### Abstract

Malaysian women who in their own way contributing towards the nation’s development can be referred to as ‘Serikandi’ which in English means women who are strong and brave. These characteristics can be drawn upon the female doctoral students since doing PhD studies requires physical and mental devotion as the journey is full of challenges. Thus, this study explored the experiences of these women in order to shed some light into their journey and add to the scarce knowledge on lives as doctoral students in the local context. The study was done qualitatively and three methods of data collection were employed, namely individual interviews, focus group discussions and informal sessions. Eighteen female doctoral students from the Engineering faculties at the university participated in the study. Thematic analysis of the data shown that the experiences of these students can be divided into two major themes namely Personal and Academic Experiences.

### Introduction

‘Serikandi’ is a suitable reference to Malaysian women who in their own way have fulfilled their role in developing Malaysia. In English, the word refers to women who are strong and brave. For example, a round of applause should be given to career women for sacrificing their time and energy in the labour force, mothers for giving birth, nurturing and educating the young generation of Malaysians and also female students at all academic levels for taking part in the pursuit of becoming educated Malaysians. However, lack of studies on female engineering students’ participation at PhD level especially in the Malaysian context has initiated me to explore their experiences. This notion was also highlighted by Schwartz who conducted a study on the experiences of female African American graduate students highlighted a similar notion, “Understanding the obstacles and challenges faced by these students would certainly help to increase the number of African Americans entering graduate school in the future” (2003:252). The scenario explored in this study was similar to this research since the participation of African Americans at Masters and PhD levels was not as robust as the
undergraduate studies. Therefore, the research question for this study is ‘What are the experiences of female PhD students in Engineering at one university in Malaysia?’

2. Methods of data collection and analysis

Qualitative approach was suitable for the study as an exploratory study of a problem or an issue is a form of qualitative research as mentioned by Silverman (2005:39), “We conduct qualitative research because a problem or issue needs to be explored”. Subsequently, three methods of data collection were used namely individual interviews, focus group discussions and informal sessions. Purposive sampling was adopted and therefore eighteen female PhD students voluntarily participated in the fieldwork. The data were transcribed and analysed thematically.

3. Findings and Discussions

Thematic analysis of the data revealed that although my participants come from various backgrounds, the shared status as female PhD students resulted in the emergence of similarities in their experiences. Two major themes emerged from the data, namely students’ personal experiences and academic experiences.

3.1 Students’ Personal Experiences while doing PhD

Having the status as PhD students does not exempt the participants from other life engagements to which they were committed prior to this academic endeavour. In addition to being full time PhD students, the participants also hold other roles such as mothers, sisters, wives and daughters. A PhD itself is notorious for being a demanding task (Rugg and Petre, 2005: 1) and, ultimately, the other roles also require rigorous involvement.

3.1.1 Motherhood and Studying

This heading focuses specifically on the participants who share their experiences as PhD students and also as mothers. Motherhood is a profession “…from which one can rarely, if ever, resign. Once you are a mother, it’s done deal and there is no turning back” (Pillay, 2009:1). One theme which emerged from the data specifically highlights the experiences of female students who are mothers in terms of juggling between their maternal role and PhD commitment. Similarly this kind of challenge has been reported in other studies such as Leonard (2001) and Edwards (1993). Amidst the academic schedule, which is occupied with classes, presentations, experiments and other research tasks, the findings indicate that the participants were determined not to neglect their children.

“..my son  will be taking his PMR (Lower Secondary Examination)..my schedule has to fit his schedule..” Fizi

The above arrangement is similar to the notion highlighted by Edwards (1993) in which working women were found to prioritize their family.

In addition to the above, the realization that both roles needed to be managed intelligently had led some of the participants to devise various strategies to achieve that aim thereby ensuring that neither of the roles would be jeopardized. Some participants believed that they needed to have self-discipline in order to be able to juggle both roles successfully.
Leonard (1998:157) raises the issues of time and money as two obstacles that will affect the choice of doing postgraduate studies. However, my data indicate that the latter is not a problem, most probably because all of my participants receive financial aids.

Therefore from the above views, it is clear that they chose to “separate” (Edwards, 1993) their lives as students from their lives as mothers. This strategy can be adopted if PhD students have the time and opportunity to delegate their roles accordingly. However, the complexity of doing a PhD may not allow the actual “separation” to exist. This notion will be highlighted in the following discussion.

