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# Augmenting Entrepreneurial Learning Among Postgraduate Students in Research University

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# INTRODUCTION

- Malaysia Education Blueprint 2015 – 2025 for Higher Education has stated that the technologies and innovations that address students' need and more personalization learning experience as one of the aspiration of Ministry of Higher Education.
- Universiti Teknologi Malaysia or UTM just like any other universities in Malaysia is inculcating an energetic academic culture of creativity and innovation as one of their strategic agenda as a way to move forward.
- The current scenario requires that university must be not only increasing number of students' intake but also emphasized on their quality.

# INTRODUCTION (cont...)

- Entrepreneurship thinking or education can increase the quality and quantity of graduates as they enter into the country economy while after receiving their education in the higher academic institution.
- Students who have positive approaches towards learning, in terms of attitudes and behaviours, tend to enjoy good learning outcomes.
- Deep learning occurred when students integrates new and old information, synthesizing it, make new connection and finally form the knowledge into wider perspective.

# INTRODUCTION (cont...)

- Surface approach occurred when students see tasks as being imposed, for which they develop strategies that focused on reproduction of essentials points and memorizing information for assessment rather than for the purpose of understanding the given knowledge.
- There is a significant difference in the current learning environment for postgraduate students, particularly since creative solutions and collaborative teamwork are necessary skills for them to master.

# INTRODUCTION (cont...)

- learner beliefs influence their capabilities to regulate their own learning activities such as choice of activities and level of effort.
- The level of self-efficacy depends on the difficulty of a particular task such as application of a subject to real life situations

# INTRODUCTION (cont...)

This paper emphasizes on the following research questions:

1. What is the level of learning approaches used among postgraduate students in UTM?
2. What is the level of self-efficacy among postgraduate students in UTM?
3. What is the effect of self-efficacy on learning approaches?

# METHODOLOGY

- This is cross-sectional study used questionnaires for data collection.
- Participants consist of postgraduate students from six faculties.
- The selection of faculties was based on three main streamline: engineering, social sciences and science and technology.
- A total number of 14 faculties were grouped according to the streamline, which enable two faculties to be selected randomly from each group.

# METHODOLOGY (cont...)

- A total number of 100 questionnaires were distributed to each faculty. Participants were given a week to return the questionnaire to the designated contact person.
- Part time postgraduate students were also invited to participate in the study via email.
- Participation in the research is made on voluntarily basis.



# METHODOLOGY (cont...)

- The self-efficacy instrument was adopted from the General Self-Efficacy Scale by Jerusalem and Schwarzer.
- The scale was originally developed in Germany and has been translated into 33 languages by other authors.
- The English language version in 1995 was used in this present study and it can be accessed online at <http://userpage.fu-berlin.de/health/engscal.htm>.
- This questionnaire is a 10 item psychometric scale that was designed for adults to assess optimistic self-beliefs in coping with a variety of difficult demand in life.

# METHODOLOGY (cont...)

- The learning approaches measurement is adapted from Kirby *et al.*
- The questionnaire was commonly used in the workplace learning, therefore we change the term “work” to fit in postgraduate studies context.
- The learning approaches are divided into three categories: deep, surface-disorganized and surface-rational.

# METHODOLOGY (cont...)

- Respondents selected from a four point scale that was coded as binary variables; Strongly Disagree=1, Disagree=2, Agree=3 and Strongly Agree=4.
- The questionnaire was pretested to assess the reliability of the instrument.
- The Cronbach's alpha values were 0.80 for deep approach, 0.83 for surface-disorganized, and 0.75 for surface-rational. For the self-efficacy the values were 0.82.
- Descriptive analysis, such as frequency, percentage and mean were used to explain the level of self-efficacy and also the usage level of learning approaches.
- Whereby, Simple Linear Regression was employed to investigate the causal effect between self-efficacy and learning approaches.

