

## SERVICE ATTRIBUTES OF GRADUATE RESEARCH STUDENTS' NEEDS IN A MALAYSIAN UNIVERSITY

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### Abstract

Issues of graduate studies have been studied and debated worldwide in the face of a changing higher education landscape. There are various stakeholders in the graduate process of study and inquiry, including the wider macro socio-economic environment, the micro institutional and departmental environment, as well as the individual student. Students need information and support to cope in balancing the demands of the different environments. This paper is mainly focusing on graduate research students' needs in terms of information and services. Questionnaire was administered to graduate research students in a Malaysian public university. 184 (53.96%) sets of questionnaires were successfully returned from 341. Students' responses in terms of information and services were reported. The study revealed that the information and services in this university was moderate from students' perspective. Their needs and expectations were also being sourced. The results obtained show that graduate students' needs extend beyond the mere informative basics. Suggestions were made on how the students' stated needs can be used in the enhancement of an effective resource. As an educational institution, they may need to consider various ways in which these needs can be met. Students have different needs at the different level of graduate studies. The learning that takes place during graduate studies is a maturing process. Thus, effective resources are required in order to enhance the graduate process.

**Keyword:** Effective resource, Graduate student, Information, Services, University

### INTRODUCTION

In higher education, attrition rates and completion rates of graduate students becoming statistical of vital concern. In 2005, graduate research student in this university with thesis program completed their Masters averagely within 2.69 years and Ph.D student completed their studies within 4.84 years averagely where as they could complete it earlier than that. This scenario is worrisome if the duration of their study become longer and longer. This indicates the need to improve completion rates. One university found they would save one million dollars a year if attrition went down by 10%, since they would no longer over-enroll students to compensate for expected attrition (Smallwood, 2004). The concern about higher degree non-completion and time taken to completion has attracted many scholars to explore especially in overseas for example in American, attrition estimates for doctoral studies being far higher than 50% (D'Andrea, 2002). However, some university estimates have suggested that attrition over the first several years of candidature is less than 40%. Other studies have suggested that more than one third leave in the first year (Lovitts and Nelson, 2000). A recent study in Canada indicated that discipline area was important for completion, with completion rates varying from 45% in arts and humanities to 70% in life sciences, with science completions being generally in the high 60% range (Elgar, 2003). For the UK, completion rates after 10 years differed by general discipline area with arts/humanities rates being 51%, and sciences cited at 64% (Wright and

Cochrane, 2000). The same study also reported considerable variation in completion rates between institutions and disciplines.

As the number of graduate students in this university keeps increasing, the ability for university to manage these students is at a vital concern. The effectiveness of the resource becomes the main attention in this issue. As of 1st semester 2007/2008, there are about 4741 graduate students studying here and 1500 of them are international students. From previous year, there were 3905 graduate students registered. Majority of the student are from thesis structure. To handle this large number of students, the requirement of good information and services including other facilities would be a must. Managing the students' needs for convenience environment will be a big challenge to the institution. Students undertaking graduate study at universities are under increasing pressure to complete their candidature within particular timeframes, and faculty are also under similar pressure to attract and retain quality candidates who will be able to complete on time and attract funding and research quantum as well as raise the level and status of the institution's research profile. Research students represent a significant range of diversity: (1) age; (2) cultures; (3) experience and ability; (4) part-time, full-time, internal or external; (5) their needs change over time / place / space; and (6) sometimes with, but mostly without scholarships or other funding support. There are also pressure on research students to: (1) Complete within candidature time – (reduced learning entitlement); (2) Publish / present conference papers; (3) Support families / jobs; and (4) Develop a broader range of skills that will enhance their marketability. These exclude creating new knowledge, producing ground-breaking work, keeping up with the literature, and writing a thesis et cetera. Being as graduate students, they have a lot of challenges to overcome such as family commitment, work commitment, finance et cetera, which may affect their achievements since most of them are working and married students. These challenges are much greater if the students are doing part time which really consumes time, money, effort, patience and enthusiasm. Most of them either financing their study by themselves or receive a scholarship, so it is important for them to complete their study as soon as possible, and certainly within the time frame given.

There is no doubt that ineffectiveness of information and services provided by school, faculty or university contributes to low quality of student's studies. The main responsibility of these institutions is to ensure that the facilities provided are always at the best condition. The benefit in having good facilities is that it can be a factor in students choosing the institution to pursue their study. These days, students are increasingly looking for a high quality work environment. Delivering quality service, relevant information and support have become an important goal for most higher education institution. For an excellent educational institution, students are emphasized to have a good knowledge and skills. Research students commonly have a responsibility to enhance the image of university. To improve students' performance, there are crucial needs for effective resource. This requirement manifests complementing the development of human capital. The general purpose of human capital is knowledge gained through education and training in areas of value to a variety of firms. Becker (1993) considers education and training to be the most important investment in human capital.