Although the mission to juggle the roles of mother and student appears to be nicely executed using the above strategies, in reality it cannot be perfectly achieved. Physically leaving PhD matters in the office did not mean that they were not being thought of at home. This predicament left a feeling of guilt in one of the participants.

“...it’s not true that this study does not affect my children at all..somehow it does affect them..in terms of their education...” Dalila

In addition, the challenge to juggle both roles is evident for one participant (Zurina) who simply could not believe how much her newly acclaimed maternal role affected her focus on her PhD. A similar notion can also be found in Paula and Miller (1999), Wittenberg-Szekely et. al. (2008) and Skjortnes and Zachariassen (2010). She was in her final term of first child pregnancy when she enrolled for her PhD.

### 3.1.2 Personal roller coaster rides

From the responses gathered in the data, the participants’ journey as PhD students can be metaphorically refer to that of roller coaster rides. The track towards a doctorate is not straight and linear. Each person’s experiences will differ due to many factors such as age and health condition. The same connotation applies to doing a PhD. Similar to a roller coaster track which has loops and curves that can raise the adrenalin of its passengers, the participants have indicated that they have encountered various personal setbacks that have affected their PhD progress. These include age factor, poor health condition and family problems. The notion that PhD work is not comparable with undergraduate and Master’s degrees definitely emerges in my data (Lawton, 1998:1). Consequently, some of my participants felt that their ability to focus on academic work had deteriorated compared to when they did their Bachelor Degrees and Masters.

“...there’s no personal life ok..you have your moments..your downs..your ups..feel defeated sometimes..your brain is not as it was before...personally I would say very big challenge..” Fizi

Unfortunately, two of the participants admitted that they suffered from health problems due to PhD work. Ain endured two months of bleeding after her sudden miscarriage and, surprisingly, the doctor told her that the bleeding was caused by hypertension.

In addition to health problems, some participants also expressed that family problems had also jeopardised their PhD progress.

“...at one stage I had a family problem..it affected me very much..” Hanim
The issue of personal problems affecting studies was also raised by Wellington and Sikes (2006). Furthermore, the above claims on how family issues can affect studying also support the suggestion made by Skjortnes and Zachariassen (2010:200) that students should create “geographical distance” from their family members.

In dealing with the above challenges, the data have revealed that there were certain ways that had helped the participants to go through the ordeal. Whenever they had problems, my Muslim participants chose to rely on Allah’s grace by performing lots of prayers. The belief that the problems are part of the challenges from Allah managed to strengthen their will to persevere and pursue their commitment towards their studies. Therefore, the participants’ academic pursuit is strongly influenced by a Muslim perspective in which the PhD journey is considered as one of the religious obligations.

The above claims further add to the notion that doing a PhD is a challenging endeavour (Leonard: 1998) as it requires different strategies in order to maintain the momentum and concentration (Majid, 2010). In addition, the above notion also exemplifies the metaphor used by Wisker (2005:259) when she associated a PhD journey with “long-distance running”.

### 3.1.3 Embracing changes

The third theme that emerges from the participants’ responses about their personal experiences concerns how some aspects of their lives have changed as they progressed in this academic endeavour. The changes include the opportunity to establish new acquaintances and the shift in topics of conversation among friends. Furthermore, some of them also have to adapt to new routines and acquire new hobbies. Ultimately, these changes are inevitable in order to complement the demand of a PhD and are among the “pleasures” derived from doing a doctorate degree (Leonard, Becker and Coate, 2005:147).

For the sake of her research, Dija needed to establish contact with people from another faculty to gain their expertise and, consequently, she managed to make new friends. This situation was also experienced by Dalila and Rina. They claimed that they would have not have known these people if it were not for their PhD projects.

In addition, some participants realised that since becoming PhD students, they had to change some of their routines. Lina claimed that she rarely went for movies compared to before. The choice to study at this university had required three of my participants to commute between home and campus. Fatin had to drive around two hours daily for her trip to the campus and although it was quite tiring, she had to endure it for the sake of her small baby.

The theme of ‘change’ can also be used to describe the change in personalities as the participants progress in their PhD studies. The data have indicated that for some of the participants, their PhD journeys are not solely about academic accomplishments. Some students are pleased to realise that they have become better people however others lamented that they are not like the people they used to be.

