METACOGNITIVE ABILITY AND PERCEPTION OF THE BARRIERS TO BECOME ENTREPRENEUR: A STUDY OF THE UNDERGRADUATE-LEVEL BUSINESS STUDENTS OF THREE UNIVERSITIES IN KHULNA REGION OF BANGLADESH

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Abstract:

Metacognitive ability refers to one's knowledge and the mechanism of how people control the process of generating and applying such knowledge in order to maximize learning. This paper focuses on the exploration of the influence of metacognitive abilities of the university students in their perceptions of the barriers to the formation of their intentions to become an entrepreneur. Based on the extant literature, two hypotheses were developed and tested using Partial Least Squares based on Structural Equation Modeling (PLS-SEM). To test the hypotheses, primary data were collected from the 3rd year students of the business administration departments of three universities from Khulna, the third-largest city in the south-western part of Bangladesh. This study found that cognitive knowledge and cognitive regulation positively affects the perception of the barrier to be an entrepreneur. This might prove helpful to the nascent entrepreneurs by broadening their outlook.

Keywords: cognitive knowledge, cognitive regulation, metacognitive ability, perception of barriers to entrepreneurship

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1. Introduction

Metacognition comprises of two segments: information and guideline. Metacognitive information incorporates information about oneself as a student and the elements that may affect the execution and learning about systems. It also encompasses the information about when and for what purposes to utilize the techniques. The metacognitive guideline is the checking of one's insight. It incorporates arranging the exercises, making familiarity with the appreciation, undertaking the execution and making an assessment of the adequacy of observing procedures and systems (Marca, 2014). Metacognition is a multi-faceted concept that includes considering and controlling one's discernments (Flavell, 1979). Past research has demonstrated that metacognition is decidedly identified with powerful critical thinking (Berardi-Coletta, 1995), exchange (Lin and Lehman, 1999) and self-directed learning (Zepeda, 2015). Earlier work has investigated distinctive metacognitive measures. Nonetheless, the relations among the measures are not surely known, bringing about worry about each measure's legitimacy and exactness (Veenman, 2003). Firstly, the aim of the study is to prepare and draw an original instrument for measuring the features of metacognition, which is denoted as the Awareness of Independent Learning Inventory (AILI), and the perception of the barrier to become an entrepreneur. Secondly, this study will find how metacognitive ability and perception of a barrier to becoming an entrepreneur are related to each other (Joost Meijera, 2013). The general objective of the study is to explore the metacognitive ability and perception of the barrier to become an entrepreneur among the students of the business administration department. More precisely, the objectives of the study are:

a) To explore the idea of metacognitive ability and the perception of the barrier to become an entrepreneur,
b) To explore the relation between metacognitive ability and the perception of the barrier to become an entrepreneur.

2. Literature Review

2.1 Metacognitive Ability

Metacognition alludes to the consciousness of one's own insight—what one does and one's capacity to control one's intellectual procedures (Meichenbaum, 1985). It incorporates knowing when and where to utilize specific methodologies for learning and critical thinking. It also includes being conscious of how and for what purposes to utilize explicit techniques. Metacognition is the capacity to use earlier information to design a technique for moving toward a learning task, make essential moves to illuminate, ponder and assess results, and change one's methodology as required (Flavell, 1976). On the other hand, Flavell (1979) opined that metacognition is a multi-faceted marvel that includes considering and controlling one's perceptions.

2.2 Types of Metacognitive Ability

There are two types of metacognitive ability: the object level and the Meta level. The object-level refers to the extent where cognitive processes or *"one's thinking"* occur. One example is decoding text while reading. Cognitive strategy such as decoding is used to help the learner achieve a particular goal at the object level (understanding the meaning of the text). The Meta level refers to the extent where a person's *"thinking about thinking"* takes place. At this higher-order level, metacognitive strategies are used to ensure the learner reaches the goal he/she has set. This would commence with the apprentices' thinking about how well they have comprehended the paragraph they have just read. This is termed monitoring which is referred to their contentment that is, if they are pleased with their comprehension level, they will continue reading. If not, they will re-read the paragraph, or decide to use a dictionary to help their understanding. These actions are called control processes, as they are changing the learner's cognitive processes or related behaviours (Somerville, 2015). Based on the previous literature, metacognitive ability can be divided into two subconstructs: a) Cognitive Knowledge and b) Cognitive Regulation.