Many institution of higher learning are now trying to understand and achieve an effective resource. There is a prevailing belief that education has entered a new environment in which quality plays an increasingly important role. Within this context, concern for quality in higher education is perhaps at an all time high (Nielsen, 1997; Eaton, 1999). Being quality minded in education means caring about the goals, needs and interests of the students and other external groups (Whitaker and Moses, 1994). Moreover, students are aware of their educational rights and are more likely than before to demand competent and accessible resources. Clarity about the roles and responsibilities of the institution and students is therefore of the utmost importance. In return, it is expected this will increase knowledge and self-quality for good information and supports. Higher Institution has to manage their resources and maneuver their research culture. Given the democratization of education, higher education is no longer the sanctity of the elites but accessible to students from varied backgrounds and from all levels of society. Students would have gained places at the institutions of higher learning with varying entry-level qualifications. Therefore it is essential that they are exposed to the

best resource and research culture to ensure that they receive optimum learning processes to help them develop and maximize their capacity and to inspire them so that in turn they develop into the innovative and creative workforce that the nation needs. Higher Institution needs to move on from here or work simultaneously with these processes to ensure that there is constant improvement which impact directly on our future human resources. It has responsibility to provide these students with an effective resource.

The main objective of this research is to identify the needs of graduate research students towards information and services in a Malaysian public university. This research also seeks to investigate graduate research students' expectation and needs through these elements. The specific objectives are: (1) To identify students' needs towards the information and services offered by a public university; (2) To determine the comparison between demographic profile (year of study and gender) with the perception towards the information and services offered by a public university.

### **LITERATURE REVIEW**

Graduate student needs can be investigated from various perspectives. A institutional perspective could provide valuable insights, for example Lessing and Schulze (2002) and Van Tonder, Wilkinson and Van Schoor (2005) refer to the South African higher education context, where transformative processes, increased graduate student numbers and the drive for quality and accountability place high demands on the academic environment for information and support to graduate students. Another approach to this area of concern would be to question the current graduate students themselves, as proposed by Lessing and Schulze (2002), Lin and Cranton (2005) and McAlpine and Norton (2006). McAlpine and Norton (2006) found that a student voice is seldom heard in research on graduate studies.

Lin and Cranton (2005) describe the process of graduate study as growing from a scholarship student to becoming a responsible scholar, which Lovitts (2005) refers to as a critical transition. The graduate growth process is not always a fluent and untroubled transition. The growth that takes place by working through what Malfroy (2005) refers to as a necessary creative tension and the development of independence, critical thinking (Lin and Cranton, 2005) and creativity (Lovitts, 2005), are essential elements of graduate development. Lin and Cranton (2005) add that students need to be supported in their growth to establish an individual scholarly identity. Lovitts (2005) found that graduate students are often ill-prepared to deal with the challenges graduate studies pose to them.

#### **Graduate Research Process**

Research is an interactive process and requires the development of social as well as academic skills (Phillips and Pugh, 2000). A school's administrative function is commonly interpreted as referring to managing, operating or directing an organization (Burton and Bruekner, 1995) in order to support students towards the completion of Ph.D. Faculty and Graduate School Office is the major source of academic guidance for graduate students and they go there and feel at ease discussing their problems and asking for advice. On the other hand, the students consult their academic advisor if they have academic problems. Given the length and complexity of graduate student supervision, it is understandable that various difficulties arise (Brown and Atkins, 1988; Moses, 1994) due to organisational or professional factors. There are circumstances where a student can face a personality clash, barriers to communication, cultural or language difficulties or personal differences in the approach to work. Here the school has to ensure that it provides the best solution for the student (Donald et al., 1995). Besides that, the school should appoint an appropriate administrator to monitor the supervision provided to all graduate research students and required that annual reports of student's progress be submitted to the graduate studies office or faculty (Holdaway et al., 1995).

