

KORESPONDENSI

ARTIKEL JURNAL INTERNASIONAL BEREPUTASI

Judul artikel : **IMPACT OF BUSINESS MODELS CANVAS LEARNING ON IMPROVING LEARNING ACHIEVEMENT AND ENTREPRENEURIAL INTENTION**

Jurnal : **Cakrawala Pendidikan, Vol. 39, No. 1, February 2020**

Penulis : **Saidun Hutasuhut* , Irwansyah, Agus Rahmadsyah, Reza Aditia**

No	Perihal	Tanggal
1	Bukti Registrasi ke jurnal Cakrawala	8 Nov 2019
2	Bukti konfirmasi submit artikel dan artikel yang disubmit	9 Nov 2019
3	Bukti penolakan dari Editor karena file tidak ditemukan/tidak sesuai guidelines	10 Nov 2021
4	Bukti Penerimaan Re submit	24 Nov 2019
5	Hasil Editor Decision, dan revisi reviwer 1 dan 2	25 Desember 2019
6	Bukti Editor decision revisi 2	23 Jan 2020
7	Bukti Accepted	19 Feb 2020
8	Bukti Editor Meminta perbaikan referensi, File yang mau diperbaiki	21 Feb 2020
9	Bukti Pemberitahuan Final Version manuscript dari	1 Maret 2020
10	Final artikel	1 Maret 2020

- 99+ Compose
- Mail
- Inbox 1,672
- Starred
- Snoozed
- Important
- Sent
- Drafts 16
- Categories
- Social 234
- Updates 671
- Forums
- Promotions 416
- More

Labels

[CP] Journal Registration Inbox x



Prof. Dr. Burhan Nurgiyantoro <cakrawala@uny.ac.id>
to me

Fri, Nov 8, 2019, 5:05 PM

Dear - Saidun - Hutasuhut,

You have now been registered as a user with Jurnal Cakrawala Pendidikan. We have included your username and password in this email, which are needed for all work with this journal through its website. At any point, you can ask to be removed from the journal's list of users by contacting me.

Username: saidu30-8-66
Password: 300866

Please make sure you have read our author guidelines or use the manuscript template provided.

Thank you,
Prof. Dr. Burhan Nurgiyantoro

Cakrawala Pendidikan
<http://journal.uny.ac.id/index.php/cp>

- 99+
- Compose
- Mail
- Inbox 1,672
- Starred
- Snoozed
- Important
- Sent
- Drafts 16
- Categories
- Social 234
- Updates 671
- Forums
- Promotions 416
- More

Labels

[CP] Submission Acknowledgement Inbox x



Prof. Dr. Burhan Nurgiyantoro <cakrawala@uny.ac.id>
to me

Sat, Nov 9, 2019, 4:00 PM

Dear - Saidun - Hutasuhut,

Thank you for submitting the manuscript, "INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)" to Jurnal Cakrawala Pendidikan. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL:
<https://journal.uny.ac.id/index.php/cp/author/submission/28061>
Username: saidu30-8-66

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Sincerely,

Prof. Dr. Burhan Nurgiyantoro
Jurnal Cakrawala Pendidikan

INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)

¹⁾Saidun Hutasuhut, ²⁾Irwansyah, ³⁾Agus Rahmadsyah, ⁴⁾Reza Aditia

^{1, 2, 3)}, Faculty of Economics, Universitas Negeri Medan, Indonesia

^{**)} Postgraduate Student, Universitas Negeri Medan, Indonesia

e-mail: saidun@unimed.ac.id

Abstract : This study examines the impact of entrepreneurial learning by using the Business Model Canvas (BMC) on learning outcomes and enhancing student entrepreneurial intentions. The interaction of entrepreneurial learning achievement levels was also tested for its impact on entrepreneurial intentions. However, existing research has not explicitly stated the learning model used to increase entrepreneurial intentions. This study is a quasi-experiment involving two classes of entrepreneurship courses at the Faculty of Economics Universitas Negeri Medan. Each class act as experimental class and control class. Hypothesis testing is done by the "t" and ANOVA tests. The analysis showed that entrepreneurial learning outcomes and entrepreneurial intentions of the BMC class proved significantly different from the control class. Entrepreneurship learning outcomes are 12.74% higher, and entrepreneurial intentions are 3.14% higher in the BMC class. BMC learning has not been proven to increase entrepreneurial intentions. However, the level of learning achievement proved to be positive and can significantly increase entrepreneurial intentions. There is no interaction between learning models, either BMC or conventional, with the high and low levels of entrepreneurial learning achievement on increasing entrepreneurial intentions. The results of this study are useful for instructors to design entrepreneurial learning that can increase entrepreneurial intentions.

Keywords : BMC, learning outcome, entrepreneurial intention

TINGKAT INTENSI KEWIRAUSAHAAN MAHASISWA; DAMPAK PENERAPAN PEMBELAJARAN MODEL BISNIS CANVAS (BMC)

Abstrak : Penelitian ini secara spesifik menguji dampak penerapan pembelajaran kewirausahaan Model Bisnis Canvas (BMC) terhadap peningkatan hasil belajar dan intensi kewirausahaan mahasiswa. Interaksi tingkat prestasi belajar kewirausahaan juga diuji dampaknya terhadap intensi kewirausahaan. Sementara penelitian yang ada belum spesifik menyatakan model pembelajaran yang digunakan untuk meningkatkan intensi kewirausahaan. Metode yang digunakan dalam penelitian ini adalah quasi eksperimen dengan melibatkan dua kelas mata kuliah kewirausahaan di Fakultas Ekonomi Unimed. Satu kelas sebagai kelas eksperimen dan satu kelas sebagai kelas kontrol. Pengujian hipotesis dilakukan dengan uji "t" dan anova. Hasil analisis menunjukkan hasil belajar kewirausahaan dan intensi kewirausahaan kelas BMC terbukti secara signifikan berbeda dengan kelas kontrol. Hasil belajar kewirausahaan lebih tinggi 12,74% dan intensi kewirausahaan lebih tinggi 3,14% kelas BMC dibandingkan kelas kontrol. Pembelajaran kewirausahaan kelas BMC tidak terbukti dapat meningkatkan intensi kewirausahaan. Akan tetapi tingkat prestasi belajar terbukti positif dan signifikan dapat meningkatkan intensi kewirausahaan. Kemudian tidak terbukti ada interaksi model pembelajaran (BMC dan konvensional) dengan tinggi rendahnya prestasi belajar kewirausahaan terhadap peningkatan intensi kewirausahaan. Hasil penelitian ini berguna bagi pengajar kewirausahaan untuk merancang pembelajaran kewirausahaan yang dapat meningkatkan intensi kewirausahaan.

Keywords : BMC, hasil belajar, intensi kewirausahaan

INTRODUCTION

Higher education, only able to produce job seekers, and very rarely are willing and able to create jobs, both for themselves and others. Even the job seekers produced are not ready for use, both in terms of knowledge, skills, and attitudes. So that tertiary graduates prefer to look for work rather than create their jobs. This condition causes the unemployment rate at the undergraduate level in February 2018 to be 6.31%, higher than the national total of 5.13% and in February 2019 the unemployment rate at the undergraduate level also remains higher, at 6.24% and nationally total of 5.01% (BPS, 2019). So the bachelor's program as explained in the Law of Republic of Indonesia number 12 of 2012 article 18 paragraph 2 concerning Higher Education is tasked with preparing students to be cultured intellectuals and/or scientists, able to enter and/or create jobs, and able to develop themselves into professionals yet works well.

This phenomenon is the impact that the entrepreneurial intentions of Indonesian students are still weak (Indarti & Rostiani, 2008). Meanwhile, according to Krueger & Carsrud, (1993), entrepreneurial intentions are the best predictors for entrepreneurial actors. Globally, entrepreneurship education is the fastest-growing field of education (Sirelkhatim & Gangi, 2015). In the European Union introduces high-quality entrepreneurship education to equip knowledge, and enhance the attractiveness of entrepreneurial careers to young people (Jakubczak & Rakowska, 2013). In Indonesia, efforts to foster entrepreneurial enthusiasm were carried out through Presidential Instruction of the Republic of Indonesia Number 4, 1995 concerning the "National Movement to Promote and Cultivate Entrepreneurship." In 2008 the Ministry of Cooperatives and SMEs launched the National Shoot Entrepreneurship Movement program for high school students and students (Murtini, 2008). Then since 2009, universities in Indonesia must enter entrepreneurship courses into the curriculum as compulsory subjects in 2 semesters. However, the degree to which entrepreneurship education affects students is still a matter of debate in various circles (James O. Fiet, 2000).

Entrepreneurship Education and Entrepreneurial Intention

Entrepreneurship education is essential to help increase entrepreneurial intentions (Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2017). They explain that entrepreneurship education provides knowledge and influences one's mindset. Entrepreneurship education can

influence the attitudes and aspirations of young people towards entrepreneurship (Robles & Zárrega, 2015). Knowledge about entrepreneurship (learning achievement) positively correlates significantly with entrepreneurial intentions (Dogan & Ebru, 2015). The results of the Mikic, Sopta, & Horvatinovic, (2018) also show there is a positive relationship between entrepreneurship education and entrepreneurial intentions, and this confirms the success of the current entrepreneurship education program and the importance of further enhancing and developing these programs..

The role of entrepreneurship education in increasing entrepreneurship is increasingly essential. Although until now, there has been no useful entrepreneurial learning model to increase entrepreneurial intentions. Türko, (2016) has researched students' perceptions of entrepreneurial learning, applying the business plan model and the canvas business model. The result was that 62% of students stated that it was more challenging to prepare a business plan on a business plan model, while the Business Model Canvas (BMC) had advantages in several ways.. Research that conducted by Coes, (2014) explains that the power of BMC is useful as a visual representation of business models, the simplicity of designing and communicating business models to employees, partners, and customers. Research on BMC has so far been limited to its benefits in preparing business plans. No research has been found that examines the role of BMC entrepreneurship learning in increasing entrepreneurial intentions. Therefore, this study examines the learning role of the Canvas business model in increasing entrepreneurial intentions.

According to Fritscher & Pigneur, (2014), the canvas business model is a visual modeling method used to capture the business model of a company. BMC is learning entrepreneurship by creating a one-page business plan with nine business area blocks. The goodness of this model can be used for each type and business model. Another advantage is that students are required from the beginning to know who their business partners are, the main activities of the business, the value offered, channels, customer segmentation, key resources, cost structures, and business profit potential. Through this BMC, students from the beginning are more realistic and comprehensive in understanding business. If students have understood the business more realistically and comprehensively, it is suspected that it can increase entrepreneurial intentions.

The Learning of Business Model Canvas (BMC)

Fritscher & Pigneur, (2014) explained that there are two entrepreneurship education models, namely the Entrepreneurial performance education model (E / P model) and the Entrepreneurial education model (E / E model). While Pretorius, (2001) proposes entrepreneurship training with a model of five relevant constructs to improve the ability to start a business (start-up). The five constructs are entrepreneurial success, business knowledge and skills, learning approaches, business plans, and facilitators. Furthermore, Pretorius, Nieman, & van Vuuren, (2005) combined the Entrepreneurial Performance Model and the Entrepreneurial Education Model into an integrative model with the case study method. The aim is to increase the number of new businesses. The success of this model is measured by the extent to which the behavior of students wants to take responsibility for starting a business. All proposed model constructs contribute through certain synergies to improve the results of entrepreneurship training programs. However, if construction is ignored, the program results will fail (Pretorius et al., 2005).

Alexander Osterwalder, in 2004, introduced a business model, the Business Model Canvas (BMC). BMC is a tool to describe business models based on nine elements (Osterwalder, 2004; Fritscher & Pigneur, 2014). Meanwhile, according to Pigneur (2010) BMC, an abstract concept design of a business model that represents business strategies and processes. This model illustrates and visualizes business ideas that are planned and suitable for innovative startup companies (Alias, Goudz, Jawale, & Noche, 2015).

One of the documents that must be prepared before running a business is the right business plan. According to Delmar & Shane, (2003) business planning can be a useful tool for new businesses than established businesses. The BMC model in entrepreneurship learning is considered relevant for making business plans. The advantages of this model can overcome the difficulties of students in making a viable business plan and at the same time, be able to know the advantages and disadvantages of business, the needs analysis, and profit analysis process quickly. According to Fritscher & Pigneur, (2014), BMC is a business model that can visualize the business of a company. BMC learning excellence can visualize business on one sheet of canvas. Students pour a business plan on one sheet of the canvas by filling 9 area blocks. The goodness of this model can be used for each type and business model. Another advantage is that students are required from the beginning to know who the customer segment is, what value proposition

they have, who the business partners are, the potential for profit to know the cost components that must be spent. Through BMC, students from the beginning are more realistic and comprehensive in understanding a business. If students have understood the business more realistically and comprehensively, it is suspected that it can increase knowledge and entrepreneurial intentions. The nine blocks, according to Osterwalder & Pigneur, (2010), they are: (1) Customer Segment, (2) Value Proposition, (3) Customer Relationship, (4) Channel, (5) Revenue Stream, (6) Key Resources, (7) Key Activities, (8) Key Partnership, (9) Cost Structure. The strengths of this model are that students can develop a business plan by synergizing nine blocks into a single unit, for more details, presented in Figure 1.

Much research has been done on BMC, but it is still limited to using BMC as a business model that is run to improve business performance. No research has been found that examines the role of BMC entrepreneurship learning in improving learning outcomes and entrepreneurial intentions. This research aims to test; (a) whether the entrepreneurial learning outcomes of the BMC class differ significantly from conventional, (b) whether the entrepreneurial intentions of BMC class students differ significantly from conventional, (c) whether the level of entrepreneurial learning outcomes influences entrepreneurial intentions, and (d) whether there is an interaction of learning models with the level of entrepreneurial learning outcomes on entrepreneurial intentions.