Nevertheless, as Yati, Anis and Nadia realised, the success of their PhD projects would require commitment from people, they confessed that they have become more helpful towards others. Furthermore, Hyda and Hanim claimed that in order to cope with the demands of a PhD, they had to be more hardworking and more disciplined compared to before. Despite all the positive changes mentioned above, some participants had opposite thoughts on the matter. The PhD journeys have unleashed the shadow side of their personalities. Fizi and Nadia confessed that due to the stress of PhD work, they behaved differently. The claims on changes in personality, routines and habits during the process of doing a PhD further support the findings of Padula and Miller (1999). Furthermore, the themes also further
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exemplify the notion that a PhD contributes towards “emotional growth” (Leonard, Becker and Coate, 2005:147).

3.2 Students’ academic experiences while undertaking PhD studies

3.2.1 “Jauh Perjalanan Luas Pandangan”

The above quotation is a Malay idiom which means ‘The more you travel, the more you see’. It is used to express the benefits that one can gain because of travelling. In a wider context, the idea of ‘travelling’ here does not necessarily refer to a journey, but represents any type of endeavour. Therefore, in the context of this research, it would mean that ‘the more one studies, the more benefits one can gain’. The above idiom is suitable to convey the first theme that is presented here. As a form of academic endeavour, it is not surprising when the participants narrated that through the learning process, they have acquired various skills and knowledge related to their fields of study. The skills and knowledge are either new to them or updated versions of their previous ones. In addition to the ability to gain knowledge, as was confessed by some of the participants from Engineering, the acquisition of research skills was also highlighted in the interviews.

“..after embarking on a PhD..I am able to criticize journal articles.” Zurina

The above findings show that these students have achieved what they expected from their PhD studies. It is the “intellectual growth” that is commonly associated with the benefit of doing a doctorate degree (Leonard, Becker and Coate, 2005:147). Consequently, these students are fortunate since they are able to gain what they hope for from the learning process while this opportunity may not necessarily happen in others as found by Padula and Miller (1999).

3.2.2 Academic roller coaster ride

Through thematic analysis of the responses, it is discovered that the next theme that emerged from the data is the process of acquiring skills and knowledge, which is similar to their personal experiences. This is also like a roller coaster ride.

As in the start of a roller coaster ride in which the track is normally straight, some of the participants who were in the early stage of their PhD had pleasant thoughts about their academic experiences. Depending on the structure of the PhD programme, the orientation stage involves activities like attending prerequisite courses, doing preliminary reading on the fields of interest and also building a rapport with the supervisors. These excerpts were taken from students who were in their first semester of PhD.

“..I haven’t done any lab work yet..I just spend time reading and this semester I am taking the three days Research Methodology course organised by the School of Postgraduate Studies.” Rina

Conflicts between students’ needs and the academic facilities offered by their institutions are also found in other studies, such as McCormack (2004) and Golde (2005). This matter is due to the nature of PhD students as adult learners since their desire to study is based on certain needs and purposes (Knowles, 1990). Ultimately, differences in academic backgrounds and prior knowledge also add to the complexity of this matter (Phillip & Pugh, 2005).
These participants did not have to attend any training units for their PhD; they were only required to attend a Research methodology course offered by the School of Postgraduate Studies. However, some of them had voluntarily chosen to attend some courses offered in the university in order to gain input that was relevant to their projects.

“..Faculty of Electrical Engineering does not require me to take any course..it’s up to me..previously I took one subject on Signal Processing..half way through the unit I realised that it has little relevance to my research..actually I need to know about Artificial Intelligence so now I need to find a course on that..” Dalila

In contrast, the academic experiences of participants who were in the middle and later phases of their PhD studies were totally different from the ones presented above. Under normal circumstances, full time PhD students at this university are expected to present their proposals and execute data collection activities during the second year of studies. Then, the research tasks continue with the analysis of data and write up of the thesis. The workload in these two PhD stages was filled with different types of difficulties and challenges. Subsequently, these ‘loops’ and ‘corners’ had caused unpleasant experiences in their academic pursuits.

Similar to a roller coaster ride whereby the riders cannot have control on the flow of the track, most of the participants’ academic journeys were also disrupted by various incidents that were beyond their control. The notion of unexpected hurdles was also highlighted by Lawton when he shared his experiences as a part-time PhD student. “A doctorate by part-time study is tough enough without having to deal with the library being closed for stocktaking..” (1998:117).