Graduate education programs worldwide, as at this university, attract professionally-based, non-residential students studying part-time. Many graduate students are mature and/or distance learners with needs different to those of residential and undergraduate students (Humphrey and McCarthy, 1999). Part-time

students struggle to cope with their simultaneous academic and professional workloads and experienced a lack of support and understanding from their supervisors, inflexible program organization and structures, and a feeling of isolation (Lessing and Lessing, 2004; Mackinnon, 2004). Graduate students report anxiety as a result of uncertainty about what is expected of them and procedures such as assessment (Lovitts, 2005; Malfroy, 2005). Students from previously disadvantaged backgrounds may have further distinctive needs in order for them to cope with the pressures of a technologically advanced environment and a system that demands independent research (Lessing and Schulze, 2002). These factors need to be taken into account in the design of information and support resources provided to graduate students. Service provided for students have to be well-managed and fits the students' needs.

Lessing and Lessing (2004) adds the following general aspects that influence graduate completion rate: student-friendly, accessible administrative procedures, understanding academic and scientific requirements, ability to judge workload related to different components of the research process, retaining supervisor contact, overcoming isolation, conflict management, and the ability to take a stand and argue a position in terms of the study. Humphrey and McCarthey (1999) add the important role the provision of adequate facilities, financial support, interaction within the department and wider university, logistical arrangements and demographic factors play in graduate student success. McAlpine and Norton (2006) stated that a serious problem exists in the academic world – doctoral education attrition rates that approach 50% in some disciplines. Students are central to the graduate undertaking. Yet, theirs is the voice that is least heard (Golde, 2000). This absence of the student's voice begins with undergraduates (Dunwoody et al., 1995) where information is rarely, if ever, collected as to why students drop classes. This silence becomes loud for doctoral students who meet the criteria of people who have not been heard because their points of view are believed to be unimportant or difficult to access by those in power (McLaughlin and Tierney, 1993). Today's students come to graduate programs with increasingly varied backgrounds, preparation, expectations, motivations, and responsibilities (e.g., child-care, work). In the US, they tend to be older than in the past, mostly in a relationship, parents, employed in areas unrelated to their discipline, and domiciled far enough away from campus that it is not easy to be present (Elgar, 2003).

Many of these students want to enrich what is to them a new community with their knowledge and experience. However, despite such diversity, studies consistently demonstrate a set of variables originating in different contexts that influence graduate retention and completion for all students. This uniformity results from common features that students experience as they begin to acculturate in their chosen community of practice. Their academic experience may include increasing debt, competition for funding, overwhelming program requirements, isolation, competing demands (family and unrelated employment) resulting in concerns about quality of life as well as fears about career opportunities upon completion. Thus, they need support from the institution to keep them continuing their studies. Departments are important sites of learning and change that exist within larger organizations: faculties/schools within universities. Institutions incorporate degrees of diversity just as do student populations and departments. Interestingly, many universities estimate shorter times to and higher levels of completion than other universities (Elgar, 2003) but did not take action into this. Why is the case remains unclear; perhaps with increasingly insufficient public funding, universities now look to the community as well as student tuition fees to augment government funding (Alexander, 2001). As the level of competitiveness among universities increases, promoting the positives of their own programs and outcomes becomes essential.

Funding linked to academic work is the last variable since its presence reduces stress concerning finances, links paid work to tasks within the academic rather than the external world, and is often more flexible in scheduling than external employment. Institutions traditionally play a role in student access to external funding, such as scholarships. Internal funding includes teaching assistantships, largely distributed by departments, with institutions usually setting overall policies, and RAships negotiated between student and supervisor. Some universities have initiated new internal funding policies to reduce student's need to work outside the university. When one university limited student admissions to the number of research and teaching

assistantships that humanities departments could provide, completion rates increased from 34% to 68% over 10 years (Smallwood, 2004). Funding is critical, so is the nature of the responsibilities attached to it.

Graduate students often experience problems which delay their studies or prevent them from finishing. According to Helm (1989) these problems are threefold, namely problems in the research design, the collecting and processing of information and the writing of the report. Lessing and Lessing (2004) adds the following general aspects that influence graduate completion rate: student-friendly, accessible administrative procedures, understanding academic and scientific requirements, ability to judge workload related to different components of the research process, retaining supervisor contact, overcoming isolation, conflict management, and the ability to take a stand and argue a position in terms of the study. Humphrey and McCarthy (1999) add the important role the provision of adequate facilities, financial support, interaction within the department and wider university, logistical arrangements and demographic factors play in graduate student success.