METHOD

This research uses the quasi-experimental method carried out on the campus of the Faculty of Economics, Medan State University. This study is based on constructivist learning theories that demand students' independence to formulate a business idea, design business, and report it. Students are allowed to set their learning process to complete business plan tasks. The study population was all entrepreneurship classes at the Faculty of Unimed in the odd semester of 2018. The class sample was determined by two classes. One class as a BMC treatment (experimental class) and one other class as a control class and determined by purposive random sampling.

Data collection techniques used were instruments consisting of; (a) instrument (test) of entrepreneurial learning outcomes, and (b) entrepreneurial intentions (adopted from Liñán & Chen, 2009; Liñán et al., 2011) on a scale of 1-7. A score of 1 (one) describes "very weak," and a score of 7

(seven) describes "very strong." To measure the impact of BMC entrepreneurship learning using the "t" and "ANOVA" tests with the help of SPSS version 24.

Table 1. Research Variables and Instruments

No	Variable	Number of Items	question
1	Entrepreneurship Learning Outcomes	18	
2	Entrepreneurial intention	6	<ul style="list-style-type: none"> • I'm ready to be an entrepreneur • My professional goal is to be an entrepreneur • I will make every effort to start and run my own company • I am very seriously thinking about starting a company • I am determined to create a company in the future • I have the intention to start a company in the future

RESULT & DISCUSSION

Result

The number of questions used to measure the level of entrepreneurial knowledge of students was 18 items out of the 20 items tested to students. Then from the 6 statement items used to measure student entrepreneurial intentions, all of them are worth seeing from the validity with the lowest Corrected item-total Correlation score of 0.681 and 0.824 (with criteria > 0.30) and Alpha Cronbach 0.912 (with criteria > 0.60).

The principle of the reaction of the BMC learning model is seen from the responses given by students to the learning instruments and the application of Business Model Canvas, and the results are presented in Table 2.

Table 2. Student Responses to BMC Learning Instruments and Implementation

Aspects	Average Response (%)	
	Happy	Unhappy
Feelings of "Happy or Unhappy" Respondents to the component; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	100	0
"New or Not New" respondents' opinions of the components; subject matter, BMC Model. Student Worksheet (Business Plan),	New	Not new
	85	15

learning atmosphere, instructor/lecturer appearance, how to teach		
"Clear or Unclear" respondents' opinions about the language used in the Student Worksheet and learning achievement test	Clear	Unclear
	96,55	3,50
Respondents' opinions about "understanding or not understanding" of the Student Worksheet (Business Plan) and learning achievement test	Understand	Not Understand
	93	7,00
Respondents' opinions about the "exciting or unexciting" towards Student Worksheets (Business Plan) and test results	Exciting	Unexciting
	89,50	10,50

Criteria: 0 % - 20 %	Very low
21% - 40%	Low
41% - 60%	Medium
61% - 80%	High
81% - 100%	Very high

Student responses to the application of BMC viewed from 5 aspects; happy and unhappy feelings, aspects of learning new categories or not, the level of language clarity, the level of understanding, and the level of exciting or unexciting on the BMC Student Worksheet and learning outcomes test, the result is that every aspect received a positive response in 81% and above (category " very high"). Calculation results are presented in Table 2.

To find out whether the data are normally distributed, a normality test has been conducted, the learning outcomes of the conventional class and the BMC class are both eligible because Shapiro-Wilk sig are respectively 0.118 and 0.056 > from 0.05 as explained in Table 3. This study uses the Shapiro-criteria Wilk because of the small number of samples.

Table 3 Test Results of Normality Learning Outcomes and Entrepreneurship Intention

	Model	Shapiro-Wilk		
		Statistic	df	Sig.
Learning Outcomes	Conventional	,924	20	,118
	BMC	,914	22	,056
Entrepreneurial Intention	Conventional	,960	20	,549
	BMC	,933	22	,140

The entrepreneurial intentions of both the conventional class and the BMC class are both normally distributed because the Shapiro Wilk sig values are respectively 0.549 and 0.140 > 0.05. Furthermore, the homogeneity test results of learning outcomes data and entrepreneurial intention (Learning model and level of learning outcomes) both meet the requirements because of their respective sig values > 0.05, as presented in Table 4. Because the normality and homogeneity requirements of the data have been fulfilled, the next step is to test hypothesis.

Tabel 4 Test of Homogeneity of Variances

Learning Outcomes				
	Levene Statistic	df1	df2	Sig.
Learning Model	,137	1	40	,713
Level Learning Outcomes	,181	1	40	,673
Entrepreneurial Intention				
Learning Model	,756	1	40	,390
Level Learning Outcomes	,479	1	40	,493

Furthermore, to find out whether there are differences in entrepreneurship learning outcomes between the BMC class and the control class, a "t" test is performed. In Table 5 it is known from the output "Independent Samples Test" in the section "Equal variances assumed" known sig (2-tailed) value of 0.033 < 0.05, meaning that there are significant differences in learning outcomes of the BMC class with the control class.

Tabel 5 Independent Samples Test, Learning Outcomes

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning Outcomes	Equal variances assumed	,137	,713	2,206	40	,033	7,79545	3,53371
	Equal variances not assumed			2,211	39,880	,033	7,79545	3,52632

The magnitude of the difference in entrepreneurial learning outcomes between the BMC class and the control class (see Table 6) by looking at the average. The average learning outcomes of the BMC class is 12.52% higher than the control class.

Table 6. Learning Outcomes by Class Group

	Model	N	Mean	Std. Deviation	Std. Error Mean
Learning Outcomes	BMC	22	70,0455	11,66793	2,48761
	Control	20	62,2500	11,17740	2,49934

Entrepreneurship Intention Test Results BMC class with control class (conventional) seen from the total mean is not significantly different, where the average total BMC class is 37.868, and the control class is 35.50 with a difference of 6.67% (see Table 7).

Tabel 7. Entrepreneurial Intention Based on Class and Level of Learning Outcomes

Model	level of learning outcomes	Mean	Std. Deviation	N
Convensional	Low	34,6000	2,27058	10
	High	38,4000	1,71270	10
	Total	36,5000	2,76253	20
BMC	Low	35,5455	2,84125	11
	High	39,8182	1,99089	11
	Total	37,6818	3,24237	22
Total	Low	35,0952	2,56719	21
	High	39,1429	1,95667	21
	Total	37,1190	3,04601	42

Hypothesis test results of the impact of the application of the BMC model and the effect of entrepreneurial learning outcomes on entrepreneurial intentions are presented in Table 8. It is known that the Corrected Model shows a sig value of 0,000 < 0.05, meaning that the BMC learning model, the level of entrepreneurial learning outcomes together proved to influence the intention entrepreneurship significantly. The contribution of learning models and the level of entrepreneurial knowledge in influencing entrepreneurial intentions is seen from the R Squared value of 49.2%.

Tabel 8 Test of Between-Subjects Effects.

Dependent Variable: Entrepreneurial Intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	187,241 ^a	3	62,414	12,278	,000
Intercept	57649,870	1	57649,870	11341,136	,000
Model	14,632	1	14,632	2,878	,098
Level Learning Outcomes	170,681	1	170,681	33,577	,000
Model * Level LO	,585	1	,585	,115	,736
Error	193,164	38	5,083		
Total	58249,000	42			
Corrected Total	380,405	41			

a. R Squared = ,492 (Adjusted R Squared = ,452)

Partially the BMC model was not proven to be able to increase entrepreneurial intentions because the sig value was $0.98 > 0.05$. However, the level of entrepreneurial learning outcomes proved to significantly influence entrepreneurial intentions because of the sig value of $0,000 < 0.05$. Then found no evidence of an interaction between learning models (BMC and control) and the level of entrepreneurial knowledge of student entrepreneurial intentions, because of the sig value of $0.736 > 0.05$.

Discussion

The essence of learning entrepreneurship by applying business Model Canvas is making a business plan. The business plan is summarized in 9 blocks, as shown in Figure 1. Before preparing a business plan, students are equipped with various business-related knowledge and skills such as; the ability to recognize business opportunities, the ability to take advantage of these opportunities, the ability to organize needed resources, the ability to think critically and creatively, and the ability to prepare financial reports.

8.Key Partnership: Some activities are outsourced and some resources are acquired outside the enterprise	7 Key Activities: ...by performing a number of Key Activities	2. Value Propositions: It seeks to solve customer problems and satisfy customer needs with value propositions	4. Customer Relationships: Customer relationships are established and maintained with each Customer Segment	1. Customer Segment: An organization serves one or several Customer Segments
	6.Key Resource; Key resources are the assets required to offer and deliver the previously described elements...		3. Channels: Value propositions are delivered to customers through communication, distribution, and sales Channels.	
9. Cost Structure: The business model elements result in the cost structure.		5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers		

Figure 1 Business Model Canvas: nine business model building blocks, (Osterwalder & Pigneur, 2010)

After the students are equipped with knowledge and skills about business, they then prepare a business plan that is set out in one sheet of canvas paper that has nine areas. The

preparation of a business plan starts with finding a business idea. The business idea must be based on creativity and have favorable prospects. Then the business idea was poured in one sheet of canvas paper.

Entrepreneurship learning with BMC makes it easy for students to understand a business comprehensively. Students who have no experience of business find it difficult to draw up business plans. However, with this BMC pursuit, students are required to be able to fill each of the nine existing blocks. Each block is related to one another. If students can fill all nine blocks and are related to one another, they have understood the business plan that they will realize. The stages are filled in the following sequence.

First, the Customer segment block, at this stage, students must be able to determine who their customer segment is. The customer segment is to whom the goods or services we offer. Previously it must be known what their needs are not being met and they need. Business ideas usually arise from opportunities. Opportunities, in this case, are the needs of consumers who have not been met, whether they know or do not know it. Soliha, Hubeis, & Maulana, (2014) explains an organization must decide which segments are served and which are ignored, after that, then design the right business model according to needs.

If consumers are not aware of their needs, the seller will introduce them so that consumers are aware of them. Here students need creative ideas to be able to find new business opportunities. Recognizing potential customers can be from various perspectives such as; geographical, demographic, and psychographic. These different characteristics make the type of needs they will also be different.

Second, Value propositions, students must be able to determine the value that is offered to consumers, and that cannot be given by competitors. The ability of new businesses to enter the market and be able to compete with businesses that already exist in the market lies in the added value or something unique that they offer to consumers. Consumers accept this, and they feel it is a necessity and then makes a transaction. Hermawan & Pravitasari, (2013) states that if the Value Propositions offered can address the needs or satisfy the needs of consumers can divert the attention of consumers from one company to another company.

Third, Chanel, in this block, students must be able to determine how to deliver or sell products/services to buyers. What media or means do we use to sell our products to consumers? The media used must be in accordance with the development of information technology or

digital-based such as Google, Yahoo, Altavista, Exclopedia, Wikipedia, and others. The market orientation that is designed should not be limited to the local market but rather to a broader national market, even globally depending on the nature of the product it has.

Fourth, Customer Relationships, in this case, students must be able to design how to guarantee good relations with consumers. Maintaining good relations with consumers is one of the business strategies that students must master from the start. Fifth, Revenue Stream, students must know the primary source of income for the planned business. The main income comes from the sale of their products. Besides, that income can come from selling products from third parties. Sixth, Key Resources, from the beginning, students must be able to determine the resources that must be had to run the main activities of the business. Key resources can be in the form of physical resources (buildings, vehicles, equipment), money, intellectual assets (brands, copyrights, patents, customer databases), and human resources.

Seventh, Key Activities, in this case, students must know the main activities in their business. If students already know the main activities in business, it means that their mastery over the planned business is better. Key activities that determine the success of the business in delivering value propositions to the customer segment. Eighth, Key Patnership, this is related to who the business partners are suppliers of cheap and quality goods, freight forwarding services (JNE, TNT, post offices, and others), advertising agencies, marketplaces (tokopedia, bukalapak, zalora, Shoope, JD .id, etc.). The eighth final step, Cost structures, from the beginning, students can already know what types of costs must be incurred. If the type of trading business consists of the cost of purchasing goods, advertising costs, shipping costs, internet costs, and company employee costs. If students are able to fill the nine blocks that are well available and related to one another, then they already understand the business as a whole. This knowledge and experience will benefit them if they realize their business both when they are students and after graduating from college.

BMC learning received a good response from students. All students said BMC learning was fun because they could collaborate in designing business independently. As many as 85% of students stated that BMC learning was new and different from previous learning. Furthermore, BMC learning is clear, easy to understand, and enjoyable. Of the five aspects observed, 81% of students responded above and are in the "very high" category. When viewed by student activities, they are encouraged to participate actively both individually and in groups. Learning like this

makes them able to work in teams (teamwork), each team member has the responsibility to complete their group assignments.

Then, when viewed from the level of understanding, it can be concluded that the understanding of students is excellent because they can pour business ideas on a canvas sheet by filling in every block and its contents related between one block and another block. Examples of student group work are presented in Figure 2. From the students' assignments, it is known that they can find creative-based business ideas, can set customer segments and can show value propositions or the advantages of their products or services compared to competitors. Students have also been able to determine what strategies will be taken to deliver products or services to prospective buyers or customers. In general, the ability of students in each group is relatively the same. This BMC entrepreneurial learning experience will be useful later if they build their businesses or work with others.

