



THE STUDENT SATISFACTIONS IN USING BMC ONLINE TOOLS IN TEACHING AND LEARNING

Sharmili Mohamed Rafi¹, Rusliana Binti Rusle²

¹Kolej Komuniti Bentong, Malaysia, sharmili@kkben.edu.my

²Kolej Komuniti Bentong, Malaysia, rusliana@kkben.edu.my

Corresponding Author: First Author

Abstract: Business Model Canvas (BMC) is a platform of nine building block representing a business. BMC has been adapted to the entrepreneurship syllabus in teaching and learning. However, the BMC Online tools have been developed as a part of the teaching and learning method to easily visualize the nine-building block business model canvas by the student. Hence, the objective of this study is to investigate students' awareness, self-efficacy, attitude, and helpfulness towards teaching and online learning, particularly the implementation of BMC online tools in Bentong Community College. Questionnaires related to BMC online tools were distributed to Bentong Community College students, involving students from the Business Operations Certificate Programed, and Information Technology Programed. The collected data were analyzed using the Statistical Package for Social Science (SPSS). The results of this study showed that students at the Bentong Community College are aware of the business model online tools and has high satisfaction in the learning process because it is an appropriate platform to create presentations, interact with lecturers, and understand the component of the BMC originally. This study suggests a combined initiative by all relevant parties including course instructors, students, administrators, and college management to provide continuous support in maximizing business model online tools in learning as a new platform in the Pandemic Situation through an online medium at Bentong Community College.

Keywords: Business Model Canvas, BMC Online Learning, Attitude, Helpfulness, Awareness and Self-Efficacy Level

INTRODUCTION

Business model canvas is one of the tools use in developing business in teaching and learning. Business model canvas is introduce by Osterwalder and Pigneur's (2010) (Batocchio, Minatogawa, & Anholon, 2017) (Ambrož & Omerzel, 2017) (Fabian Ariel Salum & Lopes, 2019) to represent the business organization to created, deliver and capture value of their business activities initial ideas with new information (O'Neill, 2015) and knowledge (Caetano et al., 2017).

The purposes of developing business model are to define the organization system to generate the product, track the evolution of the decision, offer what should be included in the business framework to sustain profit (Ladd, 2018). Somehow the BMC also used as

communication tools in planning model integration and facilitating the process, model operates in synergy with the concept initially (Siluk, Garlet, Marcuzzo, Michelin, & Minello, 2018) (Hoveskog et al., 2015). As a result, the BMC make sense of doing business (Keane, Cormican, & Sheahan, 2018) concluded with the identification of business strategy, necessary resources and organization processes – all items that are captured in various ways in the business model-are vital for explaining new venture performance by the student. Thus, the students based their business models on the nine building blocks of a Business Model Canvas tool.

The advent of Internet technology as a teaching and learning platform with the concept of "anytime" and "anywhere" can facilitate delivery methods to all students. Following the Era of technology, the lecture has change the teaching mode of representing the business model canvas from traditional method developing A3 nine block to online platform to visualize the BMC more creative. In the BMC online the student can add more visual, diagram, picture and logo to explain their business idea. The student is more interested in the learning platform due to advance technology using web or hand phone.

Programs taught and supported by technology tend to focus on student-centered learning has been adapted in BMC teaching and learning style. Therefore, a BMC Online tools has been developed to acknowledge one-page canvas. There are some previous researcher has adapted traditional template of BMC toward graphic organizer (O'Neill, 2015) with mind map key structural element (Alsufyev & Gavrilova, 2016), standard and their relationship to special positions and interconnected flows for a business (Amalia Kurniawan & Zaenal Abidin, 2020) designing and analysis (Kajanus et al., 2019).

However, the BMC online tools developed using BMC nine building block represent the internal process and efficiency in the left side of the canvas: key resources, key activities and key partnerships. The right side of the canvas contain the customers and value: customer segments, channels and customer relationships. The centre side of the canvas represent the value proposition and lastly the bottom of the canvas represent the cost of structure and the revenue stream of the business (Ojasalo & Ojasalo, 2018) (Abuzeinab, Arif, Qadri, & Kulonda, 2017) (Amalia Kurniawan & Zaenal Abidin, 2020) (Fritscher & Pigneur, 2015) (Ladd, 2018) (Alsufyev & Gavrilova, 2016) (Meriem, 2019) (Hoveskog, Halila, & Danilovic, 2015) (Indrawan, Nasution, Adil, & Rossanty, 2016) (Sohl, Vroom, & Fitza, 2020).