#### **Needs on Information and Services**

Phillips and Pugh (2000) and Spear (2000) agreed that the school should establish a reputation for research and a real commitment to the development of doctoral students. They also stated that it has to provide the students with good facilities. The benefit in having good facilities is that it can be a factor in students choosing the school to pursue their study. Other issues that the school should emphasize have to do with the mechanics of getting the work done, for example, access to laboratory equipment, library facilities, potential samples and their availability and ease of access, the amount of support from secretarial staff, photocopying facilities and in the case of survey research, the potential for help with postage. These include study cubicles, common room, and desk in a small-shared room similar to those used by staff members. All university or school should offer student e-mail network and access to the internet since personal computer, email and internet technologies are such an integral part of research.

Not surprisingly the contemporary student poses a particular challenge to this sector in terms of their differing needs and wants. Mature age students, for example, view education very much in the same light as any other form of commercial exchange activity. Consequently, they are every bit as demanding in terms of the product purchased and service received in relation to the delivery of that product (Mavondo and Zaman, 2000). They demand the same qualities in their education, as they receive from any other commercial establishment, high quality, convenience, service, and low costs (Haworth and Conrad, 1997). They compared shop for the service (educational) provider that coordinates with their demands and needs both personally and professionally (West, 1999). Many feel that they are equal to faculty members, and resent traditional passive learning styles, favoring a more personal one-on-one relationship with their educator. In short, valued relationships are perceived as being those, which are both user friendly and convenient, much like the partnership formed between banks and supermarkets and the modern day consumer (Levine and Cureton, 1998). Because of their busy and dynamic life style and needs, they expect the educational institution to offer a variety of course, campus and delivery options that are timely, easily accessible and very much user friendly (Twigg, 1994). These trends, combined with the fact that employers increasingly demand a university education as a necessary prerequisite to employment have driven up the need for a higher education as a vital antecedent to career success within today's society. For example, in Australia alone, university enrolments have risen 125% between 1990 and 1996. With more students holding full and/or part-time jobs, nuances and convenience are major issues that need to be addressed, as well as the quality of the services offered by higher educational institutions, in an attempt to meet their needs. Students' disposable income levels are being stretched to the limit; meanwhile they desire higher quality and more convenient services for their time and money.

That said, the highly subjective and intangible nature of the educational product, which can be a cumulative measure of service delivery, a post-purchase experience, or an accumulation of tangibles and offerings does makes it extremely difficult to evaluate (Didomenico and Bonnici, 1996). This, however,

should not preclude any worthwhile attempt to measure actual service performance. Education is directly impacted by the provider and is only as effective or inadequate as the professor, or technology used in its delivery. As a service provider the university is defined by the quality of service it provides (Slade et al., 2000) and within the higher education sector, the services offered and the way in which they are offered now serve as a form of competitive differentiation for educational providers. Often these packages are the main attraction for potential and current students (Didomenico and Bonnici, 1996) and as universities continue to become more student oriented, student perceptions of higher educational facilities and services are becoming increasingly more important (Wright, 2000). It is absolutely critical therefore that this sector develops some means of evaluating, tracking and managing student perceptions of service quality.

The desire to pursue higher education is constantly increasing. School leavers recognize that higher educational qualifications result in more job options, lower rates of unemployment, and, in most cases, a higher salary than those with a secondary school qualification only. Not only are school leavers entering colleges and universities, but working and mature adults are also entering or returning to higher education (Safahieh and Singh, 2006). These adults hope to use the higher educational qualification to play a more ambitious role in their organization or society, to fulfill a personal desire to acquire new knowledge and abilities, or respond to a need to develop intellectually. Earlier studies have indicated that the problems include adapting to the new educational and social environment, pressures of staying away from home, financial pressures, language problem, and lack of friends (Australasian Law Teachers' Association, 1995). Other studies that have examined the problems of international students, grouped them into 11 categories: financial aid, placement services, English language, academic records, health services, socio-personal, admissions and selection, living/dining services, orientation services, student activities, and religious services (Galloway and John, 2005).

Malaysia is one of the countries that attract not only local students but also international students for higher education. The Malaysian Government and the institutions of higher learning are striving to attract international students, especially at the graduate level. The institutions make every effort to provide quality education. A wide range of courses are offered. Living costs are generally kept low. English has been made the medium of instruction for science and technology courses. These factors have resulted in Malaysia becoming an attractive destination for international students from various parts of the world. At the end of 2005, it was estimated that there were about 40,000 foreign students studying in Malaysian public and private higher educational institutes (Clark and Robert, 2005). Among the goals of the university are to increase the percentage of international students. To meet this goal, the university provides appropriate academic, recreational, cultural, counseling and informational support for these students.