Based on the results of data analysis, as reported in Table 8, it was found that BMC learning and entrepreneurial learning outcomes together proved to have a significant effect on entrepreneurial intentions. The results of this study support research (Ismail et al., 2009; Kusmintarti, Thoyib, Maskie, & Ashar, 2016) which states entrepreneurship courses or training, (Tessema, Gerba, 2012 ; Premand, Brodmann, Almeida, Grun, & Mahdi Barouni, 2016); Patricia & Silangen, 2016 ; Nowiński et al., 2017) entrepreneurship education contributes to entrepreneurial intentions. Then Dehghanpour, (2013) added that the entrepreneurship course that was followed could increase entrepreneurial intentions. Furthermore, Kusmintarti et al., (2016) added that people who participated in entrepreneurship training had the provision of business ideas and social networking and had the desire to build a business going forward. This research provides a theoretical foundation for the development of entrepreneurial intentions through entrepreneurial learning.

Entrepreneurship education is increasingly attracting the attention of researchers. Raposo & Paço, (2011) state that entrepreneurship education provides knowledge in the form of; (a) the ability to recognize opportunities, (b) the ability to take advantage of opportunities, generate new ideas and find needed resources, (c) the ability to create and operate new devices, and (d) the ability to think critically and creatively. According to Jose Sanchez, (2011), in addition to business knowledge and skills, entrepreneurship education also develops beliefs, values, and attitudes, and aims to make students confident and consider entrepreneurship as an alternative job

or as unemployment. Furthermore, Ismail et al., (2009) stated that the entrepreneurship course, Fayolle & Gailly, (2015) added that entrepreneurship education has a positive effect on students who either have low or non-existent entrepreneurial intentions.

The completion of one entrepreneurship course can increase entrepreneurial intentions by 1.3 times (Dehghanpour, 2013). Then Martin, McNally, & Kay, (2013) found a significant relationship between Entrepreneurship Education and Training (EET) with the preparation of entrepreneurial human capital assets. Kusmintarti et al., (2016) stated similarly that students who participated in entrepreneurship training had the intention to build a new business in the future because they were equipped with business ideas and social networking. Previously Nursito & Nugroho, (2013) stated that entrepreneurship education could shape entrepreneurial knowledge and have a positive and significant impact on entrepreneurial intentions. Therefore, Barba-Sanches & Atienza-Sahuquillo, (2017) need to integrate entrepreneurship education with technical education to increase entrepreneurial intentions. The focus of entrepreneurship education is to develop entrepreneurial attitudes, skills, and entrepreneurial behavior (Dogan, 2015). The results of the latest research Solesvik, (2019) explains that business education positively influences the formation of entrepreneurial skills and competencies. Students who study business also exhibit higher levels of entrepreneurial intentions than those who do not participate in business education.

Čapienė & Ragauskaitė, (2018) support the entrepreneurship teaching method by increasing collaboration between stakeholders in entrepreneurship education and getting closer to the business environment. According to P. Kyrp, (2003) entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge, and entrepreneurship. Entrepreneurship learning in universities examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006) . Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana, Suhud, & Wibowo, 2018).

Furthermore, the partial test results of the application of BMC have not been proven to increase entrepreneurial intentions. This means that there is no difference in the entrepreneurial intentions of students taught by BMC with the control class. So far, no research has been found that examines the effect of BMC learning on entrepreneurial intentions so that none can be used as a comparison. However, the use of BMCs in the field of financial management allows companies to identify customer needs, estimate the potential benefits and costs required (Dudin,

Kutsuri, Jur, & Sozrykoevna, 2015). Furthermore, Crotty, Kinney, & Farren, (2017) state that BMC learning is simple, clear, and how business strategy is centered on nine main business area blocks, and more importantly, encourages students or business people to think about how interactions and consequences occur.

Research conducted by Dewobroto, (2013) states that the use of Business Model Canvas can be a simple tool to produce an alternative strategy for the company to achieve financial viability. Then Dudin et al., (2015) stated that the use of the business model of the canvas model could create a competitive advantage in the agricultural industry due to the organizational features of the production and sales cycle. Toro-jarrín, Ponce-jaramillo, & Güemes-castorena, (2016) also argued that Business Model Canvas identifies essential parts of the business, the simplicity of its application makes it more acceptable and disseminated. Furthermore, Baudier & Supérieur, (2017) states that BMC is expected to not only be able to improve organizational performance, enhance the ability of entrepreneurs to communicate, and innovate their business models but also as tools that are adapted for visualization, decision making, creative thinking, collaboration, and reflection

Entrepreneurial learning, according to Fruchter, (2001), needs to change from traditional teaching practices centered on teaching to "knowing-what," to active learning with a focus on teaching to "know-why." BMC learning includes active and student-centered learning. Student-centered learning makes them more independent and responsible for finding solutions; educators play a role as mentors or facilitators (Doppelt, 2003). The advantages of active learning are very relevant in the field of entrepreneurship, where students have the goal to create and lead their projects, and become a favorite practice for teaching entrepreneurship (Åsvoll & Jacobsen, 2012). Rae, (2011) also proposes that entrepreneurship education requires a holistic and activity-based approach. This model is useful for understanding learning material, practice, and personal development of social and group interactions. Active learning activities make academic results and higher motivation, and more in-depth understanding of content, and have been proven in several studies (Michael, 2006).

The next finding is that the level of entrepreneurial learning achievement has been proven to influence entrepreneurial intentions. This means that student entrepreneurship intentions will be higher if entrepreneurship learning achievement is high, and vice versa, entrepreneurial intentions will be lower in students with lower entrepreneurial learning achievements. High

levels of student achievement, illustrating their mastery of entrepreneurial knowledge is higher. In general, entrepreneurial knowledge includes business planning, business development strategies, attitudes, and records and finance. Suryana & Bayu, (2010), explained that an entrepreneur must know the business to be initiated and knowledge of the business environment that will affect entrepreneurial activities; knowledge of roles and responsibilities; knowledge of personality and responsibilities; and the latest knowledge is knowledge about management and business organizations.

Mastery of entrepreneurial knowledge (learning achievement) is essential. Knowledge about entrepreneurship influences entrepreneurial intentions positively and significantly (Anggraeni & Harnanik, 2015; Hutasuhut, 2018; Dogan, 2015, 2015; Roxas, Cayoka, & Jesus, 2008). Mastery of entrepreneurial knowledge will increase the ability of students to run businesses. When he feels he has the ability, there will be an intention to run a business. Previous researchers such as (B. Roxas, 2014; Küttim, Kallaste, Venesaar, & Kiis, 2014) stated that entrepreneurship education significantly increased entrepreneurial knowledge. Entrepreneurial knowledge is the basis of entrepreneurial resources found in individuals (Hisrich, Peters, & Shepherd, 2008). The results of this research strengthen the theoretical foundation of the importance of providing education in higher education to build entrepreneurs. Entrepreneurship education can help and increase entrepreneurial awareness and acceptance as a valuable career choice (Mikic et al., 2018). Entrepreneurship education is also able to provide knowledge to recognize opportunities, take advantage of opportunities, create and operate new devices, and the ability to think critically and creatively (Robles & Zárraga, 2015). Raposo & Paço, (2011) added that entrepreneurship education could be competencies and attitudes that can determine future carrier choices.

Further findings, this research did not succeed in proving an interaction between the application of the BMC model and the level of knowledge (entrepreneurial learning achievement) in shaping student entrepreneurial intentions. This is because partially, the BMC learning model does not have an impact on increasing entrepreneurial intentions even though the level of achievement has a partial impact. Although the application of BMC learning directly has not been proven to be able to increase the entrepreneurial intentions of students. However, this research succeeded in proving that the application of BMC can improve entrepreneurial learning outcomes and through moderation of the level of knowledge (learning achievement of

entrepreneurship), is proven to increase entrepreneurial intentions. The results of this research strengthen the theoretical foundation of the importance of entrepreneurship education to increase knowledge about entrepreneurship in order to create a generation that is interested in entrepreneurship.

CONCLUSION

Application of Business Model Canvas (BMC) on entrepreneurial learning can be a positive response from students and can increase entrepreneurship learning outcomes, experimental class learning outcomes (BMC) 12.52% higher than the control class learning outcomes. However, the entrepreneurship intentions of BMC class students were not proven to be higher than the control class. However, together, the application of BMC and the level of entrepreneurial learning achievement can increase student entrepreneurial intentions. The class learning process that applies BMC can create a pleasant learning atmosphere for all students (100%) who feel understood 93% and feel drawn 89.5%. This research provides a theoretical foundation that the development of entrepreneurial intentions can be done through entrepreneurship education. Entrepreneurship education can increase knowledge (entrepreneurial learning achievement), and achievement levels can strengthen (moderate) BMC learning to increase entrepreneurial intentions. For this reason, universities are expected to be able to design practical and coherent entrepreneurial learning that combines conceptual learning and practical learning. This study has limitations in duration and class of treatment, so it is possible to be reviewed again by adding a broader duration and class.

ACKNOWLEDGEMENT

The researcher thanked the Rector of Universitas Negeri Medan for financial assistance through the Lecturer Study Group Research Grant program and grateful also to the Dean of the Faculty of Economics for the research permission given and thanks to the students for their participation in this research..

REFERENCES

Alias, C., Goudz, A., Jawale, M., & Noche, B. (2015). Generating a business model canvas for Future-Internet-based logistics control towers. *2015 4th IEEE International Conference on*

- Advanced Logistics and Transport, IEEE ICALT 2015*, 257–262.
<https://doi.org/10.1109/ICAdLT.2015.7136592>
- Anggraeni, B., & Harnanik. (2015). Pengaruh Pengetahuan Kewirausahaan dan Lingkungan Keluarga Terhadap Minat Berwirausahaan Siswa Kelas XI SMK Islam Nusantara Com al Kabupaten Pematang. *Jurnal Pendidikan Ekonomi/Dinamika Pendidikan* X(1).
- Åsvoll, H., & Jacobsen, P. J. (2012). A Case Study: Action Based Entrepreneurship Education How Experience Problem Can Collaboration Problem Mitigated. *Journal of Entrepreneurship Education*, 15, 75–93.
- Barba-Sanches, V., & Atienza-Sahuquillo, C. (2017). entrepreneurship education. *European Research on Management and Business Economics*.
- Baudier, M. L. et P., & Supérieur, D. D. B. (2017). Business Model Canvas Acceptance Among French Entrepreneurship Students: Princiole for Enhancing Innovation Artefact in Business Education. *Journal of Innovation Economics & Management*, 23(2), 159–183.
- Čapienè, A., & Ragauskaitè, A. (2018). Entrepreneurship education at university: innovative models and current trends, 2, 284–291. <https://doi.org/10.22616/rrd.23.2017.080>
- Coes, B. (2014). Critically Assessing Strngths And Limitations of The Business Model Canvas. *University of Twente*, 1 to 99. from https://essay.utwente.nl/64749/1/Coes-_MA_MB.pdf%0Ahttps://www.google.co.uk/search?client=firefox-b&q=essay.uwente.nl%2F64749%2F1%2FCoes_MA_MB.PDF&oq=essay.-uwente.nl%2F64749%2F1%2FCoes_MA_MB.PDF&gs_l=psy-ab.12...16773.34806.0.37240.7.7.0.0.0.1392.2210.3j
- Crotty, Y., Kinney, T., & Farren, M. (2017). Using the Business Model Canvas (BMC) strategy tool to support the Play4Guidance online entrepreneurial game, 4(1), 34–41.
- Dehghanpour, A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention : Study of educational system of Education + Training Article information : *Education + Training*, 55(8/9), 868–884.
<https://doi.org/10.1108/ET-04-2013-0053>
- Delmar, F., & Shane, S. (2003). Does business planning facilitate the development of new ventures? *Strategic Management Journal*, 24(12), 1165–1185.
<https://doi.org/10.1002/smj.349>
- Dewobroto, W. S. (2013). Penggunaan Business Model Canvas Sebagai Dasar Untuk Menciptakan Alternatif Strategi Bisnis dan Kelayakan Usaha. *Jurnal Teknik Industri*, 1, 215–230.
- Dogan, E. (2015). The Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Student in Turkey, 0(212), 79–93.
- Dogan, & Ebru. (2015). the Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Students in Turkey. *The Journal of Entrepreneurship*, 23(1), 1–18.
<https://doi.org/10.1177/0971355713513346>
- Doppelt, Y. (2003). Implementation and Assessment of Project-Based Learning in a Flexible Environment, 255–272.
- Dudin, M. N., Kutsuri, G. N., Jur, I., & Sozrykoevna, S. (2015). The Innovative Business Model Canvas in the System of Effective Budgeting, 11(7), 290–296.
<https://doi.org/10.5539/ass.v11n7p290>
- Fayolle, A., & Gailly, B. (2015). on Entrepreneurial Attitudes and Intention : Hysteresis and Persistence, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- Fritscher, B., & Pigneur, Y. (2014). Visualizing Business Model Evolution with the Business Model Canvas : Concept and Tool. <https://doi.org/10.1109/CBI.2014.9>