This paper empirically explores the understanding of the nine block element and the satisfaction of using the BMC online tools. Each factor in providing effective usage of business model canvas online tools to facilitate the teaching and learning. The factor of helpfulness, learning outcomes and satisfaction to eventual the learner centred using technology e-learning platform.

This study aims to identify the level of understanding of students and the appropriate use of e learning BMC online tools among students. The specific objective of the study is to find out:

1. The understanding level on the Importance of the Business Model and/or its Building Blocks among students.
2. To investigate the factor that affected the online tools Business Model Canvas (BMC) in learning process?

We addressed the research question of whether

- a. What are the level of understanding nine block business model canvas?
- b. Is there any relationship between the understanding, self-efficacy, attitude, helpfulness and satisfaction in respect of the business model canvas online tools?

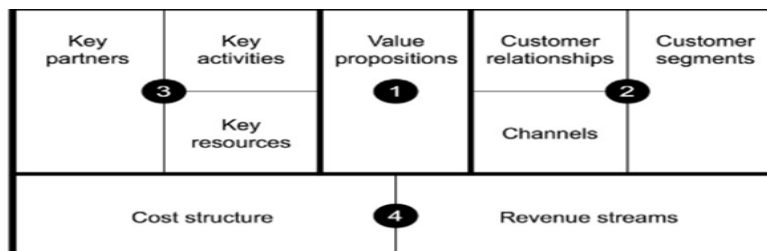
LITERATURE REVIEW

Nine element of Business Model Canvas

The Osterwalder and Pigneur’s (2010) BMC contain nine block is explaining below:

1. Customer segments: It refers to those different groups of people or organisations the company aims to reach and serve.
2. Channels: It describes how the company communicates with and reaches its customer segments.
3. Customer relationships: It defines the types of relationships the company establishes with the targeted customer segments.
4. Value proposition: It describes the bundle of products and services that creates value for a specific customer segment. A value proposition may include characteristics such as newness, performance, customisation, “getting the job done”, design, brand/ status, price, cost reduction, risk reduction, accessibility and convenience/usability.
5. Revenue stream: It represents the cash the company generates from each segment.
6. Key resources: It is the most important asset required to make the business model work.
7. Key activities: It describes what the company must do to make the business model work, such as production, problem-solving, platform and networking activities.
8. Key partnerships: It constitutes the network of suppliers and partners that makes the business model work. Partnerships may be strategic alliances between non-competitors as well as competitors (coopetition), joint ventures to develop new business or buyer–supplier relationships.
9. Cost structure: It describes all costs incurred to operate the business model.

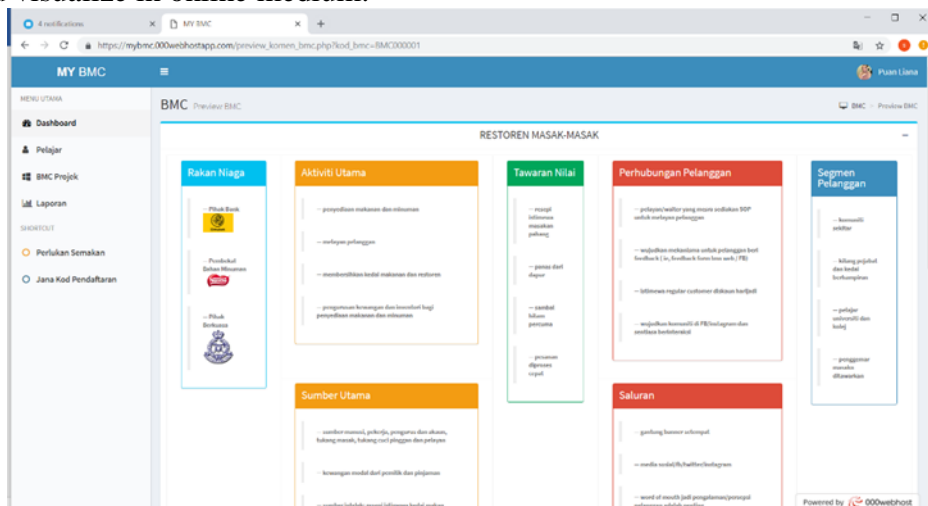
Sources : (Ojasalo & Ojasalo, 2018)



Source: Theoretical framework representation of the BMC (adapted from Osterwalder, 2004)

Business Model Online tools

The BMC Online tools in the teaching and learning adapted from the Osterwalder model and visualize in online medium.



Source: Author work BMC Online System

Student will have created their business idea using the online platform with more graphical visual to demonstrated their own visual. Therefore, visualization can help in evaluating the feasibility of the business model by specifying the applications and resources needed to realize it (Fritscher & Pigneur, 2015).

