in recent years, only a slight improvement in graduation rate from the graduate programs in the School of Statistics has been seen. This study evaluates post graduate students' learning experiences in their masters' degree programs to assist the administrators and teachers in taking proactive steps to address students' concerns and to further enhance support for their post graduate students. A phenomenological case study was undertaken considering the different perspectives of post graduate students on their learning experiences in the School. The emergent themes were eagerness to learn; career advancement; time management; coping with obstacles; faculty competency; faculty advising; learning environment; and peer influence. Data triangulation was utilized by interviewing other stakeholders to gain insights into their perspectives on the graduate program and the experiences of their students.

BACKGROUND

For the past six decades, the School of Statistics of University of the Philippines Diliman has been offering academic programs as well as research and extension services to advance the development and maintenance of a high level of efficiency in statistical activities. This is a vision that includes not only the entire country but looks as far as into the Asia Pacific region. The School envisions playing a dominant role in the creation of a Filipino society that is not only literate in statistics but active in the participation of the development of statistics. The conscious effort to align this vision and take heed to demands of students who value post graduate education to enhance their career prospects prompted the school to offer two kinds of master's program in Statistics.

The master's programs are Master of Statistics (MOS) - a post graduate program for non-Statistics majors and Master of Science in Statistics (MS) - a post graduate program for Statistics majors. On the average, 75 and 60 students enroll in the MOS and MS programs, respectively. What is sad is that the average number of graduates for a school year for the MOS is only four while that of the MS is only eight. In recent years, only a slight improvement in graduation rate from the graduate programs has been seen. Such turnout is dismally lower when compared to the increasing demand of the workforce for professional training in advanced level in statistics.

THE PROBLEM

The School of Statistics has been widely recognized as the primary source of statistical expertise and manpower for the both private and government agencies. However, the School still cannot supply the huge demand. It does need to provide a workforce adequately prepared to meet the challenges of the global economy. It is necessary that the School catches up with the ever increasing demand for statisticians at the graduate level. Various sectors like banks and financial institutions need statisticians. The same can be said of fast moving consumer goods, knowledge process outsourcing, and other emerging businesses. Statisticians are valuable human resources in any kind of enterprise.

OBJECTIVE

The study evaluates post graduate students' learning experiences in both Master's degree programs. This shall assist the administrators and teachers in taking proactive steps to address concerns of graduate students in their continuous effort to further enhance support for their graduate students.

PREVIOUS WORKS

The reasons given by students in undertaking their graduate studies are desire for knowledge, desire to do research, desire to benefit others through their work, desire to teach in higher education, and for career related reasons (Anderson and Swazey (1998) and Atkinson (2004)). Equipment, technical support, library access are not usually reported as issues affecting success in post graduate programs. However, suggestions for improvement of the intellectual climate (Deem & Brehony, 2000) include the development of collegiality (also from Elton & Pope, 1989) to overcome power issues and the idea of collective responsibility (Cadman, 2000). Golde (2000), in his study had three themes that emerged and these were academic integration – relations with faculty; social integration – the student community; and telling others about leaving.

The major themes found in qualitative studies determining factors of graduate success consisted of professors' interest in student's academic success, affordable tuition, knowledgeable advisor, and family support. Minor themes that emerged were personal motivation, job security, being present physically and emotionally for family, and having access to an online library (Bain, 2006). Walpole (2002) gave top five qualities and skills of successful graduate students persistence; amount and quality of research or work experience; interpersonal skills; communication; and personal and professional values.

METHOD

The participants were post graduate students in the two master's program in the School of Statistics. The self-administered questionnaire consisted of questions regarding the demographic characteristics of students and 19 open-ended questions regarding their learning experiences. Questions on learning experiences were on reasons for enrolling in the graduate program; mentoring relationships; academic environment; and involvement experiences. Participants were requested to write their answers in narrative form so as to give detail regarding their postgraduate learning experiences.

In particular the questions focused on: i) main reasons or factors that motivate them to pursue the degree; ii) difficulties encountered as part-time/full-time student; iii) perceptions on ability to cope with the mathematical requirements of the courses; iv) any financial difficulties encountered or any other obstacles that hinder progress in their academic studies; v) what they liked most about the graduate degree program; vi) way/s where students felt they benefitted from the graduate program; vii) interactions experienced with faculty members; viii) experiences/interactions that are significant to the student and how these interactions affected the student academically; ix) defining the academic environment and how the environment influence their view of the program, x) kinds of activities where the student is involved; xi) ways by which current academic experiences influenced professional decisions; xii) if applicable, describe any experiences with research, publications, or any related scholarly activity; xiii) role of classmates or peers in academic and professional development; and xiv) suggestions, if any, for improving the graduate program.

The participants' profiles were entered in MS Excel and descriptive statistics were computed. For the qualitative part of the questionnaire, answers of participants to each question were placed in a table using MS Excel comprising of four columns namely: Data, Concepts, Constructs, and Themes. From 19 questions, it became 16 since three questions were combined with common topics. The data were then summarized by sorting the participants' responses to come up with the emergent themes wherein a phenomenological case study was undertaken considering the learning experiences of the postgraduate students.