# RESULTS AND DISCUSSION

Table 1: Demographic Characteristics of the Study Population

Demographics (n=333)	Category				
Gender	Male (f=195; %=58.6)	Female (f=138; %=41.1)			
Age	20-29 (f=231; %=69.4)	30-39 (f=82; %=24.6)	40-49 (f=16; %=4.8)	> 50 (f=4; %=1.2)	
Main streams	Engineering (f=94; %=28.2)	Social Sciences (f=138; %=41.4)	Science & Technology (f=101; %=30.3)		
Mode of Study	Full-Time (f=215; %=64.6)	Part-Time (f=118; %=35.4)			
Working Experience	< 5 (f=244; %=73.3)	6-10 (f=45; %=13.5)	11-15 (f=22; %=6.6)	16-20 (f=14; %=4.2)	> 21 (f=8; %=2.4)

*Notes.* The majority of the respondents is male (58.6%), between the age category of 20 – 29 years (69.4%), on the full-time study basis (64.6%) and have less than 5 years (73.3%) working experience

# RESULTS AND DISCUSSION (cont...)

Table 2: The Level of Self-Efficacy & Learning Approaches

Variables	Mean	SD	Level
Deep	3.07	0.36	High
Surface-Disorganized	2.78	0.48	Medium
Surface-Rational	3.03	0.36	High
Self-efficacy	3.09	0.37	High

*Notes.* The highest level of learning approach used by respondents is deep approach ( $\mu = 3.07 \pm 0.36$ ), followed by surface-rational approach ( $\mu = 3.03 \pm 0.36$ ) and surface-disorganized approach ( $\mu = 2.78 \pm 0.48$ ).

# RESULTS AND DISCUSSION (cont...)

- The highest level of learning approach used by respondents is deep approach ( $\mu = 3.07 \pm 0.36$ ), followed by surface-rational approach ( $\mu = 3.03 \pm 0.36$ ) and surface-disorganized approach ( $\mu = 2.78 \pm 0.48$ ).
- In this situation there is a puzzling pattern among students who adopt deep and surface-rational approach when only a trivial difference is indicated.
- Students who approach learning in a more mechanistic way or just on the surface is always determined as 'rote learners'.
- This might postulate to the issue of quality level since approaching learning at surface level tends to be associated with low level outcomes.
- Though students are assumed to be independent and creative, 87% (290) of them like being told what is expected and have little desire to discover for themselves.

# RESULTS AND DISCUSSION (cont...)

- Lecturers still need to spoon feed them in order to help them in achieving learning goals.
- Majority of them fail to understand the function of learning new things is to transform it into meaningful context, e.g. lots of effort in their study is being used to memorise new facts (81.9%, 255) and definitions from textbooks (65.4%, 218).
- Students neglect to understand information from different disciplines and to make necessary connections among them beyond well-structured context and through the more 'real-world' constraint.
- University's vision and mission in producing competent and versatile graduates is hard to achieve if this situation transpire continuously.

# RESULTS AND DISCUSSION (cont...)

- Almost all (91.8%, 336) respondents have strong belief in managing to solve difficult problems if they try hard enough and invest the necessary effort in dealing with it.
- Nonetheless, quite a number (18.9%, 63) of respondents were unsure whether they are able to deal with unexpected events efficiently.
- Albeit the level of self-efficacy is high, there are many facets that need to be addressed, especially when it is related to independency, creativity and confidence among respondents in approaching learning.



# CONCLUSION

- The rationale of this study is trying to reach an understanding of the learning approaches and the effect postgraduates students' self-efficacy in a research university.
- Since transforming a traditional learning environment into new academia environment has become the main agenda of Malaysian public universities, particularly UTM, evaluating students' performance relating to learning approach is crucial.
- The appropriateness of teaching and learning methods to facilitate students in adopting deep approach more than surface approach is highly desirable.

# CONCLUSION (cont...)

- Lecturers, program owners, curricula developers and assessors need to restructure and redesign teaching and learning methods to foster a deep approach in post graduate studies which require active participation of the students.
- When introducing this approach, students need to be supported and guided to allow time for adaptation.
- Deep learning is highly required by experienced postgraduate students to adopt for problem solving.

# CONCLUSION (cont...)

- If this strategy is used continuously, students may experience less difficulty in analyzing problems.
- However, students' motivation and use of learning strategies can be controlled by learners and changed through teaching.
- Therefore, once self-efficacy can be enhanced, students will know how to adapt the best strategy which will lead to success in learning.
- When they succeeded, they credited their achievement to their abilities.

# CONCLUSION (cont...)

- In their perception their abilities lead to the achievement that affects the outcome rather than their actual abilities.
- Even though a conclusion may review the main results or contributions of the paper, do not duplicate the abstract or the introduction.
- For a conclusion, you might elaborate on the importance of the work or suggest the potential applications and extensions.

**Thank You!**