Some of the potential values in graphic organizers are that they provide “at a glance” simplified conveyance of understandings, foster discussion and brainstorming, and “are also effective in identifying both valid and invalid ideas held by students” in developing their business idea and visualize it in the BMC Online tools. Beside business model is used to make strategic option illustrates how a business can be creating, offer and take various values to run its operations.

Factors affecting the Business Model Canvas online tools usage

The self-efficacy element is of knowledge and skills turn into action which contain business model to answer content (know-what) and process (know-how) of creating a business(Keane et al., 2018). Self-efficacy or high self-motivation is a significant determinant involve student behaviour and judgement in multiple learning stage and discipline to attain designated type of performance(Prior, Mazanov, Meacheam, Heaslip, & Hanson, 2016).

The self-efficacy element has been adapted in BMC online tools which adequate the same function in delivering the understanding the nine block business element which sees the student behaviour. Thus Internet of things(IOT) is a sustainable platform of education basis from knowledge transfer model to an active collaboration self-directed model which created new relationship between educators and student. The technology has been seen in many aspect of education from student engagement in learning and content creation to helping teachers provide personalized content and improving student outcomes (Bagheri & Movahed, 2017).

The element of attitude or influence toward learning through digital literacy has been explores in current study to predict the potential student acceptance on online learning tools and supported by the previous research conducted mentioning attitude has been positively contribute to self-efficacy as well as digital literacy(Prior et al., 2016). Another element has been seen is by using the online business tools created the helpfulness variable where the tools help the student to develop better attitude toward learning the BMC.

The Helpfulness variable promoting the student engagement by self-paced learning process facilitated the student learning process as has been seen in flipped classroom has been adapted in the study. Lastly the student satisfaction of business model online tools will be analysis to reflect the new venture of learning method by the educators. Positive learning outcomes combining the technology driven approach reveals high satisfaction in learning process(Das et al., 2019).

Teaching and learning

BMC has been experience in classroom workshop to deliver the real development of company nine block building of business element to elucidated the student knowledge, created problem solution and presented the result(Hoveskog et al., 2015). However, Hixson and Parretti (2014, p. 1) note BMC also had been used in engineering student classroom practices and educators start to explore the potential of how the BMC anchor business activities (O’Neill, 2015).

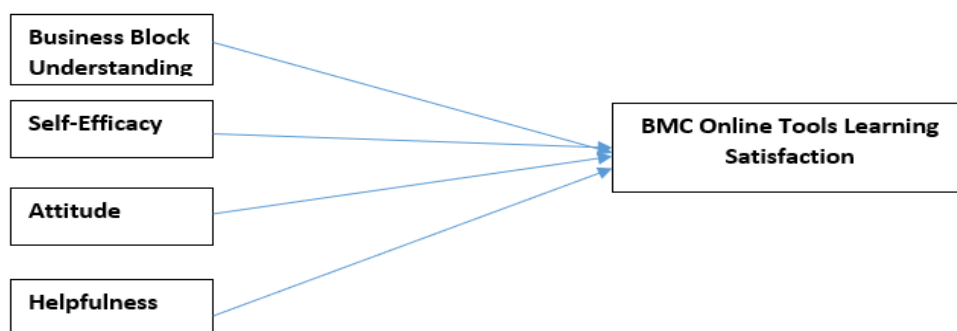
The usage of business model in the classroom will encourage the student to be the future entrepreneur and the students might be better prepared to develop, refine, validate, and filter business model ideas(Hoveskog et al., 2015).

So the upgrading of teaching and learning process in the education sector has create AN innovation and interesting in presenting the knowledge. The researcher has taken an

opportunity to create a business model canvas online tools to produce the BMC block in one-page visualization to help the student understand better the topic. Comparing IT services and a teaching and learning business model and seeing how they are connected helps to highlight the interactions between them.

Based on an extensive analysis of existing literature, shows there still lack of study conducted on behalf the factor discusses. The factor depicts the relationships between independent variables (understanding the business block, self-efficacy, attitude and helpfulness) and the dependent variable (BMC Online Tools Learning Satisfaction) that need to be seen empirically in the current research.

Conceptual Framework



METHODOLOGY

Questionnaire Development

The 26-item questionnaire was designed from the current online learning literature. The questionnaire incorporated a five-point Likert scale which ranged from 1: strongly disagree to 5: strongly agree. The questionnaire adapted validated items from the literature to assess the influence of the variables on awareness, self-efficacy, attitude and helpfulness to sustain satisfaction in BMC online learning.