- Fruchter, R. (2001). Dimensions of Teamwork Education *, *17*, 426–430.
- Gerba, D. tessema. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. <https://doi.org/10.1108/20400701211265036>
- Heinonen, J., & Poikkijoki, S. (2006). An entrepreneurial-directed approach to entrepreneurship education : mission impossible ? *Journal of Management Development*, *25*(1), 80–94. <https://doi.org/10.1108/02621710610637981>
- Hermawan, A., & Pravitasari, J. (2013). Business Model Canvas (Kanvas Model Bisnis).
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2008). *Entrepreneurship*.
- Hutasuhut, S. (2018). The Roles of Entrepreneurship Knowledge, Self-Efficacy, Family, Education, and Gender on Entrepreneurial Intention. *Dinamika Pendidikan*, *13*(1), 90–105. <https://doi.org/10.15294/dp.v13i1.13785>
- Indarti, N., & Rostiani, R. (2008). Intensi Kewirausahaan Mahasiswa : Studi Perbandingan Antara Indonesia , Jepang dan Norwegia Intensi Kewirausahaan Mahasiswa : Studi Perbandingan Antara Indonesia , Jepang dan Norwegia. *Jurnal Ekonomika dan Bisnis Indonesia*, *23*(4), 1–27.
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial Intention among Malaysian Undergraduates. *International Journal of Business and Management*, *4*(10), 54–60. <https://doi.org/10.5539/ijbm.v4n10p54>
- Jakubczak, J., & Rakowska, A. (2013). the Role of Education and Culture in the Development, 997–1004.
- James O Fiet. (2000). The Theoretical Side of Teaching Entrepreneurship. *Journal of Business Venturing*, *16*, 1–24.
- Jose Sanchez. (2011). The influence of entrepreneurial competencies on small firm performance. *Revista Latinoamericana de Psicología*, *7*(2), 239–254.
- Krueger, J. N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, *5*, 315–330.
- Kusmintarti, A., Thoyib, A., Maskie, G., & Ashar, K. (2016). Entrepreneurial characteristics as a mediation of entrepreneurial education influence on entrepreneurial intention. *Journal of Entrepreneurship Education*, *19*(1), 24–37.
- Küttim, M., Kallaste, M., Venesaar, U., & Kiis, A. (2014). Entrepreneurship Education at University Level and Students' Entrepreneurial Intentions. *Procedia - Social and Behavioral Sciences*, *110*, 658–668. <https://doi.org/10.1016/j.sbspro.2013.12.910>
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship: Theory and Practice*, *33*(3), 593–617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, *7*(2), 195–218. <https://doi.org/10.1007/s11365-010-0154-z>
- Martin, B., McNally, J. J., & Kay, M. (2013). Examining the Formation of Human Capital in Entrepreneurship : A Meta-Analysis of Entrepreneurship Education Outcomes. *Journal of Business Venturing*, *28*(2), 211–224. <https://doi.org/10.1016/j.jbusvent.2012.03.002>Elsevier
- Michael, J. (2006). Where 's the evidence that active learning works ?, *30*, 159–167. <https://doi.org/10.1152/advan.00053.2006>.
- Mikic, M., Sopta, M., & Horvatinovic, T. (2018). the Role of Entrepreneurial Education in the Development of Entrepreneurship. *Casopis Za Ekonomiju I Trzisne Komunikacije*, *8*(2), 385–395. <https://doi.org/10.7251/EMC1802385M>
- Murtini, W. (2008). Success Story Sebagai Pendekatan Pembelajaran Kewirausahaan. *Varia*

- Pendidikan*, 20(2), 173–183.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2017). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 5079(August), 1–19. <https://doi.org/10.1080/03075079.2017.1365359>
- Nursito, S., & Nugroho, A. J. S. (2013). Analisis pengaruh interaksi pengetahuan kewirausahaan dan efikasi diri terhadap intensi kewirausahaan. *Kiat Bisnis*, 5(3), 201–211.
- Osterwalder, A. (2004). The Business Model Ontology A Proposition in a Design Science Approach. de Université de Lausanne. from; <http://eprints.uanl.mx/5481/1/1020149995.PDF>
- Osterwalder, A., & Pigneur, V. (2010). *Business Model Generation A Handbook for Visionaries, Game Changers, and Challengers*.
- P. Kyrp. (2003). Entrepreneurship Pedagogy-The Current Public and Some Future Expectations. In *In the 3rd European Summer University*.
- Patricia, & Silangen, C. (2016). The Effect of Entrepreneurship Education on Entrepreneurial Intention in Indonesia. *DeReMa Jurnal Manajemen*, 11(1), 67–86.
- Premand, P., Brodmann, S., Almeida, R., Grun, R., & Mahdi Barouni. (2016). Entrepreneurship Education and Entry into Self-Employment among University Graduates. *World Development*.
- Pretorius, M. (2001). “A training model to enhance micro and small business start-ups in South Africa.” Pretoria.
- Pretorius, M., Nieman, G., & van Vuuren, J. (2005). Critical evaluation of two models for entrepreneurial education. *International Journal of Educational Management*, 19(5), 413–427. <https://doi.org/10.1108/09513540510607743>
- Purwana, D., Suhud, U., & Wibowo, S. F. (2018). Determinant Factors of Students’ Entrepreneurial Intention: A Comparative Study. *Dinamika Pendidikan*, 13(1), 1–13.
- Rae, D. (2011). Entrepreneurial learning : a practical model from the creative industries
Entrepreneurial learning : a practical model from the creative industries.
<https://doi.org/10.1108/00400910410569614>
- Raposo, M., & Paço, A. (2011). Entrepreneurship education : Relationship between education, 23(2001), 453–457.
- Robles, L., & Zárraga, M. (2015). Key Competencies for Entrepreneurship. *Procedia Economics and Finance*, 23(October 2014), 828–832. [https://doi.org/10.1016/S2212-5671\(15\)00389-5](https://doi.org/10.1016/S2212-5671(15)00389-5)
- Roxas, B. (2014). Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected South-east Asian business students. *Journal of Education and Work*, 27(4), 432–453. <https://doi.org/10.1080/13639080.2012.760191>
- Roxas, B. G., Cayoka-, R. P., & Jesus, R. M. de. (2008). Entrepreneurial Knowledge and its Effects on Entrepreneurial Intentions : Development of a Conceptual Framework. *Asia-Pacific Social Science Review*, 8(2), 61–77.
- Sirelkhatim, F., & Gangi, Y. (2015). Entrepreneurship education : A systematic literature review of curricula contents and teaching methods, 1–11.
<https://doi.org/10.1080/23311975.2015.1052034>
- Solesvik, M. Z. (2019). Entrpreneurial Competencies and Intentions: The Role of Higher Education. *Forum Scientiae Oeconomia*, 7(1), 9–23. <https://doi.org/10.23762/FSO>
- Soliha, *Eius, Hubeis, A. V. S., & Maulana, A. (2014). Analisis Model Bisnis Pada KNM Fish Farm dengan Pendekatan Business Model Canvas (BMC) Business Model Analysis of KNM Fish Farm with Business Model Canvas (BMC) Approach. *J Sosek KP*, 9(2), 185–194.

- Suryana, Y., & Bayu, K. (2010). *Kewirausahaan : pendekatan karakteristik wirausahawan sukses*. Jakarta: Kencana Predana Media Group.
- Toro-jarrín, M. A., Ponce-jaramillo, I. E., & Güemes-castorena, D. (2016). Technological Forecasting & Social Change Methodology for the of building process integration of Business Model Canvas and Technological Roadmap, *110*, 213–215.
- Türko, E. S. (2016). Business plan vs business model canvas in entrepreneurship trainings: A comparison of students' perceptions. *Asian Social Science*, *12*(10), 55–62.
<https://doi.org/10.5539/ass.v12n10p55>

- 99+
- Compose
- Mail
- Inbox 1,672
- Starred
- Snoozed
- Important
- Sent
- Drafts 16
- Categories
- Social 234
- Updates 671
- Forums
- Promotions 416
- More

Labels

[CP] Rejection: Manuscript does not follow author guidelines

Inbox x



Endah Retnowati, Ph.D <e.retno@uny.ac.id>
to me

Sun, Nov 10, 2019, 6:41PM

Dear - Saidun - Hutasuhut,

Thank you for your enrollment submission. However, there is no file of "INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)" you send. Furthermore, the submission should be fit within the author guidelines of Jurnal Cakrawala Pendidikan. I recommend that you consult the description of this journal under About, as well as its current contents, to learn more about the work that we publish.

Please also read and follow this author guidelines before you re-submit your articles:

<https://journal.uny.ac.id/index.php/cp/pages/view/authorguidelines>

We look forward to receiving your future manuscript. Thank you.

Regards,

Endah Retnowati, Ph.D
Department of Mathematics Education,

- 99+
- Compose
- Mail
- Inbox 1,673
- Starred
- Snoozed
- Important
- Sent
- Drafts 16
- Categories
- Social 234
- Updates 671
- Forums
- Promotions 417
- More

Labels

[CP] Submission Acknowledgement Inbox x



Prof. Dr. Burhan Nurgiyantoro <cakrawala@uny.ac.id>
to me

Sun, Nov 24, 2019, 2:12 PM

Dear - Saidun - Hutasuhut,

Thank you for submitting the manuscript, "INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)" to Jurnal Cakrawala Pendidikan. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL:
<https://journal.uny.ac.id/index.php/cp/author/submission/28308>
Username: saidu30-8-66

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Sincerely,

Prof. Dr. Burhan Nurgiyantoro
Jurnal Cakrawala Pendidikan

- 99+ Compose
- Mail
- Inbox 1,671
- Starred
- Snoozed
- Important
- Sent
- Meet Drafts 16
- Categories
- Social 234
- Updates 670
- Forums
- Promotions 416
- More

Labels

[CP] Editor Decision: Major Revision Inbox x



Endah Retnowati, Ph.D <e.retno@uny.ac.id>
to me

Dec 25, 2019, 4:52 PM

Indonesian English [Translate message](#) [Turn off](#)

Dear Saidun Hutasuhut,

We have reached a decision regarding your submission to Jurnal Cakrawala Pendidikan, "INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)".

We require you to revise your manuscript. Please see notes from the reviewer, and also the comments in the soft-copy of your article. You can download these from your dashboard account.

Revision deadline: 30 January 2020

On behalf of the editorial board,
Endah Retnowati, Ph.D

Universitas Negeri Yogyakarta
(Scopus ID: 36006825500)
e.retno@uny.ac.id

Dear Saidun Hutasuhut,

We have reached a decision regarding your submission to Jurnal Cakrawala Pendidikan, "INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)".

We require you to revise your manuscript. Please see notes from the reviewer, and also the comments in the soft-copy of your article. You can download these from your dashboard account.

Revision deadline: 30 January 2020

On behalf of the editorial board,
Endah Retnowati, Ph.D

Universitas Negeri Yogyakarta
(Scopus ID: 36006825500)
e.retno@uny.ac.id

Reviewer A:
perlu ada revisi pada beberapa sections

Reviewer B:

Catatan:

- (1) Judul dirumuskan kembali secara lebih provokatif an menarik.
- (2) Abstrak: isi substansi ikuti panduan; dimulai dengan background (tidak langsung tujuan).
- (3) Introduction: sebiknya dipadatkan sehingga paling panjang 20% dari keseluruhan artikel dan itu sudah termasuk judul dan abstrak. Pada bagian ini sebenarnya tdk perlu ada uraian teoretis, tetapi ditunjukkan saja esensi teori (mutakhir) dan kesenjangan yang ada serta solusi diajukan peneliti dan tujuan (bukan permasalahan) seperti yang ditunjukkan pada abstrak. Cara merujuk harus sesuai dengan panduan; dan sebaiknya tidak memakai kata "according to" karena hal itu menunjukkan bahwa pengarang kurang bersikap.
- (4) Method kurang jelas; kelas eksperimental dikenai sebuah perlakuan, sedang kelas kontrol tidak dikenai apa-apa: ya jelas berbeda hasilnya. Instrumen juga kurang jelas "seperti apa wujudnya" dan bagaimana kualitasnya (harus ada bukti bahwa instrumen itu memang dapat dipertanggungjawabkan (ini amat penting untuk penelitian eksperimental). Mengapa tidak ada pretes, bagaimana orang akan tahu bahwa sebelum dikenai perlakuan kondisi awal mahasiswa tidak berbeda?
- (5) Result: (a) informasi mengenai instrumen dan kriteria yang menjadi bagian method justru muncul di result: bagaimana ini? (b) tidak ada informasi bagaimana hasl uji pretes; (c) uji normalitas: mengapa veri KS (Kolmogorov-Smirnov tidak muncul (padahal lazimnya muncul bersama Shapiro-Wilk); (d) mestinya ada penunjukkan tabel sebelum penyajian tiap tabel (misal: ... in Table 8.).
- (6) Daftar pustaka: penulisan harus konsisten mengikut stile APA; semua yang ada di daftar pustaka harus dirujuk di badan artikel, dan sebaliknya (ada sumber yang tidak dirujuk tetapi muncul di daftar pustaka); semua sumber artikel jurnal harus lengkap dengan DOI (URL)-nya; mestinya penulis juga merujuk artikel dari jurnal ini (harus).

Berdasarkan kondisi di atas, artikel masih harus banyak mengalami revisi.

Cakrawala Pendidikan
<http://journal.uny.ac.id/index.php/cp>

INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)

¹⁾Saidun Hutasuhut, ²⁾Irwansyah, ³⁾Agus Rahmadsyah, ⁴⁾Reza Aditia

^{1, 2, 3)}, Faculty of Economics, Universitas Negeri Medan, Indonesia

^{**)} Postgraduate Student, Universitas Negeri Medan, Indonesia

e-mail: saidun@unimed.ac.id

Abstract : This study examines the impact of entrepreneurial learning by using the Business Model Canvas (BMC) on learning outcomes and enhancing student entrepreneurial intentions. The interaction of entrepreneurial learning achievement levels was also tested for its impact on entrepreneurial intentions. However, existing research has not explicitly stated the learning model used to increase entrepreneurial intentions. This study is a quasi-experiment involving two classes of entrepreneurship courses at the Faculty of Economics Universitas Negeri Medan. Each class act as experimental class and control class. Hypothesis testing is done by the "t" and ANOVA tests. The analysis showed that entrepreneurial learning outcomes and entrepreneurial intentions of the BMC class proved significantly different from the control class. Entrepreneurship learning outcomes are 12.74% higher, and entrepreneurial intentions are 3.14% higher in the BMC class. BMC learning has not been proven to increase entrepreneurial intentions. However, the level of learning achievement proved to be positive and can significantly increase entrepreneurial intentions. There is no interaction between learning models, either BMC or conventional, with the high and low levels of entrepreneurial learning achievement on increasing entrepreneurial intentions. The results of this study are useful for instructors to design entrepreneurial learning that can increase entrepreneurial intentions.