Given the critical importance of information in today's world, these students need information for various purposes, and university can play an important role in meeting of their information needs through their programs, facilities, and services. But, in order to accomplish this task effectively, university must first understand the information and service needs of this group of students. Wilson (1997) noted that information needs are influenced by cultural background, characteristics such as emotional, educational, demographic, social or interpersonal, environmental, and economic intervening variables; and by social context in which the need arises. Mohamed (2000) carried out a survey on the information need of foreign women in Malaysia, with special reference to Sudanese community. The findings of the study showed that the main information needs of respondents were related to continuing their education, education of their children, parenting, and concerns about their family health, child-care, tackling youth problems and other every day concerns. Other findings of this study revealed that main barriers of foreign woman in meeting their information needs were limitations in Bahasa Melayu and the English language. It needs to be acknowledged that while these students come from diverse backgrounds and cultures, and may be very different in demographic and educational characteristics, they are sufficiently different from the locals to be treated as a separate entity. Faculties, and university administrators, could benefit from an understanding of the information and services needs of this

category of students. The literature thus suggests that diversity of students' background will have needs that are somewhat different from the others.

### **Resource Needs in Higher Education**

Like many other business organizations, institutions of higher learning must also be concerned with the quality of the services offered to their customers that is, the students. Service quality can lead to excellence in education and can have lasting effects on the institutions and students. This can influence students' recommendations of their programs to others, as well as their future monetary contributions in support of their institutions (Chong, 2002). Nowadays, higher education is being driven towards commercial competition imposed by economic forces resulting from the development of global education markets and the reduction of government funds that forces tertiary institutions to seek other financial resources (Firdaus, 2006). Tertiary institutions had to be concerned with not only what the society values in the skills and abilities of their graduates, but also how their students feel about their educational experiences (Bemowski, 1991). These new perspectives call attention to the management processes within the institutions as an alternative to the traditional areas of academic standards, accreditation and performance indicators of teaching and research. Firdaus (2006) also added that tertiary educators are being called to account for the quality of education that they provide. While more accountability in tertiary education is probably desirable, the mechanisms for its achievement are being hotly debated.

Hattie (1990) and Soutar and McNeil (1996) in their studies opposed the current system of centralized control, in which the government sets up a number of performance indicators that are linked to funding decisions. There are a number of problems in developing performance indicators in tertiary education. One such problem is that performance indicators tend to become measures of activity rather than true measures of the quality of students' educational service (Soutar and McNeil, 1996). These performance indicators may have something to do with the tertiary education's quality management, but they certainly fail to measure the quality of education provided. While institutions of higher learning are becoming more competitive with the emerging market growth, students' perceptions of the higher education experience have become increasingly important as institutions also attempt to become more students-oriented. Therefore it is crucial for institutions of higher learning to maintain and continuously improve the quality of education. However, there has been little research seeking to identify the quality factors of education from the students' viewpoint. This lack of knowledge by the institution's management might lead to their misallocating resources while attempting to improve their institution's quality. Such efforts could result in students' dissatisfaction with the institution. Hence, students' perception of information and services in institutions of higher learning becomes very important.

### **METHODOLOGY**

The framework of this study was based on a few theories by experienced and expert scholars. This is a descriptive research design where it is aimed to investigate the perception of graduate students towards the information and services offered by a public university. The sample consist only one cohort; graduate students which were already within the system (who have been registered). There were 341 sample out of 3523 students in the population has been identified as the respondents. The population of this research involved graduate students at Master's or doctoral levels with thesis program. Purposive sampling method was used in this research. The students were met at the faculty especially after classes. Faculty's staff helped the researcher to locate the students especially for Seminar and Research Method classes. They were believed meeting the required criteria and the representative of the given population. The questionnaires were distributed at all faculties to ensure that there is an equal distribution to every respondent in a public university. This study was conducted via questionnaires by hand. 184 (53.96%) of the questionnaires were return from 341. It is slightly higher than the response rate achieved by Lessing and Schulze (2002) of 41% and by Adee (1997) of 37% in a similar study. According to Babbie (2001), a response rate of at least 50% is considered acceptable for analysis and reporting. Statistical analyses were performed using statistical package

for social sciences (SPSS Version 14.0). The data were analyzed accordingly (quantitative questions by means of basic statistical analysis in and qualitative questions by means of content analysis).

### FINDINGS AND DISCUSSION

This study revealed the perception of graduate students need in terms of information and services. The first section of the results provides a brief overview of the general results and provides a profile of the respondents. The second section focuses on the respondents' needs on information and services. A total of three hundred and fifty two (N=341) questionnaires were distributed to graduate students and only one hundred and eighty four (N=184) were returned successfully.