2.3 Metacognitive Ability and Entrepreneurship

The effect of business enterprise programs is still under question (Fayolle, 2013). According to Fretschner (2013), an examination into business enterprise ought to give something beyond mean qualities, giving progressively useful proposals for instructors. They talk about whether we are contrasting apples and oranges, and suggest recognizing programs in advanced education as indicated by mindfulness and start-up ideas. Start-up projects endeavour to copy enterprising assignments, and much of the time intend to increment pioneering aim (Liñán, 2009). In a few examinations (Mitchell, 2005; Haynie, 2010), metacognition has intended to clarify the connection between the cognizant direction of a person's thinking designs and his/her inclination to achieve enterprising vocations. Here, the object of metacognition was to develop the essential mentality for entrepreneurship.

2.4 Entrepreneurial Barrier

Existing literature demonstrates that enterprise and new firm entry encourage business creation and guarantee the increasingly even-handed salary circulation (Hirschman, 1958; Baumol, 1990; Acs, 2006). However, these advantages rely upon the institutional condition where the foundations are "frail" and business people are less prone to attempt new activities or may rather concentrate their energies on ineffective ones (Johnson, 1997; Baumol, 1990; Hodler, 2009). While there can be lacks in the institutional system anyplace, it is ordinarily contended that issues are particularly prevalent in less advanced economies. North (1973), Williamson (1985), Barzel (1997), Rodrik (2000) and Parker (2007) offer a review of the manner by which the different parts of unnecessary business guideline force costs on business visionaries and hamper innovative movement (Djankov, 2002). It is strongly averred that the rising pattern of college graduates' absence

of intrigue and powerlessness to take part in enterprising action is quickly turning into a worldwide issue (Monitor, 2011). This is even more acute because the nations are experiencing a decline in the customary job openings for tertiary graduates (Chauke, 2011). Along these lines, it is sensible to accept that creating new enterprises is a superior answer for the joblessness issue. Nevertheless, graduates show next to no enthusiasm for becoming business visionaries in spite of the arrangements and projects taken for advancing entrepreneurship. All these things considered, there have been calls to change the advanced education segment to suit enterprise and entrepreneurship training.

Based on the above literature, two hypotheses can be developed and can be explored further.

H₁: There is a positive relationship between cognitive knowledge and perception barrier to become an entrepreneur.

H₂: There is a positive relationship between cognitive regulation and perception barrier to become an entrepreneur.

3. Material and Methods

The study is exploratory in nature and attempts to explore what factors may influence the student to overcome the barrier they face to become an entrepreneur. It also investigates the use of metacognitive ability by the students in overcoming the barrier to start their primary business platform. To complete this research both primary and secondary data are used. Secondary data are collected from different published journals, articles and books related to metacognition and entrepreneurship.

Survey method is used to collect the data. To conduct the research, a seven-point Likert-scale questionnaire was developed. The scale ranges from point "7", representing "Completely true", to point "1", which signifies "Not true at all". This tool has been used because it helps to reduce cost and to increase the respondents' willingness to participate and provide an accurate response. From a total of 180 distributed questionnaires, only 140 were returned, and 130 were retained finally, due to the discarding of extreme responses and incomplete data. The questionnaire had three sections with the first focusing on the basic information of the respondent's business. The second part included 29 questions that were designed to gather information on the Metacognitive ability among students. The third part included 10 questions were designed to know the entrepreneurial intention among students.

The research population is composed of the 3rd-semester students of the business administration department of Khulna University (KU), Northern University of Business & Technology Khulna (NUBTK), and North Western University (NWU) in Khulna, Bangladesh. In terms of skills and knowledge, the interest of this group lies in the fact that they appear to be excellent candidates for venture creation. Moreover, those took part in the survey were near the start of their studies and were expected to have the time and energy available in the near future to plan a business project. Data were gathered using a questionnaire distributed in the classroom. To avoid bias in the responses, the

students were assured that participation in the study would not be disclosed. Perception variables were measured on a 1 to 7 scale with not true at all to completely true. Questions were asked on the perception of feasibility and perception of desirability. Intentions were measured as a percentage probability that the respondent would go into business following their graduation at some point in their life.

Data was collected over a period of 2 days especially during the classes and over the internet. The sampling method employed for this research was an intercept survey sampling whereby students were intercepted at the classes and computer laboratories. This seems to be the most viable sampling technique that could be employed for the study. The reason was that most of the students were not so interested to fill up the survey forms after leaving the class or being left alone to do so. On top of that, the time and cost of the survey were also other reasons to employ the above intercept technique.

4. Results and Discussion

Table 1 illustrates that 65.7% of male students and 34.3% of female students out of the total sample size of 140 students responded to the survey.