The population of this study consist of student in Business Study Bentong Community College Student. From this population size, the sample size study was taken from number of Semester 2 Business Study Certificate student. Random sampling technique was utilised randomly and the Krejcie and Morgan table was referred to select the number of samples (Robert V. Krejcie, 1970). Since the total population of the study is 45 students, then the total sample for this study is 40 students. However, only 39 responses receive in the study.

The context of the study was focused on Bentong Community College students only. In this study, several measurement instruments from previous studies (Das et al., 2019; Hoveskog et al., 2015; Keane et al., 2018; Prior et al., 2016) were used to help in forming the questionnaire. The survey questionnaire was divided into 2 parts, namely Section A which contained the demographics of the respondents. In Section B, respondents were asked to assess the extent of their agreement for each factor using a five-point Likert scale.

The research framework demonstrated the relationship between supporting the self-efficacy, awareness, helpfulness and lastly satisfaction of business model canvas online tools in education system which were adapted from Hoveskog et al., (2015), Keane 2018, Prior et. al (2016), Das et al (2019) to form the conceptual framework of this study. Respondents were asked to evaluate the questions using a five-point Likert in a google form survey.

Hypothesis

There are four independent variables according to the research model, namely understanding on the business blocks, Self-efficacy, Attitude and Helpfulness. These variables are supposed to affect the dependent variable named effectiveness of BMC. To reveal the relationships among these factors, hypotheses to the research questions:

- H1: There is a relationship between the factors of understanding of the business block of BMC as teaching and learning tools satisfaction
- H2: There is a relationship between the factors self-efficacy of BMC as teaching and learning tools satisfaction
- H3: There is a relationship between the factors attitude of BMC as teaching and learning tools satisfaction
- H4: There is a relationship between the factors helpfulness of BMC as teaching and learning tools satisfaction

Study Analysis Methods

Statistical Package for the Social Science (SPSS 23.0) was used to analyse the data gathered from the questionnaires. Descriptive analysis was conducted using SPSS to determine the standard deviation and mean of each item in the variable (Griffith, 2010) and Pearson Correlation.

FINDINGS OF THE STUDY

Reliability Test and Missing Value

The reliability of the research instrument will be test using reliability analysis in finding the Cronbach Alpha. The result show all the variable meet the threshold 0.7. The Cronbach Alpha obtain for the item measuring awareness is 0.751. The reliability test also measures the four factor under business blocks including brainstorming BMC (0.684), BMC model develop business (0.695), thinking of company perspective (0.716) and BMC as a clear overview of a company (0.681). The second Cronbach Alpha was obtaining to self-efficacy is 0.924 which sustain the analysis for nine item customer segmentation (0.912), customer value proposition and channel (0.909), customer relationship and revenue stream (0.908), resource (0.926), key partners (0.923), cost structure (0.912) and key activities (0.926). The third Cronbach Alpha obtain for the item measuring attitude is 0.955 including six item BMC online tools (0.949), learning better BMC (0.945), BMC interesting tools (0.952), motivation in BMC learning and self-directed (0.941) and mobile technologies BMC (0.948). Another Cronbach Alpha obtain for the item measuring helpfulness (0.924) and contain four item knowledge (0.926), flexible usage (0.895), well-explained (0.894) and creative (0.988). lastly the Cronbach Alpha for satisfaction factor is 0.881 and including three factor satisfaction in teaching method (0.863), knowledge satisfaction (0.856) and experience satisfaction (0.770). The reliability test shows, all the item is accepted in study and had meet the threshold 0.7 Cronbach alpha (Hair Jr et al., 2016).

Frequency Distribution

Table 1 summarize the demographic profile of the respondent which include gender and age of the 39 total respondent. The female respondent represents 71.8% then the male respondent in using the BMC online learning with the age group of 20-25 year 53.8%.

Table 1. Demographic Profile of Respondent

| Demographic Variables | Categories | Frequencies | Percentage |
|-----------------------|---------------|-------------|------------|
| Gender | Male | 11 | 28.2 |
| | Female | 28 | 71.8 |
| Age | Below 19 year | 18 | 46.2 |
| | 20-25 year | 21 | 53.8 |

Table 2 depict the BMC online tools in teaching and learning. The highest mean attained by helpfulness factor 4.36 and the lowers mean is attained by satisfaction factor 4.29 shows that the score mean revealed student had high satisfactory in implementing the BMC online tools in teaching and learning.