#### Profile of the Respondents

This section contains the profile of the respondents. The demographic items for profile respondents are: Age, Gender, Marital Status, Faculty, Program of Study, Year of Study, Discipline of Study, Student Status (In or Off-campus) and Nationality.

**Table 1: Summary of Respondents' Profile (n=184)**

	Demographic Profile		Discipline of Study		Total
			Science	Social Science	
<b>Age</b>	Below 30	N	100	45	145
		%	54.3%	5.4%	78.8%
		of Total			
	31-50	N	10	29	39
		%	24.5%	15.8%	21.2%
		of Total			
<b>Gender</b>	Male	N	47	18	65
		%	25.5%	9.8%	35.3%
		of Total			
	Female	N	63	56	119
		%	34.2%	30.4%	64.7%
		of Total			
<b>Marital Status</b>	Single	N	94	42	136
		%	51.1%	22.8%	73.9%
		of Total			
	Married	N	16	31	47
		%	8.7%	16.8%	25.5%
		of Total			
	Divorced	N	0	1	1
		%	0.0%	0.5%	0.5%
		of Total			
<b>Study Program</b>	Master	N	94	56	149
		%	51.1%	30.4%	81.5%
		of Total			
	Ph.D	N	16	18	34
		%	8.7%	9.8%	18.5%
		of Total			
<b>Year of Study</b>	1 <sup>st</sup>	N	10	13	23
		%	5.4%	7.1%	12.5%
		of Total			



<b>Status</b>	2 <sup>nd</sup>	N	64	31	95	
		%	34.8%	16.8%	51.6%	
		of Total				
	3 <sup>rd</sup>	N	33	23	56	
		%	17.9%	12.5%	30.4%	
		of Total				
	4 <sup>th</sup>	N	3	7	10	
		%	1.6%	3.8%	5.4%	
		of Total				
	<b>Student</b>	In Campus	N	70	52	120
			%	38%	28.3%	66.3%
			of Total			
Off Campus		N	40	22	60	
		%	21.7%	12.0%	33.7%	
		of Total				
<b>Nationality</b>	Malaysian	N	79	58	137	
		%	42.9%	31.5%	74.5%	
		of Total				
	International	N	31	16	47	
		%	16.8%	8.7%	25.5%	
		of Total				

Table 1 shows that, the majority of the respondents were below than 30 years old. The result also exposed that the majority of respondents were under the common retirement age (55-60 years). The respondents were relatively distributed between the age groups of below 30 years (n=145) and 31-50 years (n=39). 78.8% respondents fall in below 30 years age group. This implied a distribution skewed towards younger adults. The results showed that a majority of the respondents were females (64.7%) and 35.3% (n=65) of the respondents were males. Female respondents were more than the male respondents. Results showed that 73.9% (n=136) respondents were single, 25.5% were married and only 1 respondent was divorced. It is clearly showed that the majority of the respondents were single. The chart shows that the highest response came from Faculty of Education (n=54) and Faculty of Engineering (n=40). It is followed by Faculty of Science (8.7%) and Faculty of Modern Languages and Communication (7.6%). These four faculties have the highest numbers of graduate research. Results showed the majority of the respondents were Master students with n=149 (81%) and only 34 (18.5%) were the Ph.D students. All respondents were pursuing their study with thesis program. Most of the respondents were second year students (n=95) followed by third year students, 30.4% (n=56). Respondents in their first year were 23 (12.5%) and fourth year and above were 5.4% (n=10). The result showed that the majority of the respondents were from second year and above. 59.7% (n=110) of the respondents were from science and 40.2% (n=74) were from social science discipline. The numbers of science students were higher than the students of social science. We can see that 66.3% of the respondents (n=122) were staying in campus while 62 (33.7%) respondents were off-campus. It seemed like most of the students were choose to stay in campus compared to the outside. In terms of nationality, 137 respondents (74.5%) were Malaysian and 47 respondents (25.5%) were international students. From the data, the majority of International students were from Iran, Iraq and Indonesia.

The profile of the students correspond to what was found in literature, indicating that they are mostly mature learners who have to cope with balancing work, family and their studies. The majority of the respondents has been in their graduate program of choice for at least a semester, and was therefore able to articulate their needs in terms of supervision's information and support. It is supported by (Humphrey and McCarthy, 1999) where they explained that many graduate students are mature and/or distance learners with needs different to those of residential and undergraduate students. The results also explained that more than

half of the respondents are female and more than 50% of them are from science discipline. It is match up by the current situation in Malaysian Universities where the majority of the students are female for more than 60% and Malaysian Government currently emphasized more to science discipline compared to others since these courses are very important to the government especially in Research and Development areas.

