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EXPERIENTIAL LEARNING METHOD IN MEASURING THE EFFECTIVENESS OF THE JIGSAW LEARNING METHOD FOR THE JIGSAW LEARNING METHOD FOR BUSINESS MODEL CANVAS

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ABSTRACT

Entrepreneurs utilize Business Model Canvas planning to design a business with 9 parts that bring value to customers and are sustainable. Encourage and explore students' inventiveness when teaching Business Model Canvas planning. Jigsaw is one learning strategy. Small groups discuss the instructor's subjects after receiving a brief theoretical orientation on the Business Model Canvas teaching material in the jigsaw learning approach. Compared to typical learning approaches, how effective is this jigsaw method for Business Model Canvas teaching? Two groups of junior teachers and students, classes A and B, receive experimental methods to evaluate the jigsaw learning method using a mix of qualitative and quantitative methods. A questionnaire is presented to each group after therapy. Each group was given a closed questionnaire with a 1-5 linkert scale to assess learning and understanding following the treatment. Therefore, non-parametric statistical calculations show that learning Business Model Canvas with the jigsaw learning model works. A Chi Square (X^2) of 17.674 > table (X^2) with a confidence level of 1% accepts the alternative hypothesis (Ha), proving that the Jigsaw learning model is better at learning Business Model Canvas material. It would be better to investigate and improve the Jigsaw learning model for strategic concepts and explanations in social science teaching materials rather than formula computations.

1. Introduction

A country needs an entrepreneurship ratio of 5-10% of its total population to be established entrepreneurs (having at least 10 employees). Indonesia aims to have 3.7% of its population become entrepreneurs by 2022 but only 40% of established entrepreneurs. This shows that there is a lag to catch up to reach 5% of Indonesia's population entrepreneurship [1]. Moreover, we realize that the role of MSMEs is very large, the contribution of MSMEs to the National GDP reaches 61% or Rp. 9,580 trillion [1]. The role of MSMEs through the creative economy sector is proven to have opened 96% of employment opportunities, consisting of 31.9% in the culinary sector, the fashion sector (12.5%), the animation art sector (6.1%) and Crafts (5.97%), other 39.53% [2]. This creative economy is mostly cultivated by the younger generation aged 15-35 years (student and college student age), which amounts to 64.5 million people. This is a great potential to develop student entrepreneurship through education, because students are young people who have matured (mature thinking and

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able to control their emotions) at least have been equipped with knowledge, logic skills, analysis, creativity and innovation so that the success rate is greater if they become creative economy entrepreneurs. The world of education today is required not only to provide students with provisions to be ready to enter the world of work but also to be ready to enter as entrepreneurs because it cannot be denied that employment is limited and not balanced with the increasing number of graduates. However, the obstacle is that these novice entrepreneurs do not have mature business planning and good financial management, capital is also limited so that everything is still done independently, besides that there is a lack of personal attributes related to the entrepreneurial spirit (including persistence, honesty, discipline and responsibility) [3].

In 2022, the Indonesian government issued Presidential Regulation (Perpres) Number 2 of 2022 concerning National Entrepreneurship Development in 2021-2024. This Presidential Regulation was drafted as Indonesia's effort to achieve the goals of the National Medium-Term Development Plan 2020-2024 to improve the quality of economic growth, business climate and competitiveness, and expand employment opportunities. In order to support government policy in achieving these targets, the Ministry of Education, Culture, Research and Technology (Kemendikbudristek), by launching the Merdeka Entrepreneur Program. This program is then integrated into the Merdeka Belajar Kampus Merdeka (MBKM) policy package, which targets students in higher education and through collaboration with universities that act as implementers (PTP). The MBKM Wirausaha Merdeka programme develops entrepreneurial learning that is able to hone the entrepreneurial spirit, encourage increased entrepreneurial experience and increase student employability.

Thus, in addition to providing learning that hones the entrepreneurial spirit, entrepreneurship courses also need to teach materials from best practices in the successful business world in order to increase entrepreneurial experience and increase student employability. The best practical material includes business planning material using Business Model Canvas. Business Model Canvas planning is a business planning material that teaches how to build a business with its 9 elements so that the business can be sustainable because it provides value to its customers. These nine elements are comprehensive including market target, customer value preposition, customer relationship, channel, revenue stream, key partnership, key activities, key resources, and cost structure [4].