Keywords : BMC, learning outcome, entrepreneurial intention

TINGKAT INTENSI KEWIRAUSAHAAN MAHASISWA; DAMPAK PENERAPAN PEMBELAJARAN MODEL BISNIS CANVAS (BMC)

Abstrak : Penelitian ini secara spesifik menguji dampak penerapan pembelajaran kewirausahaan Model Bisnis Canvas (BMC) terhadap peningkatan hasil belajar dan intensi kewirausahaan mahasiswa. Interaksi tingkat prestasi belajar kewirausahaan juga diuji dampaknya terhadap intensi kewirausahaan. Sementara penelitian yang ada belum spesifik menyatakan model pembelajaran yang digunakan untuk meningkatkan intensi kewirausahaan. Metode yang digunakan dalam penelitian ini adalah quasi eksperimen dengan melibatkan dua kelas mata kuliah kewirausahaan di Fakultas Ekonomi Unimed. Satu kelas sebagai kelas eksperimen dan satu kelas sebagai kelas kontrol. Pengujian hipotesis dilakukan dengan uji "t" dan anova. Hasil analisis menunjukkan hasil belajar kewirausahaan dan intensi kewirausahaan kelas BMC terbukti secara signifikan berbeda dengan kelas kontrol. Hasil belajar kewirausahaan lebih tinggi 12,74% dan intensi kewirausahaan lebih tinggi 3,14% kelas BMC dibandingkan kelas kontrol. Pembelajaran kewirausahaan kelas BMC tidak terbukti dapat meningkatkan intensi kewirausahaan. Akan tetapi tingkat prestasi belajar terbukti positif dan signifikan dapat meningkatkan intensi kewirausahaan. Kemudian tidak terbukti ada interaksi model pembelajaran (BMC dan konvensional) dengan tinggi rendahnya prestasi belajar kewirausahaan terhadap peningkatan intensi kewirausahaan.

Commented [SDS1]: Judul sesuai dengan tujuan yang merupakan interaksi antar variabel yang diteliti

Commented [SDS2]: Penggunaan minat EI adalah ...% tidak nyambung kecuali dijelaskan skor ini adalah rerata atau skor maksimum atau yang lainnya. Benahi sambungan kalimatnya karena membandingkan angka tetapi tidak ditemukan sambungannya dalam satu kalimat.

Hasil penelitian ini berguna bagi pengajar kewirausahaan untuk merancang pembelajaran kewirausahaan yang dapat meningkatkan intensi kewirausahaan.

Keywords :BMC, hasil belajar, intensi kewirausahaan

INTRODUCTION

Higher education, only able to produce job seekers, and very rarely are willing and able to create jobs, both for themselves and others. Even the job seekers produced are not ready for use, both in terms of knowledge, skills, and attitudes. So that tertiary graduates prefer to look for work rather than create their jobs. This condition causes the unemployment rate at the undergraduate level in February 2018 to be 6.31%, higher than the national total of 5.13% and in February 2019 the unemployment rate at the undergraduate level also remains higher, at 6.24% and nationally total of 5.01% (BPS, 2019). So the bachelor's program as explained in the Law of Republic of Indonesia number 12 of 2012 article 18 paragraph 2 concerning Higher Education is tasked with preparing students to be cultured intellectuals and/or scientists, able to enter and/or create jobs, and able to develop themselves into professionals yet works well.

This phenomenon is the impact that the entrepreneurial intentions of Indonesian students are still weak (Indarti & Rostiani, 2008). Meanwhile, according to Krueger & Carsrud, (1993), entrepreneurial intentions are the best predictors for entrepreneurial actors. Globally, entrepreneurship education is the fastest-growing field of education (Sirelkhatim & Gangi, 2015). In the European Union introduces high-quality entrepreneurship education to equip knowledge, and enhance the attractiveness of entrepreneurial careers to young people (Jakubczak & Rakowska, 2013). In Indonesia, efforts to foster entrepreneurial enthusiasm were carried out through Presidential Instruction of the Republic of Indonesia Number 4, 1995 concerning the "National Movement to Promote and Cultivate Entrepreneurship." In 2008 the Ministry of Cooperatives and SMEs launched the National Shoot Entrepreneurship Movement program for high school students and students (Murtini, 2008). Then since 2009, universities in Indonesia must enter entrepreneurship courses into the curriculum as compulsory subjects in 2 semesters. However, the degree to which entrepreneurship education affects students is still a matter of debate in various circles (James O. Fiet, 2000).

Entrepreneurship Education and Entrepreneurial Intention

Commented [SDS3]: Iniapamaksudnya ready to work atau use?

Commented [SDS4]: Ini kalimat membingungkan dan justru menandakan tidak ada masalah karena pengangguran menurun dari tahun ketahun, kalimatnya membingungkan, seperti akan cerita problem pengangguran tetapi dikalimat selanjutnay pengangguran menurun

Commented [SDS5]: Is tasked ?

Commented [SDS6]: Must enter??? Entedu affects students?

Entrepreneurship education is essential to help increase entrepreneurial intentions (Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2017). They explain that entrepreneurship education provides knowledge and influences one's mindset. Entrepreneurship education can influence the attitudes and aspirations of young people towards entrepreneurship (Robles & Zárraga, 2015). Knowledge about entrepreneurship (learning achievement) positively correlates significantly with entrepreneurial intentions (Dogan & Ebru, 2015). The results of the Mikic, Sopta, & Horvatinovic, (2018) also show there is a positive relationship between entrepreneurship education and entrepreneurial intentions, and this confirms the success of the current entrepreneurship education program and the importance of further enhancing and developing these programs..

Commented [SDS7]: ???

The role of entrepreneurship education in increasing entrepreneurship is increasingly essential. Although until now, there has been no useful entrepreneurial learning model to increase entrepreneurial intentions, Türko, (2016) has researched students' perceptions of entrepreneurial learning, applying the business plan model and the canvas business model. The result was that 62% of students stated that it was more challenging to prepare a business plan on a business plan model, while the Business Model Canvas (BMC) had advantages in several ways.. Research that conducted by Coes, (2014) explains that the power of BMC is useful as a visual representation of business models, the simplicity of designing and communicating business models to employees, partners, and customers. Research on BMC has so far been limited to its benefits in preparing business plans. No research has been found that examines the role of BMC entrepreneurship learning in increasing entrepreneurial intentions. Therefore, this study examines the learning role of the Canvas business model in increasing entrepreneurial intentions.

Commented [SDS8]: Initidakadasarnyadantidakjelasmaksudnya

Commented [SDS9]: Inikalimatpembandingan yang tidakrampung

According to Fritscher & Pigneur, (2014), the canvas business model is a visual modeling method used to capture the business model of a company. BMC is learning entrepreneurship by creating a one-page business plan with nine business area blocks. The goodness of this model can be used for each type and business model. Another advantage is that students are required from the beginning to know who their business partners are, the main activities of the business, the value offered, channels, customer segmentation, key resources, cost structures, and business profit potential. Through this BMC, students from the beginning are more realistic and comprehensive in understanding business. If students have understood the business more realistically and comprehensively, it is suspected that it can increase entrepreneurial intentions.

The Learning of Business Model Canvas (BMC)

Fritscher & Pigneur, (2014) explained that there are two entrepreneurship education models, namely the Entrepreneurial performance education model (E / P model) and the Entrepreneurial education model (E / E model). While Pretorius, (2001) proposes entrepreneurship training with a model of five relevant constructs to improve the ability to start a business (start-up). The five constructs are entrepreneurial success, business knowledge and skills, learning approaches, business plans, and facilitators. Furthermore, Pretorius, Nieman, & van Vuuren, (2005) combined the Entrepreneurial Performance Model and the Entrepreneurial Education Model into an integrative model with the case study method. The aim is to increase the number of new businesses. The success of this model is measured by the extent to which the behavior of students wants to take responsibility for starting a business. All proposed model constructs contribute through certain synergies to improve the results of entrepreneurship training programs. However, if construction is ignored, the program results will fail (Pretorius et al., 2005).

Alexander Osterwalder, in 2004, introduced a business model, the Business Model Canvas (BMC). BMC is a tool to describe business models based on nine elements (Osterwalder, 2004; Fritscher & Pigneur, 2014). Meanwhile, according to Pigneur (2010) BMC, an abstract concept design of a business model that represents business strategies and processes. This model illustrates and visualizes business ideas that are planned and suitable for innovative startup companies (Alias, Goudz, Jawale, & Noche, 2015).

One of the documents that must be prepared before running a business is the right business plan. According to Delmar & Shane, (2003) business planning can be a useful tool for new businesses than established businesses. The BMC model in entrepreneurship learning is considered relevant for making business plans. The advantages of this model can overcome the difficulties of students in making a viable business plan and at the same time, be able to know the advantages and disadvantages of business, the needs analysis, and profit analysis process quickly. According to Fritscher & Pigneur, (2014), BMC is a business model that can visualize the business of a company. BMC learning excellence can visualize business on one sheet of canvas. Students pour a business plan on one sheet of the canvas by filling 9 area blocks. The goodness of this model can be used for each type and business model. Another advantage is that students are required from the beginning to know who the customer segment is, what value proposition

Commented [SDS10]: Bahassecarapadatberisiapaitu e/p dan e/e.

they have, who the business partners are, the potential for profit to know the cost components that must be spent. Through BMC, students from the beginning are more realistic and comprehensive in understanding a business. If students have understood the business more realistically and comprehensively, it is suspected that it can increase knowledge and entrepreneurial intentions. The nine blocks, according to Osterwalder & Pigneur, (2010), they are: (1) Customer Segment, (2) Value Proposition, (3) Customer Relationship, (4) Channel, (5) Revenue Stream, (6) Key Resources, (7) Key Activities, (8) Key Partnership, (9) Cost Structure. The strengths of this model are that students can develop a business plan by synergizing nine blocks into a single unit, for more details, presented in Figure 1.

Much research has been done on BMC, but it is still limited to using BMC as a business model that is run to improve business performance. No research has been found that examines the role of BMC entrepreneurship learning in improving learning outcomes and entrepreneurial intentions. This research aims to test; (a) whether the entrepreneurial learning outcomes of the BMC class differ significantly from conventional, (b) whether the entrepreneurial intentions of BMC class students differ significantly from conventional, (c) whether the level of entrepreneurial learning outcomes influences entrepreneurial intentions, and (d) whether there is an interaction of learning models with the level of entrepreneurial learning outcomes on entrepreneurial intentions.

METHOD

This research uses the quasi-experimental method carried out on the campus of the Faculty of Economics, Medan State University. This study is based on constructivist learning theories that demand students' independence to formulate a business idea, design business, and report it. Students are allowed to set their learning process to complete business plan tasks. The study population was all entrepreneurship classes at the Faculty of Unimed in the odd semester of 2018. The class sample was determined by two classes. One class as a BMC treatment (experimental class) and one other class as a control class and determined by purposive random sampling.

Data collection techniques used were instruments consisting of; (a) instrument (test) of entrepreneurial learning outcomes, and (b) entrepreneurial intentions (adopted from Liñán & Chen, 2009; Liñán et al., 2011) on a scale of 1-7. A score of 1 (one) describes "very weak," and a score of 7

Commented [SDS11]: Jelaskan teknik sampling dan mengapa dipilih. Bagaimana menentukan klp control dan treatment, dan apa dasarnya.

(seven) describes "very strong." To measure the impact of BMC entrepreneurship learning using the "t" and "ANOVA" tests with the help of SPSS version 24.

Table 1. Research Variables and Instruments

Commented [SDS12]: Jabarvari, sub var, indikator, item. Untuk kolom item cukup disebut nomor / jumlah item sj.

No	Variable	Indikator	Number of Items	question
1	Entrepreneurship Learning Outcomes		18	
2	Entrepreneurial intention		6	<ul style="list-style-type: none"> • I'm ready to be an entrepreneur • My professional goal is to be an entrepreneur • I will make every effort to start and run my own company • I am very seriously thinking about starting a company • I am determined to create a company in the future • I have the intention to start a company in the future

RESULT & DISCUSSION

Result

The number of questions used to measure the level of entrepreneurial knowledge of students was 18 items out of the 20 items tested to students. Then from the 6 statement items used to measure student entrepreneurial intentions, all of them are worth seeing from the validity with the lowest Corrected item-total Correlation score of 0.681 and 0.824 (with criteria > 0.30) and Alpha Cronbach 0.912 (with criteria > 0.60).

The principle of the reaction of the BMC learning model is seen from the responses given by students to the learning instruments and the application of Business Model Canvas, and the results are presented in Table 2.

Table 2. Student Responses to BMC Learning Instruments and Implementation

Aspects	Average Response (%)	
	Happy	Unhappy
Feelings of "Happy or Unhappy" Respondents to the component; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	100	0
"New or Not New" respondents' opinions of the components;	New	Not new

subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	85	15
"Clear or Unclear" respondents' opinions about the language used in the Student Worksheet and learning achievement test	Clear	Unclear
	96,55	3,50
Respondents' opinions about "understanding or not understanding" of the Student Worksheet (Business Plan) and learning achievement test	Understand	Not Understand
	93	7,00
Respondents' opinions about the "exciting or unexciting" towards Student Worksheets (Business Plan) and test results	Exciting	Unexciting
	89,50	10,50

Criteria: 0 % - 20 %	Very low
21% - 40%	Low
41% - 60%	Medium
61% - 80%	High
81% - 100%	Very high

Student responses to the application of BMC viewed from 5 aspects; happy and unhappy feelings, aspects of learning new categories or not, the level of language clarity, the level of understanding, and the level of exciting or unexciting on the BMC Student Worksheet and learning outcomes test, the result is that every aspect received a positive response in 81% and above (category "very high"). Calculation results are presented in Table 2.