#### Needs on General Services and Service Attributes Offered by the University

Resource in this paper was discussed on information and services. The results of graduate students' needs towards the resources have been gathered. The results of the findings were divided into the perception towards the needs of general services and service attributes offered by the university; and the perception of faculty's services.

Table 2 explains the students' perception of general service and service attributes offered by the university. It indicates that the library services in a public university are good with a mean of 3.60. It is followed by good computing and internet facilities, 3.56. The lowest evaluations stated by respondents were the staffs are available for student consultation with a mean of 3.02. This implied that the availability of the staff is not very satisfied. Staff should be available for students because they are one of the most important support or guidance other than their lecturer/supervisor.

**Table 2: Perception of Needs on General Services and Service Attributes in the University (n=184)**

Rank	Services	Mean	Std. Deviation
1	Good library services	3.60	0.92
2	Good computing and internet facilities	3.56	1.00
3	Convenient class sizes, environment and facilities	3.50	0.99
4	Good recreational and sports facilities	3.49	1.29
5	Student workload – are manageable	3.41	1.03
6	Emphasis on facilitate and educate students well	3.38	1.13
7	Level and difficulty of subject content is compliance to course requirement	3.34	0.87
8	Staff are available for student consultation	3.02	1.03

**Table 3: Students' Perception of Needs on the Services Offered by Faculty (n=184)**

Rank	Items	Mean	Std. Deviation
1	Treatment from lecturer/tutor (easy to meet, satisfactory consultation, friendly)	3.53	0.90
2	Internet access and computer facilities are satisfactory	3.47	0.99
3	Academic area facilities (such as air-conditioner, LCD, furniture, lighting) is convenience	3.45	0.89
4	Modern equipment and visually appealing facilities	3.43	0.96
5	Lecture hall/room, tutorial room, laboratory is clean and comfortable	3.36	0.89
6	Faculty provides the most up-to-date data and useful information to students	3.33	0.93
7	Assuring customers of the accuracy and confidentiality of their transaction	3.31	1.38

8	The faculty provides the chance to develop students' abilities and preparing them for their career	3.29	0.88
9	The lecturers are capable to give lecture & presentation effectively	3.28	0.62
10	Treatment from staff (Staffs are consistently courteous and deal with students in a caring fashion)	3.24	0.93
11	The faculty management is willing to take the opinions of students	3.22	0.76
12	The faculty provides a proper channel for students to give feedback and ideas	3.22	0.75
13	The faculty provides useful information related to the students needs (i.e.: Scholarship, financial support, counseling, job opportunity etc)	3.19	1.02
14	Toiletries equipment and facilities are proper and the cleanliness is satisfactory	3.19	1.02
15	The faculty is capable of handling customer complaints, giving resolution, solving problems	3.18	0.69
16	Faculty is providing services at the promised time	3.17	0.56
17	Direction to lecture hall/room, tutorial room, laboratory is clear and helpful	3.15	0.94
18	The transmission of information from university level to the faculty and certification of student form and letter	3.11	1.12
19	Staffs are always ready to respond to students' service problem	3.08	0.75
20	Staffs are willing to help students	3.01	0.93
21	Parking area facilities (is safe and sufficient)	2.86	1.16
22	Cafeteria is clean and the menus is variety	2.86	1.04

### **The Perception of Services Offered by the Faculties**

Table 3 explains the rank order of students' perception towards the services in the faculty. Highest rank falls to statement number one with a mean of 3.53. It is followed by the statement of Internet access and computer facilities are satisfactory with a mean of 3.47. This table ranking from high to low mean and the lowest falls to parking area facilities and the cafeteria with mean of 2.86 and 2.86. This clearly prompts that these two services need to be improved. Parking area should be sufficient and safe since many cases involve the car and motorcycle being stolen happened around the faculty. The cleanliness of the faculty also should be improved. Students need variety of menus in their meal so that they will not feel boring eating the same food for the entire semester.

### **Graduate Students' Needs towards the Resources within University**

In terms of information and services, we can conclude that there are a few improvements that should be undertaken to complement students' needs. Student needs proper information about transportation and student support and welfare services. These information were perceived as inaccessible for some students. In terms of service accessibility, the university should put more emphasize on International Office and Graduate School of Studies. A few major services and service attribute offered by the university also need to be highlighted. We discovered that students need good library service, good computing and internet facilities and they demanded for availability of staff for student consultation. Other than that, they need safe and sufficient parking area facilities. According to Norhasni (2006), she proposed that all university or school should offer student e-mail network and access to the internet since personal computers; e-mail and internet technologies are such an integral part of research. A respondent also clarified that they more electronic journal or article. Another respondent added that "Hopefully UABC can provide more facilities instead of internet accessibilities at residential college. Emphasize on research quality to enhance students' knowledge".