Market Target is the target market share including the lower, middle, and upper classes, Customer Value preposition is the value of satisfaction adjusting the target market that the company can create such as quality, packaging, price promos, and after-sales satisfaction. Customer relationship is how we foster good relationships with customers with service, communication, and empathy. Channel is a network used to connect products with customers, for example marketplace, TikTok social media, google ads and so on. Then the target market, customer relationship, channel, and customer value preposition create Revenue Stream. Likewise, Key Partnership planning (supplier chain) is connected to key Activities (core business) and key Resources (internal input factors) that support key Activities so that the preparation of Cost Structure (expenditure structure) can be planned, controlled and efficient [4].

In teaching Business Model Canvas planning, out of the box methods are needed that are able to motivate and explore the insights and creativity of students, exchange ideas, and collaborate to uncover all the elements in the Business Model Canvas. Thus, a learning method that is able to hone cognitive abilities is needed, namely a learning method where understanding of knowledge is obtained from processing through discussions within groups and between groups to explore more information and knowledge [5]. The Jigsaw learning model is a group discussion learning method where at the start of the material the teacher provides a brief and concise concept of material to students, then the teacher forms small groups in the class of students so that each of them discusses according to the related topics given by the teacher [5].

In this case, for example, topics related to the 9 elements of the Business Model Canvas (BMC), students after receiving a brief theoretical direction related to BMC teaching material from the teacher, then discuss in their groups called expert groups. In the next stage, a representative from each expert group is chosen who really understands the topic discussed to then discuss with other expert group representatives. Next, they conclude collaboratively with the direction of the teacher in order to get a complete picture of the correct BMC concept. The conclusion is presented in front of the class. Furthermore, an evaluation is carried out to test the understanding of each learner after forming a conclusion about BMC that has been studied and discussed together [5]. Thus, is the Jigsaw method very effective for learning Business Model Canvas? Therefore, this scientific paper aims to see how effective the application of the Jigsaw learning method is to teach Business Model Canvas material to students. Watkins et all in [6] put forward the statement that "Learning effectiveness is a constructive activity handled by a teacher who encourages learners through specialized approaches and strategies to learn achieve learning objectives well. Learning effectiveness is a measure of the success of a process of interaction between students and between students and teachers in an educational situation to achieve learning objectives [7]. Deassy and Endang [8] state that learning effectiveness i s useful and purposeful learning for learners that allows learners to gain specific skills, knowledge and attitudes, in an easy, enjoyable way, and can achieve learning objectives as expected.

Bambang [9] stated that learning effectiveness can often be interpreted as accuracy in managing situations so that learning objectives are achieved. However, it is different from the opinion of Djam'am and Asep [10] who state that learning effectiveness is not only assessing student learning outcomes but all efforts or processes that cause children to learn. Arif (2019) the results of his study prove that learning effectiveness can be improved through pedagogic competence and teamwork [11]. Bencsik (2009) stated that learning that is suitable in the 21st century era of rapid development is teamwork [12].

2. Method

To analyse the effectiveness of the jigsaw learning method, a mixed methodology between qualitative and quantitative with an experimental research method was used. Data is sourced from books, e-books, and scientific articles to explore theories related to BMC and Jigsaw, then evaluated using a closed questionnaire with a 1-5 linkert scale measurement given to respondents consisting of junior teachers, and students who have never experienced the jigsaw learning method and insights related to BMC. The questionnaire was designed to measure the level of learning experience with discussion, perceptions of participants' knowledge absorption as well as regarding creativity of opinion, responsibility in answering based on theory and being responsible for sharing knowledge with other groups.

2.1. Sample Preparation

Sample preparation is 2 classes of students consisting of 94 people or each class is taken 47 vocational students and young lecturers. Marketing Management who have never received a Business Model Canvas lecture to attend a short lecture related to the Business Model Canvas. In addition, 6 young lecturers as respondents were selected who had never received information about Business Model Canvas and Jigsaw. This is intended to maintain the neutrality of the sample.

2.2. Experimental Setup

The two classes were given Business Model Canvas lectures with different learning models, class A consisted of 45 students and 2 young lecturers who were given the Jigsaw learning model in delivering Business Model Canvas material. While class B consists of 45 student learners and 2 young

lecturers given a traditional learning model in delivering Business Model Canvas material. Then after getting the lecture, each of them was given a post-test to evaluate the learning experience gained in terms of understanding, roles, tolerance of opinion, exchange of ideas, and collaboration to unite opinions.