To find out whether the data are normally distributed, a normality test has been conducted, the learning outcomes of the conventional class and the BMC class are both eligible because Shapiro-Wilk sig are respectively 0.118 and 0.056 > from 0.05 as explained in Table 3. This study uses the Shapiro-criteria Wilk because of the small number of samples.

Table 3 Test Results of Normality Learning Outcomes and Entrepreneurship Intention

	Model	Shapiro-Wilk		
		Statistic	df	Sig.
Learning Outcomes	Conventional	,924	20	,118
	BMC	,914	22	,056
Entrepreneurial Intention	Conventional	,960	20	,549
	BMC	,933	22	,140

Commented [SDS13]: Sig terlalu jauh posisinya dan desimal seragam kan semua 3 angkanya pada semua halaman atau bagian, dan tuliskan 0,.... bila di bawah 1

The entrepreneurial intentions of both the conventional class and the BMC class are both normally distributed because the Shapiro Wilk sig values are respectively 0.549 and 0.140 > 0.05. Furthermore, the homogeneity test results of learning outcomes data and entrepreneurial intention (Learning model and level of learning outcomes) both meet the requirements because of their respective sig values > 0.05, as presented in Table 4. Because the normality and homogeneity requirements of the data have been fulfilled, the next step is to test hypothesis.

Tabel 4 Test of Homogeneity of Variances

Learning Outcomes				
	Levene Statistic	df1	df2	Sig.
Learning Model	,137	1	40	,713
Level Learning Outcomes	,181	1	40	,673
Entrepreneurial Intention				
Learning Model	,756	1	40	,390
Level Learning Outcomes	,479	1	40	,493

Furthermore, to find out whether there are differences in entrepreneurship learning outcomes between the BMC class and the control class, a "t" test is performed. In Table 5 it is known from the output "Independent Samples Test" in the section "Equal variances assumed" known sig (2-tailed) value of 0.033 < 0.05, meaning that there are significant differences in learning outcomes of the BMC class with the control class.

Tabel 5 Independent Samples Test, Learning Achievements

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning Outcomes	Equal variances assumed	,137	,713	2,206	40	,033	7,79545	3,53371
	Equal variances not assumed			2,211	39,880	,033	7,79545	3,52632

The magnitude of the difference in entrepreneurial learning outcomes between the BMC class and the control class (see Table 6) by looking at the average. The average learning outcomes of the BMC class is 12.52% higher than the control class.

Table 6. Learning Outcomes by Class Group

	Model	N	Mean	Std. Deviation	Std. Error Mean
Learning Outcomes	BMC	22	70,0455	11,66793	2,48761
	Control	20	62,2500	11,17740	2,49934

Entrepreneurship Intention Test Results BMC class with control class (conventional) seen from the total mean is not significantly different, where the average total BMC class is 37.868, and the control class is 35.50 with a difference of 6.67% (see Table 7).

Tabel 7. Entrepreneurial Intention Based on Class and Level of Learning Achievements

Model	level of learning outcomes	Mean	Std. Deviation	N
Convensional	Low	34,6000	2,27058	10
	High	38,4000	1,71270	10
	Total	36,5000	2,76253	20
BMC	Low	35,5455	2,84125	11
	High	39,8182	1,99089	11
	Total	37,6818	3,24237	22
Total	Low	35,0952	2,56719	21
	High	39,1429	1,95667	21
	Total	37,1190	3,04601	42

Hypothesis test results of the impact of the application of the BMC model and the effect of entrepreneurial learning outcomes on entrepreneurial intentions are presented in Table 8. It is known that the Corrected Model shows a sig value of 0,000 < 0.05, meaning that the BMC learning model, the level of entrepreneurial learning outcomes together proved to influence the intention entrepreneurship significantly. The contribution of learning models and the level of entrepreneurial knowledge in influencing entrepreneurial intentions is seen from the R Squared value of 49.2%.

Tabel 8 Test of Between-Subjects Effects.

Dependent Variable: Entrepreneurial Intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	187,241 ^a	3	62,414	12,278	,000
Intercept	57649,870	1	57649,870	11341,136	,000
Model	14,632	1	14,632	2,878	,098
LevelLearning	170,681	1	170,681	33,577	,000
Outcomes					
Model * LevelLO	,585	1	,585	,115	,736
Error	193,164	38	5,083		
Total	58249,000	42			
Corrected Total	380,405	41			

a. R Squared = ,492 (Adjusted R Squared = ,452)

Partially the BMC model was not proven to be able to increase entrepreneurial intentions because the sig value was $0.98 > 0.05$. However, the level of entrepreneurial learning outcomes proved to significantly influence entrepreneurial intentions because of the sig value of $0,000 < 0.05$. Then found no evidence of an interaction between learning models (BMC and control) and the level of entrepreneurial knowledge of student entrepreneurial intentions, because of the sig value of $0.736 > 0.05$.

Discussion

The essence of learning entrepreneurship by applying business Model Canvas is making a business plan. The business plan is summarized in 9 blocks, as shown in Figure 1. Before preparing a business plan, students are equipped with various business-related knowledge and skills such as; the ability to recognize business opportunities, the ability to take advantage of these opportunities, the ability to organize needed resources, the ability to think critically and creatively, and the ability to prepare financial reports.

8.Key Partnership: Some activities are outsourced and some resources are acquired outside the enterprise	7 Key Activities: ...by performing a number of Key Activities	2. Value Propositions: It seeks to solve customer problems and satisfy customer needs with value propositions	4. Customer Relationships: Customer relationships are established and maintained with each Customer Segment	1. Customer Segment: An organization serves one or several Customer Segments
	6.Key Resource; Key resources are the assets required to offer and deliver the previously described elements...		3. Channels: Value propositions are delivered to customers through communication, distribution, and sales Channels.	
9. Cost Structure: The business model elements result in the cost structure.		5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers		

Figure 1 Business Model Canvas: nine business model building blocks, (Osterwalder & Pigneur, 2010)

After the students are equipped with knowledge and skills about business, they then prepare a business plan that is set out in one sheet of canvas paper that has nine areas. The preparation of a business plan starts with finding a business idea. The business idea must be

based on creativity and have favorable prospects. Then the business idea was poured in one sheet of canvas paper.

Entrepreneurship learning with BMC makes it easy for students to understand a business comprehensively. Students who have no experience of business find it difficult to draw up business plans. However, with this BMC pursuit, students are required to be able to fill each of the nine existing blocks. Each block is related to one another. If students can fill all nine blocks and are related to one another, they have understood the business plan that they will realize. The stages are filled in the following sequence.

First, the Customer segment block, at this stage, students must be able to determine who their customer segment is. The customer segment is to whom the goods or services we offer. Previously it must be known what their needs are not being met and they need. Business ideas usually arise from opportunities. Opportunities, in this case, are the needs of consumers who have not been met, whether they know or do not know it. Soliha, Hubeis, & Maulana, (2014) explains an organization must decide which segments are served and which are ignored, after that, then design the right business model according to needs.

If consumers are not aware of their needs, the seller will introduce them so that consumers are aware of them. Here students need creative ideas to be able to find new business opportunities. Recognizing potential customers can be from various perspectives such as; geographical, demographic, and psychographic. These different characteristics make the type of needs they will also be different.

Second, Value propositions, students must be able to determine the value that is offered to consumers, and that cannot be given by competitors. The ability of new businesses to enter the market and be able to compete with businesses that already exist in the market lies in the added value or something unique that they offer to consumers. Consumers accept this, and they feel it is a necessity and then makes a transaction. Hermawan & Pravitasari, (2013) states that if the Value Propositions offered can address the needs or satisfy the needs of consumers can divert the attention of consumers from one company to another company.

Third, Chanel, in this block, students must be able to determine how to deliver or sell products/services to buyers. What media or means do we use to sell our products to consumers? The media used must be in accordance with the development of information technology or digital-based such as Google, Yahoo, Altavista, Exlopedia, Wikipedia, and others. The market

orientation that is designed should not be limited to the local market but rather to a broader national market, even globally depending on the nature of the product it has.

Fourth, Customer Relationships, in this case, students must be able to design how to guarantee good relations with consumers. Maintaining good relations with consumers is one of the business strategies that students must master from the start. Fifth, Revenue Stream, students must know the primary source of income for the planned business. The main income comes from the sale of their products. Besides, that income can come from selling products from third parties. Sixth, Key Resources, from the beginning, students must be able to determine the resources that must be had to run the main activities of the business. Key resources can be in the form of physical resources (buildings, vehicles, equipment), money, intellectual assets (brands, copyrights, patents, customer databases), and human resources.

Seventh, Key Activities, in this case, students must know the main activities in their business. If students already know the main activities in business, it means that their mastery over the planned business is better. Key activities that determine the success of the business in delivering value propositions to the customer segment. Eighth, Key Patnership, this is related to who the business partners are suppliers of cheap and quality goods, freight forwarding services (JNE, TNT, post offices, and others), advertising agencies, marketplaces (tokopedia, bukalapak, zalora, Shoope, JD .id, etc.). The eighth final step, Cost structures, from the beginning, students can already know what types of costs must be incurred. If the type of trading business consists of the cost of purchasing goods, advertising costs, shipping costs, internet costs, and company employee costs. If students are able to fill the nine blocks that are well available and related to one another, then they already understand the business as a whole. This knowledge and experience will benefit them if they realize their business both when they are students and after graduating from college.

BMC learning received a good response from students. All students said BMC learning was fun because they could collaborate in designing business independently. As many as 85% of students stated that BMC learning was new and different from previous learning. Furthermore, BMC learning is clear, easy to understand, and enjoyable. Of the five aspects observed, 81% of students responded above and are in the "very high" category. When viewed by student activities, they are encouraged to participate actively both individually and in groups. Learning like this

makes them able to work in teams (teamwork), each team member has the responsibility to complete their group assignments.

Then, when viewed from the level of understanding, it can be concluded that the understanding of students is excellent because they can pour business ideas on a canvas sheet by filling in every block and its contents related between one block and another block. Examples of student group work are presented in Figure 2. From the students' assignments, it is known that they can find creative-based business ideas, can set customer segments and can show value propositions or the advantages of their products or services compared to competitors. Students have also been able to determine what strategies will be taken to deliver products or services to prospective buyers or customers. In general, the ability of students in each group is relatively the same. This BMC entrepreneurial learning experience will be useful later if they build their businesses or work with others.

Based on the results of data analysis, as reported in Table 8, it was found that BMC learning and entrepreneurial learning outcomes together proved to have a significant effect on entrepreneurial intentions. The results of this study support research (Ismail et al., 2009; Kusmintarti, Thoyib, Maskie, & Ashar, 2016) which states entrepreneurship courses or training, (Tessema, Gerba, 2012; Premand, Brodmann, Almeida, Grun, & Mahdi Barouni, 2016); Patricia & Silangen, 2016 ; Nowiński et al., 2017) entrepreneurship education contributes to entrepreneurial intentions. Then Dehghanpour, (2013) added that the entrepreneurship course that was followed could increase entrepreneurial intentions. Furthermore, Kusmintarti et al., (2016) added that people who participated in entrepreneurship training had the provision of business ideas and social networking and had the desire to build a business going forward. This research provides a theoretical foundation for the development of entrepreneurial intentions through entrepreneurial learning.

Entrepreneurship education is increasingly attracting the attention of researchers. Raposo & Paço, (2011) state that entrepreneurship education provides knowledge in the form of; (a) the ability to recognize opportunities, (b) the ability to take advantage of opportunities, generate new ideas and find needed resources, (c) the ability to create and operate new devices, and (d) the ability to think critically and creatively. According to Jose Sanchez, (2011), in addition to business knowledge and skills, entrepreneurship education also develops beliefs, values, and attitudes, and aims to make students confident and consider entrepreneurship as an alternative job

or as unemployment. Furthermore, Ismail et al., (2009) stated that the entrepreneurship course, Fayolle & Gailly, (2015) added that entrepreneurship education has a positive effect on students who either have low or non-existent entrepreneurial intentions.

The completion of one entrepreneurship course can increase entrepreneurial intentions by 1.3 times (Dehghanpour, 2013). Then Martin, McNally, & Kay, (2013) found a significant relationship between Entrepreneurship Education and Training (EET) with the preparation of entrepreneurial human capital assets. Kusmintarti et al., (2016) stated similarly that students who participated in entrepreneurship training had the intention to build a new business in the future because they were equipped with business ideas and social networking. Previously Nursito & Nugroho, (2013) stated that entrepreneurship education could shape entrepreneurial knowledge and have a positive and significant impact on entrepreneurial intentions. Therefore, Barba-Sanches & Atienza-Sahuquillo, (2017) need to integrate entrepreneurship education with technical education to increase entrepreneurial intentions. The focus of entrepreneurship education is to develop entrepreneurial attitudes, skills, and entrepreneurial behavior (Dogan, 2015). The results of the latest research Solesvik, (2019) explains that business education positively influences the formation of entrepreneurial skills and competencies. Students who study business also exhibit higher levels of entrepreneurial intentions than those who do not participate in business education.

Čapienė & Ragauskaitė, (2018) support the entrepreneurship teaching method by increasing collaboration between stakeholders in entrepreneurship education and getting closer to the business environment. According to P. Kyrp, (2003) entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge, and entrepreneurship. Entrepreneurship learning in universities examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006). Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana, Suhud, & Wibowo, 2018).