The participants confessed that they encountered several obstacles such as financial constraints, unsuccessful experiments, lack of reading materials and a difficulty in adjusting to the new research ground. While those in laboratories had to deal with problems such as unsuccessful experiments and the lack of materials, the quest to keep up with the latest software was a challenge raised by one of the participants who had to do simulation work.

“..if I had pursued right after my Masters, it would have been very much easier because, nowadays, I have to learn many new things, new software, new programming, the rest of my team mates are very young..at most they graduated 6 years ago..I graduated long time ago..” Fizi

In addition, in recounting their academic experiences as they progressed, the participants raised the themes of failure, loss and uncertainty. Leonard (1998:167) highlighted this emotional ride when she mentioned that, “For both men and women, the first year can produce a loss of their sense of balance in life”. Anis expressed her concern about not knowing the depth of her research and whether it was up to a PhD standard. Similarly, Dalila who was in her second semester of PhD voiced her uncertainty about her proposed research area.

“..I think if I am not convinced of my contribution I’ll be worried..I know what to do but am still wondering whether it has a contribution or not..afraid that there is no justification..”

The challenges in writing were another recurrent issue that had caused the academic roller coaster ride among the participants. The analysis revealed that the participants shared their experiences in writing journal articles. Ultimately, this finding is similar to the result reported by Leonard (2001).

“.. I hope in three years I can produce at least six technical papers and one journal article to support my PhD..” Fasha
Consequently, the enthusiasm towards journal publication was initiated by supervisors and other students in their research team.

“..I hope that I can be like others who have graduated..able to produce three or four papers since they can assist in career promotion..almost everyday I talk to my seniors and juniors in our team..I can get motivation from those who have published papers..” Fatin

The excerpt below is the expression of one student who was in the process of accomplishing her journal publication mission. She confessed that the journey was not ‘as easy as ABC’.

“..writing is difficult..it’s a big setback when people say my draft is not good enough” Mary

Similarly, writing is an issue among PhD students that has also been reported in research done among postgraduate students at two public universities in Malaysia. Language competency was the root of the problem since the data projected that most of the students found it difficult to write in English (Kaur and Sidhu, 2009:52).

Another theme which emerged from the findings on PhD students’ academic experiences is that changes are inevitable throughout this journey. Some participants had to reschedule their study plans due to unforeseen circumstances either personally or academically. Mas had to postpone her experiments due to the lack of funds to purchase equipment and Alia had to request for an extension of study since her supervisor took sabbatical leave when she was in the third year.

The above claim indicates the quality of adult learners as being able to steer their learning process according to their needs. This quality is in accordance with a notion highlighted in Knowles Concept of adult learning which states that adults “orientation to learning is problem-centered” (Knowles, 1990:57:63). Subsequently, the participants acquired knowledge and skills on doing research by facing and solving the problems which they faced while studying.

4. Conclusion

This paper presents the findings that cover the experiences of doing PhD among female students in engineering at one university in Malaysia. The data can shed some lights on the lives as female PhD students in Engineering thus hopefully can encourage engineering students to embark also in doctoral studies. The themes highlight that a PhD journey is not solely an academic ride, as it can also be a physical, spiritual and emotional excursion. In some ways, it affected the lives of the participants and this finding supports the notion highlighted by Churchill and Sanders (2007: 20), “PhDs do mean making changes in your personal, social and work life..”. In addition, the participants’ stories of their experiences have illustrated these students’ personal qualities, which have enabled them to keep pursuing their ambitions. Ultimately, this supports the notion of “women as dedicated scholars” (Leonard, 2001:66). In addition, the qualities also reflect the characteristics of these students as adult learners as their experiences conform to the assumptions stated by Knowles.

Furthermore, the ways women are positioned in Islam also influence the participants’ lives as PhD students. Since these students regard their academic pursuit as a form of Ibadah (obligation to Allah), they are determined to make the journey successful. In addition, for those who receive scholarships for their studies, it is also considered as fulfilling the Amanah (Trust) towards their financier. Furthermore, the above narrations of different kinds of experiences and challenges also exemplify the need for PhD students to have a high level of commitment and ability to set their priorities wisely (Hayes: 2002).
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References