2.3. Parameters

The parameter measured in this study was the level of BMC learning experience of participants between those who received the jigsaw learning model and those who received the traditional learning model. The learning experience was measured using a questionnaire containing questions about understanding, analysis, discussion and brainstorming, level of participation and level of collaboration as detailed in Table 1.

Table 1. Questionnaire Grid

Core Aspects	Question Number	Indicator
Understanding	1-2	BMC understanding
Analysis	3,4,8,9	Ability to Critique, identify, reexplain and apply BMC in case studies
Discussion and brainstorming	5-7	Ability to listen, respect other people's opinions other people's opinions related to BMC and straighten out opinions based on BMC concepts
Participation level	10	Activeness Discussion participation, class participation
Collaboration level	11	Ability to collaboration with friend in unify opinions and conclude

Post-test scores were compared between class A using Jigsaw learning method and class B post-test using traditional learning method.

2.4. Data Testing and Analysis

This study uses non-parametric statistical tests in comparing two samples from two different classes and is independent so that it uses the Chi Sqaure (χ2) method to test comparative hypotheses for large sample data [13]. Analysis is an explanation of the results of the Chi Sqaure (χ2) test comparing class A with class B if (χ(2))calculated > (χ2) 1% confidence level = 3.481 then the hypothesis Ha is accepted means that it is more effective to use Jigsaw than Traditional otherwise if (χ2)calculated< 3.481 (1% confidence level) then the hypothesis is rejected or jigsaw and traditional methods have no difference [14].

3. Results and Discussion

Based on the results of non-parametric statistical calculations for comparison, the Chi Square calculation result (χ2)of 17.674 > (χ2)table with a confidence level of 1% is 3.841, meaning that Ho is rejected and Ha is accepted so that the statement that the Jigsaw learning model is more effective in learning BMC compared to the Traditional model.

Table 2. Comparative Test Results between Class A (Jigsaw) and Class B (Traditional)

	Effective (4-5)	Less effective (3)	(Total)	Chi (χ2) count	Chi (χ2) table (1% confidence)
Class A Jigsaw Method	42	5	47	17.674	3.841
Class B Traditional Method	22	25	47		
NUMBER	64	30	94		

It can be explained in Table 3 that the Jigsaw learning model has a very good learning experience because it is more varied such as collaboration, tolerance for people's opinions, understanding the

material, increasing discussion participation, and honing analytical skills, especially in this research related to the Business Model Canvas.

Table 3. Indicators of Excellent Response to Jigsaw

Core Aspects	Question Number	Indicator	Respondents Answer Very Well
Comprehension	1-2	BMC understanding	33.3%
Analysis	3,4,8,9	Ability to identify, criticise, explain go back and apply BMC in case studies	24.7%
Discussion and brainstorming	5-7	Ability to listening skills, respect other people's opinions related to BMC and straighten out opinions based on BMC concepts	42.6%
Participation level	10	Activeness participation class participation	33.3%
Level of collaboration	11	Ability to collaborate with friends in unifying opinions and concluding	95.0%

The Jigsaw learning method appears to be more varied and relies on discussion and collaboration so that it is not boring and lighter to learn things that are complex and have many types / aspects / elements. Likewise, the Jigsaw model in learning Business Model Canvas which has 9 elements to create customer value prepotition can help learners understand each element in detail because there is a challenge for creativity in thinking and opinion, tolerance of opinion and collaboration to complement each other.

Thus, the Jigsaw learning model is very effective for learning Business Model Canvas teaching material and can be developed for other teaching materials, especially those that discuss many case studies that require the thoughts and views of many people in solving problems such as organisational strategies [15] except for teaching materials that are calculated because the formulation and calculation process is standard.

4. Conclusions

The Jigsaw learning model is very effective for Business Model Canvas learning because it provides an excellent learning experience in terms of collaborative understanding of the whole concept, tolerance for people's opinions, increased understanding of the material, increased discussion participation, and honing analytical skills related to the material studied in terms of Business Model Canvas. The Jigsaw learning model is also suitable for learning management and organisational strategy material, case studies in other social sciences that require discussion and unification of various thoughts to solve problems, but the Jigsaw method cannot be applied in materials with a lot of calculations where the formula is standardised.

Conflict of interest

The authors declare no conflict of interest.

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