Table 1: Gender of the Respondents

Gender	Frequency	% of Respondents
Male	91	65.0
Female	49	35.0
Total	140	100

In this study, the mean value found indicates that the average respondents responded to "more true than untrue to mostly true". Their answer varies between these two points. And from the mode value, we find that most of the students are consistent with their response because most of them answered between 6.00 to 7.00. And from the standard deviation, we found consistency in the values which range between 1.05-1.45. It shows that the responses are not scattered. They are close to each other. The value of Cronbach's alpha of perception barrier to become an entrepreneur is 0.8334 which suggests that the items have acceptable internal consistency (Masroor and Alam, 2019).
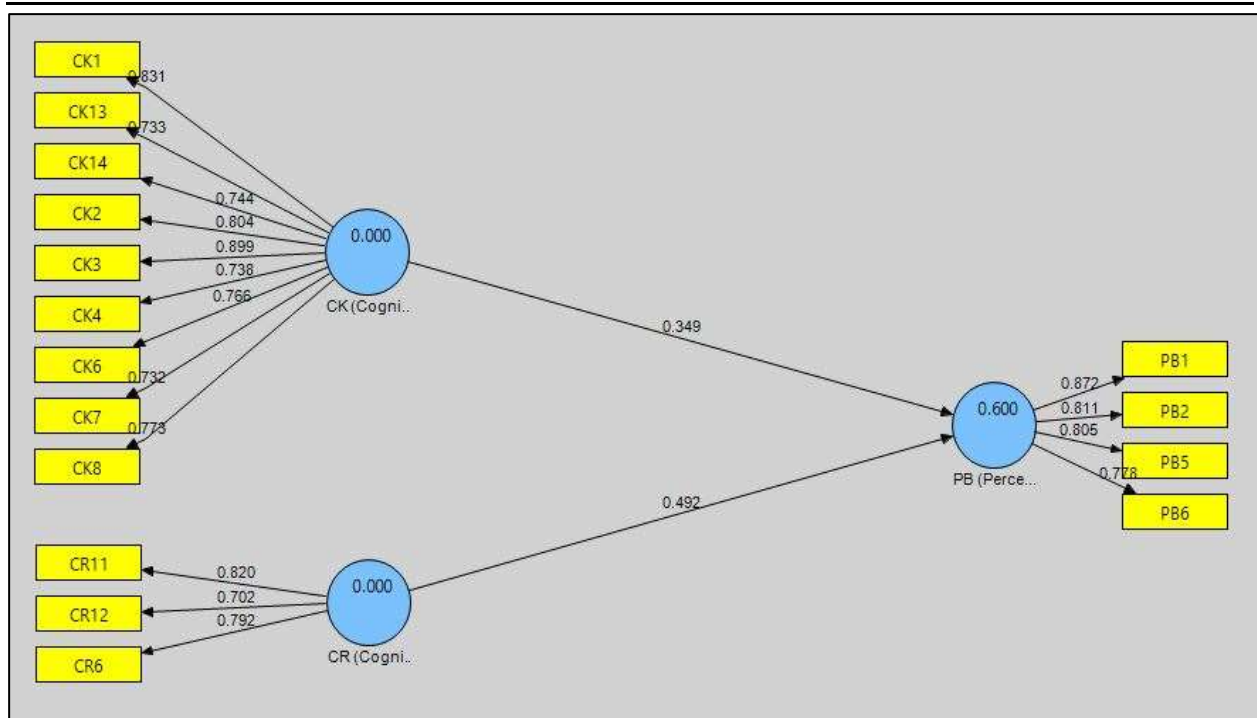
Figure 1: Final Model

The Cronbach's alpha coefficients for the items of cognitive regulation and cognitive knowledge are respectively 0.6622 and 0.9199 and the value of composite reliability is respectively 0.8161 and 0.9337 suggesting that the items have acceptable internal consistency (Masroor and Alam, 2019).

Table 2: Measurement Model Validity

	AVE	Composite Reliability	R-Square	Cronbach's Alpha	Communality
CK (Cognitive Knowledge)	0.6113	0.9337		0.9199	0.6113
CR (Cognitive Regulation)	0.5976	0.8161	0.6003	0.6622	0.5976
PB (Perception Barrier)	0.6674	0.8891		0.8334	0.6674

Items with 0.70 factor loading value were taken in the final model after running the PLS algorithm and the items with factor loadings below 0.70 were thrown down for maintaining construct reliability (Hulland, 1999). The convergent validity was verified employing the average variance extracted (AVE) measure posited by Fornell and Larcker (1981) who delineated the cut-off value to be 0.50 (Alam et al., 2020). All values of composite reliability are more than 0.70 which reflect the items' reliability (Nunally and Bernstein, 1978). Figure 1 shows the final model after dropping the items having below 0.70 factor loadings.