To establish the validity of this qualitative study, data triangulation was utilized by interviewing other stakeholders in the master's program. The Director of the Graduate Studies and a post graduate teacher were interviewed to gain insights into their perspectives on the graduate program and the experiences of their students. In the analysis stage, feedback from the stakeholder groups was compared to determine areas of agreement as well as divergence.

RESULTS AND DISCUSSION

A total of 28 students participated in answering the self-administered questionnaire regarding their experiences as post graduate students. Half are MOS students and the other half are

MS students. More than half are female, 75% are married, and with an average age of 21 years old. Majority graduated from state universities and without honors. The general weighted average in college is 1.87. Half are full-time students and majority has scholarship benefits.

The emergent themes were eagerness to learn; career advancement; time management; coping with obstacles; faculty competency; faculty advising; learning environment; and peer influence. The respondents cited that they are enjoying the learning they have been discovering in the program. The eagerness to know more about statistics motivate them to strive to manage their priorities, even if some are not full-time students. There are, however, concerns in coping with many priorities including school fees, assignments, and lessons that make them spend extra hours studying.

On the reasons why the respondents are pursuing graduate degree program in Statistics, the most prevailing reason is for career advancement given the increasing opportunities for statisticians. Taking up the graduate program enables them to appreciate and understand statistics and its usefulness to the work they do. Aside from these, they also realized the value of improving themselves with the statistical skills they gained while in the program. Pursuing higher studies is advantageous to most respondents, not only in terms of career advancements but also as a means of improving themselves.

The challenge of attending classes every day seemed difficult to overcome for most part-time students. They cited the need to properly manage their time schedule from work to school aside from attending to other concerns that are not school-related. For the financial requirement of the program, it is not so much of a burden since they can avail of scholarships.

Most of the students have strong mathematical skills and able to cope with the math requirements of the program. However, some mentioned that they needed some refresher or review of past courses like calculus and algebra. They find the curriculum not merely theoretical but also practical and applicable to everyday situations. T

The respondents valued the interactions with competent teachers who share their ideas and knowledge in tackling requirements of the graduate program. They mentioned that such experiences make them understand their assigned tasks better and inspire them to excel in their studies. The school has been said to be conducive to learning, with involvement of students focusing mostly on classroom activities and discussions that they find healthy and fulfilling. The environment facilitates enjoyable learning in students. Even for those enrolled as part-time students, the distance from work to school is not so demanding as they are given some consideration by faculty members.

Most of the respondents are not very much involved in research, publications, or any related scholarly activity, except during school related seminars, conferences and meetings where research papers are presented. In terms of academic and professional development, the respondents mentioned that classmates and peers played major inputs to enhancing these two.

Many students did not suggest any major improvements in the way the graduate program is being conducted. However, they did mention the need for more reference materials or books in the library, accessibility to software, more electives or basic courses on major statistical subjects, and teachers that will guide the students.

According to the Director for Graduate Studies of the School of Statistics, advancement is one of the main reasons that motivate students to pursue their masters' degrees. With regards to specific difficulties encountered in the post graduate program, he cited that many MS students are not prepared in terms of theory approach especially if they graduated from courses outside Statistics or Mathematics. Students lacking mathematical background are advised take a refresher course in calculus during summer before they enroll in the major courses.

Another difficulty for both MS and MOS students is that they have not thought of their special problem for their thesis even after completion of course work. He also mentioned that the school can boast of its post graduate program because of its updated and exhaustive curriculum. Aside from that, teachers are experts in their field and are dedicated. Thus, the best benefit that students can obtain from the post graduate programs is quality education. However, he suggested that some facilities can be further improved.

A professor for both the MOS and MS degree programs have the same position as the Graduate Director that career advancement is a major motivation among postgraduate students.

With regards to the benefits that students obtain from the post graduate programs, he cited the following: courses being offered, non-academic interaction, networking, expertise of teachers, and mentorship of teacher to students. He enumerated several difficulties that postgraduate students encounter and these are conflict of work and study; lack of mathematical preparation and prerequisites; and language difficulty for foreign students. He suggested improvement of facilities (computers and library) and more research outputs.

CONCLUSIONS AND RECOMMENDATIONS

The findings of this study have shown that there are various aspects in the post graduate students' learning experiences that need to be considered. These can help administrators, teachers, and even employers to become aware of the complexities of being a student in higher education. There is much expectation from post graduate students. They should be responsible, matured, resourceful, and independent. However, this study suggests that the graduate school should prepare students before they begin their academic work, have a good learning environment, and complete facilities. With regards to teachers, they need not only be knowledgeable about the subject matter but should be able to teach effectively. If the students are full-time employees, then employers should provide time for their studies since they are the direct beneficiaries of their employees' added knowledge. These recommendations shall hopefully support the students and the difficulties that they encounter in their postgraduate studies.

This qualitative study was limited to postgraduate students of the college who volunteered to be participants and thus generalizations cannot be done for other postgraduate students.

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