Table 2. Level of BMC Online Tools in teaching and learning

| | Mean | Standard Deviation | Skewness | Kurtosis |
|----------------------------------|------|--------------------|----------|----------|
| Understanding of Business Blocks | 4.39 | 0.53101 | -.487 | -.812 |
| Self-Efficacy | 4.33 | 0.57363 | -.532 | -.382 |
| Attitude | 4.33 | 0.75122 | -1.418 | -2.682 |
| Helpfulness | 4.36 | 0.69733 | -1.665 | 4.058 |
| Satisfaction | 4.29 | 0.74997 | -2.272 | 8.722 |

Descriptive analysis also portrayed the skewness result for each variable involved in this research. Skewness result for the dependent variable; satisfaction showed negative skewness with -2.272 , following by the independent variables skewness value; awareness, self-efficacy, attitude and helpfulness value also showed a negative skewness with -0.487 , -0.532 , -1.418 , and -1.665 respectively. The skewness result for all the respective values obtained are near to normal, which the normal value is equal to 0. For the kurtosis analysis, satisfaction showed a positive result of 8.722 and independent variables skewness positive value; helpfulness and negative skewness value for attitude, self-efficacy and awareness with 4.058 , -2.687 , -0.812 and -0.382 . From the results, kurtosis values obtained for both dependent and independent variables are excellent as the values are still between -3 and $+3$ (Andy Field, 2018). The normal kurtosis value would be 0 and this indicates that the kurtosis curve is seemed to be very high for satisfaction, moderate for helpfulness and the other not very sloping.

Another way of looking at the problem is to see whether the distribution as a whole deviate from a comparable normal distribution is the Kolmogorov–Smirnov test and Shapiro–Wilk test (Pallant, 2020). The significant level is greater the 0.05 and indicate normal.

Pearson Correlation

Correlation of Items with Number of Scores and Between Items Construct ‘Understanding the Business Blocks, Self-Efficacy, Attitude, Helpfulness and Satisfaction’

Table 3. Correlation item value with Number of Scores and Between Items Construct

| Item | Business Block | Self-Efficacy | Attitude | Helpfulness | Satisfaction |
|-----------------|----------------|---------------|----------|-------------|--------------|
| Business Blocks | 0.495 | | | | |
| Self-efficacy | 0.765 | 1 | | | |
| Attitude | 0.882 | 0.719 | 1 | | |
| Helpfulness | 0.879 | 0.808 | 0.882 | 1 | |
| Satisfaction | 1 | 0.495 | 0.765 | 0.882 | 0.879 |

** *. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows all item in the construct 'Understanding Business Blocks, Self-Efficacy, Attitude, Helpfulness and Satisfaction' strong and significant positive correlation with the number of construct' scores. The highest correlation is Satisfaction (1) follow by Helpfulness (0.879), Attitude (0.882), Self-Efficacy (0.765) and Awareness (0.495). It was also found that the correlation value between items showed all items were positively correlated and was significant at level 0.01. The correlation range is between 0.765 – 1 which shows the strong relationship between helpfulness, attitude and self-efficacy and 0.495 moderate relationship according to Cohen (1998) table.

CONCLUSION

This paper presents the contribution of the research based on the statistical analysis carried out in the descriptive analysis, reliability test and Pearson's correlation analysis. The study aims to determine student satisfaction in using online BMC in learning. The student really enjoys the BMC online where they agree the medium really helpful in teaching and learning. The finding of BMC online indicates very good response in attitude and self-efficacy factor by following the BMC online instruction. Student are aware of the nine block BMC but the awareness of the BMC online need to be improve in the next time usage through online medium in the Pandemic Situation. The study conclude that the online medium is helpful, develop student attitude and self-efficacy in their learning pattern. However, the awareness of the online medium has to be improve in the next batch usage.

Therefore, the teaching and learning process will be more interesting and attractive among student. As with other empirical studies, there are some drawbacks to the current analysis that suggest recommendations for further research. While this study has effectively explained the key factors influencing the BMC usefulness for higher education institutions, there are some factors that limit this research and should be taken into account in future studies. A set of hypothesis for the next study in determining the relationship between the awareness, influence factor (helpfulness, attitude and self-efficacy) independent variable toward student satisfaction (dependent variable) using PLS-SEM.

The studies conducted online to the student in one college and need to be expanded to obtain more data to explore the availability of student in BMC online learning. Multi Regression analysis and the gender influence is the only demographic factor taken into account in this analysis and it is therefore worth checking the moderating effect of other demographic factors in future studies. As for future research, the researcher would welcome opportunities to extend and contrast these results with other higher education institution which using BMC online learning.

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