Furthermore, the partial test results of the application of BMC have not been proven to increase entrepreneurial intentions. This means that there is no difference in the entrepreneurial intentions of students taught by BMC with the control class. So far, no research has been found that examines the effect of BMC learning on entrepreneurial intentions so that none can be used as a comparison. However, the use of BMCs in the field of financial management allows companies to identify customer needs, estimate the potential benefits and costs required (Dudin,

Kutsuri, Jur, & Sozrykoevna, 2015). Furthermore, Crotty, Kinney, & Farren, (2017) state that BMC learning is simple, clear, and how business strategy is centered on nine main business area blocks, and more importantly, encourages students or business people to think about how interactions and consequences occur.

Research conducted by Dewobroto, (2013) states that the use of Business Model Canvas can be a simple tool to produce an alternative strategy for the company to achieve financial viability. Then Dudin et al., (2015) stated that the use of the business model of the canvas model could create a competitive advantage in the agricultural industry due to the organizational features of the production and sales cycle. Toro-jarrín, Ponce-jaramillo, & Güemes-castorena, (2016) also argued that Business Model Canvas identifies essential parts of the business, the simplicity of its application makes it more acceptable and disseminated. Furthermore, Baudier & Supérieur, (2017) states that BMC is expected to not only be able to improve organizational performance, enhance the ability of entrepreneurs to communicate, and innovate their business models but also as tools that are adapted for visualization, decision making, creative thinking, collaboration, and reflection

Entrepreneurial learning, according to Fruchter, (2001), needs to change from traditional teaching practices centered on teaching to "knowing-what," to active learning with a focus on teaching to "know-why." BMC learning includes active and student-centered learning. Student-centered learning makes them more independent and responsible for finding solutions; educators play a role as mentors or facilitators (Doppelt, 2003). The advantages of active learning are very relevant in the field of entrepreneurship, where students have the goal to create and lead their projects, and become a favorite practice for teaching entrepreneurship (Åsvoll & Jacobsen, 2012). Rae, (2011) also proposes that entrepreneurship education requires a holistic and activity-based approach. This model is useful for understanding learning material, practice, and personal development of social and group interactions. Active learning activities make academic results and higher motivation, and more in-depth understanding of content, and have been proven in several studies (Michael, 2006).

The next finding is that the level of entrepreneurial learning achievement has been proven to influence entrepreneurial intentions. This means that student entrepreneurship intentions will be higher if entrepreneurship learning achievement is high, and vice versa, entrepreneurial intentions will be lower in students with lower entrepreneurial learning achievements. High

levels of student achievement, illustrating their mastery of entrepreneurial knowledge is higher. In general, entrepreneurial knowledge includes business planning, business development strategies, attitudes, and records and finance. Suryana & Bayu, (2010), explained that an entrepreneur must know the business to be initiated and knowledge of the business environment that will affect entrepreneurial activities; knowledge of roles and responsibilities; knowledge of personality and responsibilities; and the latest knowledge is knowledge about management and business organizations.

Mastery of entrepreneurial knowledge (learning achievement) is essential. Knowledge about entrepreneurship influences entrepreneurial intentions positively and significantly (Anggraeni & Harnanik, 2015; Hutasuhut, 2018; Dogan, 2015, 2015; Roxas, Cayoka, & Jesus, 2008). Mastery of entrepreneurial knowledge will increase the ability of students to run businesses. When he feels he has the ability, there will be an intention to run a business. Previous researchers such as (B. Roxas, 2014; Kütüm, Kallaste, Venesaar, & Kiis, 2014) stated that entrepreneurship education significantly increased entrepreneurial knowledge. Entrepreneurial knowledge is the basis of entrepreneurial resources found in individuals (Hisrich, Peters, & Shepherd, 2008). The results of this research strengthen the theoretical foundation of the importance of providing education in higher education to build entrepreneurs. Entrepreneurship education can help and increase entrepreneurial awareness and acceptance as a valuable career choice (Mikic et al., 2018). Entrepreneurship education is also able to provide knowledge to recognize opportunities, take advantage of opportunities, create and operate new devices, and the ability to think critically and creatively (Robles & Zárraga, 2015). Raposo & Paço, (2011) added that entrepreneurship education could be competencies and attitudes that can determine future carrier choices.

Further findings, this research did not succeed in proving an interaction between the application of the BMC model and the level of knowledge (entrepreneurial learning achievement) in shaping student entrepreneurial intentions. This is because partially, the BMC learning model does not have an impact on increasing entrepreneurial intentions even though the level of achievement has a partial impact. Although the application of BMC learning directly has not been proven to be able to increase the entrepreneurial intentions of students. However, this research succeeded in proving that the application of BMC can improve entrepreneurial learning outcomes and through moderation of the level of knowledge (learning achievement of

entrepreneurship), is proven to increase entrepreneurial intentions. The results of this research strengthen the theoretical foundation of the importance of entrepreneurship education to increase knowledge about entrepreneurship in order to create a generation that is interested in entrepreneurship.

CONCLUSION

Application of Business Model Canvas (BMC) on entrepreneurial learning can be a positive response from students and can increase entrepreneurship learning outcomes, experimental class learning outcomes (BMC) 12.52% higher than the control class learning outcomes. However, the entrepreneurship intentions of BMC class students were not proven to be higher than the control class. However, together, the application of BMC and the level of entrepreneurial learning achievement can increase student entrepreneurial intentions. The class learning process that applies BMC can create a pleasant learning atmosphere for all students (100%) who feel understood 93% and feel drawn 89.5%. This research provides a theoretical foundation that the development of entrepreneurial intentions can be done through entrepreneurship education. Entrepreneurship education can increase knowledge (entrepreneurial learning achievement), and achievement levels can strengthen (moderate) BMC learning to increase entrepreneurial intentions. For this reason, universities are expected to be able to design practical and coherent entrepreneurial learning that combines conceptual learning and practical learning. This study has limitations in duration and class of treatment, so it is possible to be reviewed again by adding a broader duration and class.

ACKNOWLEDGEMENT

The researcher thanked the Rector of Universitas Negeri Medan for financial assistance through the Lecturer Study Group Research Grant program and grateful also to the Dean of the Faculty of Economics for the research permission given and thanks to the students for their participation in this research..

REFERENCES

Alias, C., Goudz, A., Jawale, M., & Noche, B. (2015). Generating a business model canvas for Future-Internet-based logistics control towers. *2015 4th IEEE International Conference on*

- Advanced Logistics and Transport, IEEE ICALT 2015*, 257–262.
<https://doi.org/10.1109/ICAdLT.2015.7136592>
- Anggraeni, B., & Harnanik. (2015). Pengaruh Pengetahuan Kewirausahaan dan Lingkungan Keluarga Terhadap Minat Berwirausahaan Siswa Kelas XISMK Islam Nusantara Comal Kabupaten Pematang. *Jurnal Pendidikan Ekonomi/Dinamika Pendidikan X*(1).
- Åsvoll, H., & Jacobsen, P. J. (2012). A Case Study: Action Based Entrepreneurship Education How Experience Problem Can Collaboration Problem Mitigated. *Journal of Entrepreneurship Education*, 15, 75–93.
- Barba-Sanches, V., & Atienza-Sahuquillo, C. (2017). entrepreneurship education. *European Research on Management and Business Economics*.
- Baudier, M. L. et P., & Supérieur, D. D. B. (2017). Business Model Canvas Acceptance Among French Entrepreneurship Students: Principe for Enhancing Innovation Artefact in Business Education. *Journal of Innovation Economics & Management*, 23(2), 159–183.
- Čapienė, A., & Ragauskaitė, A. (2018). Entrepreneurship education at university: innovative models and current trends, 2, 284–291. <https://doi.org/10.22616/rrd.23.2017.080>
- Coes, B. (2014). Critically Assessing Strngths And Limitations of The Business Model Canvas. *University of Twente*, 1 to 99. from https://essay.utwente.nl/64749/1/Coes-MA_MB.pdf%0Ahttps://www.google.co.uk/search?client=firefox-b&q=essay.uwente.nl%2F64749%2F1%2FCoes_MA_MB.PDF&oq=essay.-uwente.nl%2F64749%2F1%2FCoes_MA_MB.PDF&gs_l=psy-ab.12...16773.34806.0.37240.7.7.0.0.0.0.1392.2210.3j
- Crotty, Y., Kinney, T., & Farren, M. (2017). Using the Business Model Canvas (BMC) strategy tool to support the Play4Guidance online entrepreneurial game, 4(1), 34–41.
- Dehghanpour, A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention : Study of educational system of Education + Training Article information : *Education + Training*, 55(8/9), 868–884.
<https://doi.org/10.1108/ET-04-2013-0053>
- Delmar, F., & Shane, S. (2003). Does business planning facilitate the development of new ventures? *Strategic Management Journal*, 24(12), 1165–1185.
<https://doi.org/10.1002/smj.349>
- Dewobroto, W. S. (2013). Penggunaan Business Model Canvas Sebagai Dasar Untuk Menciptakan Alternatif Strategi Bisnis dan Kelayakan Usaha. *Jurnal Teknik Industri*, 1, 215–230.
- Dogan, E. (2015). The Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Student in Turkey, 0(212), 79–93.
- Dogan, & Ebru. (2015). the Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Students in Turkey. *The Journal of Entrepreneurship*, 23(1), 1–18.
<https://doi.org/10.1177/0971355713513346>
- Doppelt, Y. (2003). Implementation and Assessment of Project-Based Learning in a Flexible Environment, 255–272.
- Dudin, M. N., Kutsuri, G. N., Jur, I., & Sozrykoevna, S. (2015). The Innovative Business Model Canvas in the System of Effective Budgeting, 11(7), 290–296.
<https://doi.org/10.5539/ass.v11n7p290>
- Fayolle, A., & Gailly, B. (2015). on Entrepreneurial Attitudes and Intention : Hysteresis and Persistence, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- Fritscher, B., & Pigneur, Y. (2014). Visualizing Business Model Evolution with the Business Model Canvas : Concept and Tool. <https://doi.org/10.1109/CBI.2014.9>

- Fruchter, R. (2001). Dimensions of Teamwork Education *, *17*, 426–430.
- Gerba, D. tessema. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. <https://doi.org/10.1108/20400701211265036>
- Heinonen, J., & Poikkijoki, S. (2006). An entrepreneurial-directed approach to entrepreneurship education : mission impossible ? *Journal of Management Development*, *25*(1), 80–94. <https://doi.org/10.1108/02621710610637981>
- Hermawan, A., & Pravitasari, J. (2013). Business Model Canvas (Kanvas Model Bisnis).
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2008). *Entrepreneurship*.
- Hutasuhut, S. (2018). The Roles of Entrepreneurship Knowledge, Self-Efficacy, Family, Education, and Gender on Entrepreneurial Intention. *Dinamika Pendidikan*, *13*(1), 90–105. <https://doi.org/10.15294/dp.v13i1.13785>
- Indarti, N., & Rostiani, R. (2008). Intensi Kewirausahaan Mahasiswa : Studi Perbandingan Antara Indonesia , Jepang dan Norwegia Intensi Kewirausahaan Mahasiswa : Studi Perbandingan Antara Indonesia , Jepang dan Norwegia. *Jurnal Ekonomika dan Bisnis Indonesia*, *23*(4), 1–27.
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial Intention among Malaysian Undergraduates. *International Journal of Business and Management*, *4*(10), 54–60. <https://doi.org/10.5539/ijbm.v4n10p54>
- Jakubczak, J., & Rakowska, A. (2013). the Role of Education and Culture in the Development, 997–1004.
- James O Fiet. (2000). The Theoretical Side of Teaching Entrepreneurship. *Journal of Business Venturing*, *16*, 1–24.
- Jose Shanchez. (2011). The influence of entrepreneurial competencies on small firm performance. *Revista Latinoamericana de Psicología*, *7*(2), 239–254.
- Krueger, J. N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, *5*, 315–330.
- Kusmintarti, A., Thoyib, A., Maskie, G., & Ashar, K. (2016). Entrepreneurial characteristics as a mediation of entrepreneurial education influence on entrepreneurial intention. *Journal of Entrepreneurship Education*, *19*(1), 24–37.
- Küttim, M., Kallaste, M., Venesaar, U., & Kiis, A. (2014). Entrepreneurship Education at University Level and Students' Entrepreneurial Intentions. *Procedia - Social and Behavioral Sciences*, *110*, 658–668. <https://doi.org/10.1016/j.sbspro.2013.12.910>
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship: Theory and Practice*, *33*(3), 593–617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantucho, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, *7*(2), 195–218. <https://doi.org/10.1007/s11365-010-0154-z>
- Martin, B., McNally, J. J., & Kay, M. (2013). Examining the Formation of Human Capital in Entrepreneurship : A Meta-Analysis of Entrepreneurship Education Outcomes. *Journal of Business Venturing*, *28*(2), 211–224. <https://doi.org/10.1016/j.jbusvent.2012.03.002>Elsevier
- Michael, J. (2006). Where 's the evidence that active learning works ?, *30*, 159–167. <https://doi.org/10.1152/advan.00053.2006>.
- Mikic, M., Sopta, M., & Horvatinovic, T. (2018). the Role of Entrepreneurial Education in the Development of Entrepreneurship. *Casopis Za Ekonomiju I Trzisne Komunikacije*, *8*(2), 385–395. <https://doi.org/10.7251/EMC1802385M>
- Murtini, W. (2008). Success Story Sebagai Pendekatan Pembelajaran Kewirausahaan. *Varia*