Table 3: Latent Variables Correlations

	CK (Cognitive Knowledge)	CR (Cognitive Regulation)
CR (Cognitive Regulation)	0.6894	
PB (Perception Barrier)	0.6879	0.7324

Table 3 shows the relationship between the latent variables taken in this study. From the above table, it can be seen that the correlation between cognitive knowledge and perception barrier to become an entrepreneur is 0.6879 and the correlation between cognitive regulation and perception barrier to become an entrepreneur is 0.7324. The coefficient of correlation value greater than 0.60 refers to a moderately strong relationship among the variables (Alam et al., 2016). Thus, there is a strong positive relationship between cognitive knowledge, cognitive regulation and the perception barrier to become an entrepreneur.

Table 4: Structural Model Validity

Path	β	R^2	Sig. (p)	t-Statistics	Hypothesis
Cognitive Knowledge -> Perception Barrier	0.3488	0.6003	0.0015	3.1833	Null Rejected
Cognitive Regulation -> Perception Barrier	0.4920		0.0000	4.7680	Null Rejected
$p<0.05$ (two-tailed test)					

Acceptance of each hypothesis was premeditated by bearing in mind the variance, beta and the statistical significance of the p-values for each conforming hypothesized path. A bootstrap of 1,000 sub-samples was engaged to yield standard deviation, standard error and the p-values. The R-square illustrates the proportion of the variance which can be elucidated by the variation in the independent variable (Masroor et al., 2020; Chin, 1998). From Table 4, it can be seen that the R-square 0.6003 indicates that 60.03% of the variation in the perception barrier to become an entrepreneur can be explained by the differences in cognitive knowledge and cognitive regulation. Also, it is found that the calculated p-value for both pathways is less than 0.05 or the level of significance. So, it is safe to say that there is enough evidence to reject the null hypotheses taken in this study. This result implies that there is a positive relationship between the variables, and it shows that society creates some impediments after having some translated information. The findings support that it is more rewarding to become a manager than become an entrepreneur.

Courses should be introduced on entrepreneurship development in the academic arena in order to enhance the cognitive knowledge of the entrepreneurs. This will induce unprivileged students to picture to the potentials of job creator instead of job seekers. It will increase their entrepreneurship skills, enhance their knowledge and encourage them to become entrepreneurs. Student entrepreneurs must possess sound knowledge about the technological advancements as they have to apply these. Metacognitive ability is important to know before becoming an entrepreneur because metacognitive ability helps set up the entrepreneurs' mind. They have to grow more trust and confidence about themselves to become an entrepreneur and it also can help to remove barriers. Family

support is very important to set up an entrepreneur's mind. To become an entrepreneur, a student must learn to make difficult decisions and risk during setting up an entrepreneurial idea. Student entrepreneurs need marketing as products produced by student entrepreneurs to need proper marketing which is also found to be non-existent. This non-existence, in turn, becomes a barrier. They need to have knowledge of different marketing strategies. Academic institutions can provide them with assistance by disseminating different marketing strategy-related knowledge.

5. Conclusion

This paper presents how metacognition is manifested in the framework of entrepreneurship study and how the different parts of metacognition are developed in students. In the theoretical background, it was acknowledged that metacognition is an independent phenomenon, with most attention from educational psychology. But little research has been made to analyse the development of metacognitive abilities in students in the entrepreneurship field. This paper initially aims to generate an understanding of the individual differences between students in terms of metacognitive abilities. The results present significant variation in the components of metacognitive knowledge and metacognitive regulation among different students. We have quite a clear understanding that students can be differentiated on the basis of metacognitive abilities. This study adds that students who have higher scores in one component of metacognition, sometimes have greater means in overcoming the barrier and sometimes lower means in overcoming the barrier. Therefore, it can be concluded that students have different needs for development. The current study has compared and analysed the generally scored highest and lowest in order to understand the educational needs and specific aspects of the respondents. Such a comparison has not been conducted before.

This analysis, therefore, revealed rather interesting results, contributing to our understanding of connections between metacognition and perception of the barrier. The strongest statements indicated that students generally set goals for themselves but then do not orient themselves towards the best outcome of overcoming the barrier. Students understand the connection between knowledge and performance but again do not think about what they currently know and what else should be known. Metacognitive abilities are expressed in terms of achievement orientation. So, it is clear that students underestimate the usefulness of making sure they understand their tasks clearly or choosing between different strategies to achieve the best results. The ability to question their own assumptions and subsequently to be able to flexibly switch between different strategies is equally problematic. This reflects how metacognition hardly develops in a student's mind. Students do not challenge their own potential or serve their future needs, but rather obey the demands of the course. For this reason, metacognitive ability didn't help the students to overcome the barrier they faced to become an entrepreneur. Students rather depend on others than themselves.

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