In terms of supervisory system, their needs in research and supervision were both identified as essential for students' progress. Norhasni and West (2007) explained that research student supervision as a blend of academic expertise and the skilful management of personal and professional relations. Accessibility of the supervisor should be improved so that the students can seek advice from them. Students need guideline from the institution to select a potential supervisor. A respondent responded that "Lecturers/supervisors should help students more instead of let them on their own. Guide students from the first step they entered University especially out campus students especially those who has to travel from places. They took the effort to come to University and at the end of the day they become so frustrated with the facility/advices provides". For research aspect, respondents perceived that research design and methodology and writing skills are the most difficult stage in their research process. Respondents noted university should improve skill and development on research, planning and organizing in doing research, be more specific. Respondents noted various skills they have learned during graduate study. The reported skills can be summarized as generic scientific skills, methodological skills, and personal management skills. Besides, students need more assistance in Managerial and Research Input. They need support from their supervisor to manage their studies effectively. Project management as a researcher and obtaining cooperation from the environment where research is conducted were noted as an important skills needed during graduate studies. Graduate study therefore not only develops students' research capacity, but needs to focus on the holistic development of the student as scholar. Students perceived some information should be looked up by the institution properly. From their perspective, information on bursaries and loans and student support services must be more emphasized. Services such as International Office should also be more manageable since the student especially international student perceived that IO services are poor. It is supported by the lowest mean of responsiveness in service's dimension. However, equal attention should also be given to other information and services.

From the findings of the study, training program are needed for the staffs since the respondents perceived that the responsiveness and the students' support service as the lowest level of service quality provided by the institution. They also perceived the same for GSO and IO services. As such, this area needs continuous improvement. The staffs need to be skilled in handling every customer interaction from greeting customers to asking the right questions. This can be achieved by training and motivating the staffs to spend a little extra time to entertain the students and know their specific needs and requirements. Besides that, they also can provide the students with proper training on how to use the facilities and how to register their program during their first encounter with the faculty. This would augment the relationships between the employees and the students and thus, enhance the staffs' skills. This would affect the quality of the department positively. The above results also suggest that the academic department needs to improve its service. They need to understand their students' needs and this can be achieved by forming a student-staff liaison committee. This committee would encourage students to complain by providing a convenient way to execute. According to Ziethaml et al. (1990), managers who want to improve problem-resolution service must overcome the common customer perception that the organization does not really care when things go wrong. By not providing the means to complain, students will think that the service provider does not care when things go wrong. Effective resolution of complaints should be done by the academic department. The employees need to listen carefully to determine the students' feelings and then respond accordingly, ensuring that the complaint is understood. They should make every effort to resolve the problem quickly. Actual complaints provide a source of product and process improvement ideas to the organization if a systematic process for collecting data is set up and the complaint data is analyzed and the information is used for improvement purposes. University and Faculty should take appropriate action to facilitate the students. Ultimately, the aim of this study is to enhance the information and services in order to promote fine research while improving the completion rates of students. The outcome of the research will be the foundation to enhance the resource for graduate students in this university.

## CONCLUSION

This study found that the services are carried out promptly according to the needs of the customers. Overall, this study has shown that the information and services in this university was moderate from students' perspective. This means that the resources provided by this university are not achieving the students' expectation and there is room for continuous improvement. The students' also perceived a highly important of supervisory input to their studies. Thus, supervisors are recognized as the major factor in the success of graduate research studies. The learning that takes place during graduate studies is a maturing process. Students need enthusiasm, strength, support and commitment to keep on their study. This explained that graduate student needs to be treated properly without sacrificing the apt and basic input needed by graduate students. Through the findings of the study, it brings several implications to those who are involved in graduate studies. The results can help the institution identify and address implementation issues related to graduate studies. A major contribution of this study is as the guideline for effective resource. It helps the institution to identify which supports are most needed by students and should be improved to facilitate effectively and at the same time promoted students' participation. Moreover, this study serves as an indicator for the institution in developing human capital. As an educational institution, they may need to consider various ways in which these needs can be met. University should provide information and support to graduate students, without sacrificing the coherence and generic input needed in any academic program.

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