- Pendidikan*, 20(2), 173–183.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2017). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 5079(August), 1–19. <https://doi.org/10.1080/03075079.2017.1365359>
- Nursito, S., & Nugroho, A. J. S. (2013). Analisis pengaruh interaksi pengetahuan kewirausahaan dan efikasi diri terhadap intensi kewirausahaan. *Kiat Bisnis*, 5(3), 201–211.
- Osterwalder, A. (2004). The Business Model Ontology A Proposition in a Design Science Approach. de Université de Lausanne. from; <http://eprints.uanl.mx/5481/1/1020149995.PDF>
- Osterwalder, A., & Pigneur, V. (2010). *Business Model Generation A Handbook for Visionaries, Game Changers, and Challengers*.
- P. Kyrp. (2003). Entrepreneurship Pedagogy-The Current Public and Some Future Expectations. In *In the 3rd European Summer University*.
- Patricia, & Silangen, C. (2016). The Effect of Entrepreneurship Education on Entrepreneurial Intention in Indonesia. *DeReMa Jurnal Manajemen*, 11(1), 67–86.
- Premand, P., Brodmann, S., Almeida, R., Grun, R., & Mahdi Barouni. (2016). Entrepreneurship Education and Entry into Self-Employment among University Graduates. *World Development*.
- Pretorius, M. (2001). "A training model to enhance micro and small business start-ups in South Africa." Pretoria.
- Pretorius, M., Nieman, G., & van Vuuren, J. (2005). Critical evaluation of two models for entrepreneurial education. *International Journal of Educational Management*, 19(5), 413–427. <https://doi.org/10.1108/09513540510607743>
- Purwana, D., Suhud, U., & Wibowo, S. F. (2018). Determinant Factors of Students' Entrepreneurial Intention: A Comparative Study. *Dinamika Pendidikan*, 13(1), 1–13.
- Rae, D. (2011). Entrepreneurial learning : a practical model from the creative industries
Entrepreneurial learning : a practical model from the creative industries.
<https://doi.org/10.1108/00400910410569614>
- Raposo, M., & Paço, A. (2011). Entrepreneurship education : Relationship between education, 23(2001), 453–457.
- Robles, L., & Zárraga, M. (2015). Key Competencies for Entrepreneurship. *Procedia Economics and Finance*, 23(October 2014), 828–832. [https://doi.org/10.1016/S2212-5671\(15\)00389-5](https://doi.org/10.1016/S2212-5671(15)00389-5)
- Roxas, B. (2014). Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected South-east Asian business students. *Journal of Education and Work*, 27(4), 432–453. <https://doi.org/10.1080/13639080.2012.760191>
- Roxas, B. G., Cayoka-, R. P., & Jesus, R. M. de. (2008). Entrepreneurial Knowledge and its Effects on Entrepreneurial Intentions : Development of a Conceptual Framework. *Asia-Pacific Social Science Review*, 8(2), 61–77.
- Sirelkhatim, F., & Gangi, Y. (2015). Entrepreneurship education : A systematic literature review of curricula contents and teaching methods, 1–11.
<https://doi.org/10.1080/23311975.2015.1052034>
- Solesvik, M. Z. (2019). Entrepreneurial Competencies and Intentions: The Role of Higher Education. *Forum Scientiae Oeconomia*, 7(1), 9–23. <https://doi.org/10.23762/FSO>
- Soliha, *Eius, Hubeis, A. V. S., & Maulana, A. (2014). Analisis Model Bisnis Pada KNM Fish Farm dengan Pendekatan Business Model Canvas (BMC) Business Model Analysis of KNM Fish Farm with Business Model Canvas (BMC) Approach. *J Sosek KP*, 9(2), 185–194.

Suryana, Y., & Bayu, K. (2010). *Kewirausahaan : pendekatan karakteristik wirausahawan sukses*. Jakarta: Kencana Predana Media Group.

Toro-jarrín, M. A., Ponce-jaramillo, I. E., & Güemes-castorena, D. (2016). Technological Forecasting & Social Change Methodology for the of building process integration of Business Model Canvas and Technological Roadmap, *110*, 213–215.

Türko, E. S. (2016). Business plan vs business model canvas in entrepreneurship trainings: A comparison of students' perceptions. *Asian Social Science*, *12*(10), 55–62.
<https://doi.org/10.5539/ass.v12n10p55>

Commented [SDS14]: Semuareferensibhs non English translate ke English

INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)

¹⁾Saidun Hutasuhut, ²⁾Irwansyah, ³⁾Agus Rahmadsyah, ⁴⁾Reza Aditia

^{1, 2, 3)} Faculty of Economics, Universitas Negeri Medan, Indonesia

~~**)~~ Postgraduate Student, Universitas Negeri Medan, Indonesia

e-mail: saidun@unimed.ac.id

Abstract : This study examines the impact of entrepreneurial learning by using the Business Model Canvas (BMC) on learning outcomes and enhancing student entrepreneurial intentions. The interaction of entrepreneurial learning achievement levels was also tested for its impact on entrepreneurial intentions. However, existing research has not explicitly stated the learning model used to increase entrepreneurial intentions. This study is a quasi-experiment involving two classes of entrepreneurship courses at the Faculty of Economics Universitas Negeri Medan. Each class act as experimental class and control class. Hypothesis testing is done by the "t" and ANOVA tests. The analysis showed that entrepreneurial learning outcomes and entrepreneurial intentions of the BMC class proved significantly different from the control class. Entrepreneurship learning outcomes are 12.74% higher, and entrepreneurial intentions are 3.14% higher in the BMC class. BMC learning has not been proven to increase entrepreneurial intentions. However, the level of learning achievement proved to be positive and can significantly increase entrepreneurial intentions. There is no interaction between learning models, either BMC or conventional, with the high and low levels of entrepreneurial learning achievement on increasing entrepreneurial intentions. The results of this study are useful for instructors to design entrepreneurial learning that can increase entrepreneurial intentions.

Keywords : *BMC, learning outcome, entrepreneurial intention*

TINGKAT INTENSI KEWIRAUSAHAAN MAHASISWA; DAMPAK PENERAPAN PEMBELAJARAN MODEL BISNIS CANVAS (BMC)

Abstrak : Penelitian ini secara spesifik menguji dampak penerapan pembelajaran kewirausahaan Model Bisnis Canvas (BMC) terhadap peningkatan hasil belajar dan intensi kewirausahaan mahasiswa. Interaksi tingkat prestasi belajar kewirausahaan juga diuji dampaknya terhadap intensi kewirausahaan. Sementara penelitian yang ada belum spesifik menyatakan model pembelajaran yang digunakan untuk meningkatkan intensi kewirausahaan. Metode yang digunakan dalam penelitian ini adalah quasi eksperimen dengan melibatkan dua kelas mata kuliah kewirausahaan di Fakultas Ekonomi Unimed. Satu kelas sebagai kelas eksperimen dan satu kelas sebagai kelas kontrol. Pengujian hipotesis dilakukan dengan uji "t" dan anova. Hasil analisis menunjukkan hasil belajar kewirausahaan dan intensi kewirausahaan kelas BMC terbukti secara signifikan berbeda dengan kelas kontrol. Hasil belajar kewirausahaan lebih tinggi 12,74% dan intensi kewirausahaan lebih tinggi 3,14% kelas BMC dibandingkan kelas kontrol. Pembelajaran kewirausahaan kelas BMC tidak terbukti dapat meningkatkan intensi kewirausahaan. Akan tetapi tingkat prestasi belajar terbukti positif dan signifikan dapat meningkatkan intensi kewirausahaan. Kemudian tidak terbukti ada interaksi model pembelajaran (BMC dan konvensional) dengan tinggi rendahnya prestasi belajar kewirausahaan terhadap peningkatan intensi kewirausahaan. Hasil penelitian ini berguna bagi pengajar kewirausahaan untuk merancang pembelajaran kewirausahaan yang dapat meningkatkan intensi kewirausahaan.

Keywords : *BMC, hasil belajar, intensi kewirausahaan*

INTRODUCTION

Higher education, only able to produce job seekers, and very rarely are willing and able to create jobs, both for themselves and others. Even the job seekers produced are not ready for use, both in terms of knowledge, skills, and attitudes. So that tertiary graduates prefer to look for work rather than create their jobs. This condition causes the unemployment rate at the undergraduate level in February 2018 to be 6.31%, higher than the national total of 5.13% and in February 2019 the unemployment rate at the undergraduate level also remains higher, at 6.24% and nationally total of 5.01% (BPS, 2019). So the bachelor's program as explained in the Law of Republic of Indonesia number 12 of 2012 article 18 paragraph 2 concerning Higher Education is tasked with preparing students to be cultured intellectuals and/or scientists, able to enter and/or create jobs, and able to develop themselves into professionals yet works well.

This phenomenon is the impact that the entrepreneurial intentions of Indonesian students are still weak (Indarti & Rostiani, 2008). Meanwhile, ~~according to~~ Krueger & Carsrud, (1993), entrepreneurial intentions are the best predictors for entrepreneurial actors. Globally, entrepreneurship education is the fastest-growing field of education (Sirelkhatim & Gangi, 2015). In the European Union introduces high-quality entrepreneurship education to equip knowledge, and enhance the attractiveness of entrepreneurial careers to young people (Jakubczak & Rakowska, 2013). In Indonesia, efforts to foster entrepreneurial enthusiasm were carried out through Presidential Instruction of the Republic of Indonesia Number 4, 1995 concerning the "National Movement to Promote and Cultivate Entrepreneurship." In 2008 the Ministry of Cooperatives and SMEs launched the National Shoot Entrepreneurship Movement program for high school students and students (Murtini, 2008). Then since 2009, universities in Indonesia must enter entrepreneurship courses into the curriculum as compulsory subjects in 2 semesters. However, the degree to which entrepreneurship education affects students is still a matter of debate in various circles (~~James O. Fiet~~, 2000).

Commented [HE1]: Pakaiistilah lain

Commented [HE2]: Cara merujuknyngbenar

Entrepreneurship Education and Entrepreneurial Intention

Entrepreneurship education is essential to help increase entrepreneurial intentions (Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2017). They explain that entrepreneurship

education provides knowledge and influences one's mindset. Entrepreneurship education can influence the attitudes and aspirations of young people towards entrepreneurship (Robles & Zárraga, 2015). Knowledge about entrepreneurship (learning achievement) positively correlates significantly with entrepreneurial intentions (Dogan & Ebru, 2015). The results of the Mikic, Sopta, & Horvatinovic, (2018) also show there is a positive relationship between entrepreneurship education and entrepreneurial intentions, and this confirms the success of the current entrepreneurship education program and the importance of further enhancing and developing these programs..

The role of entrepreneurship education in increasing entrepreneurship is increasingly essential. Although until now, there has been no useful entrepreneurial learning model to increase entrepreneurial intentions. Türko, (2016) has researched students' perceptions of entrepreneurial learning, applying the business plan model and the canvas business model. The result was that 62% of students stated that it was more challenging to prepare a business plan on a business plan model, while the Business Model Canvas (BMC) had advantages in several ways.. Research that conducted by Coes, (2014) explains that the power of BMC is useful as a visual representation of business models, the simplicity of designing and communicating business models to employees, partners, and customers. Research on BMC has so far been limited to its benefits in preparing business plans. No research has been found that examines the role of BMC entrepreneurship learning in increasing entrepreneurial intentions. Therefore, this study examines the learning role of the Canvas business model in increasing entrepreneurial intentions.

~~According to~~ Fritscher & Pigneur, (2014), the canvas business model is a visual modeling method used to capture the business model of a company. BMC is learning entrepreneurship by creating a one-page business plan with nine business area blocks. The goodness of this model can be used for each type and business model. Another advantage is that students are required from the beginning to know who their business partners are, the main activities of the business, the value offered, channels, customer segmentation, key resources, cost structures, and business profit potential. Through this BMC, students from the beginning are more realistic and comprehensive in understanding business. If students have understood the business more realistically and comprehensively, it is suspected that it can increase entrepreneurial intentions.

The Learning of Business Model Canvas (BMC)

Fritscher & Pigneur, (2014) explained that there are two entrepreneurship education models, namely the Entrepreneurial performance education model (E / P model) and the Entrepreneurial education model (E / E model). While Pretorius, (2001) proposes entrepreneurship training with a model of five relevant constructs to improve the ability to start a business (start-up). The five constructs are entrepreneurial success, business knowledge and skills, learning approaches, business plans, and facilitators. Furthermore, Pretorius, Nieman, & van Vuuren, (2005) combined the Entrepreneurial Performance Model and the Entrepreneurial Education Model into an integrative model with the case study method. The aim is to increase the number of new businesses. The success of this model is measured by the extent to which the behavior of students wants to take responsibility for starting a business. All proposed model constructs contribute through certain synergies to improve the results of entrepreneurship training programs. However, if construction is ignored, the program results will fail (Pretorius et al., 2005).

Alexander Osterwalder, in 2004, introduced a business model, the Business Model Canvas (BMC). BMC is a tool to describe business models based on nine elements (Osterwalder, 2004; Fritscher & Pigneur, 2014). Meanwhile, ~~according to~~ Pigneur (2010) BMC, an abstract concept design of a business model that represents business strategies and processes. This model illustrates and visualizes business ideas that are planned and suitable for innovative startup companies (Alias, Goudz, Jawale, & Noche, 2015).

One of the documents that must be prepared before running a business is the right business plan. According to Delmar & Shane, (2003) business planning can be a useful tool for new businesses than established businesses. The BMC model in entrepreneurship learning is considered relevant for making business plans. The advantages of this model can overcome the difficulties of students in making a viable business plan and at the same time, be able to know the advantages and disadvantages of business, the needs analysis, and profit analysis process quickly. According to Fritscher & Pigneur, (2014), BMC is a business model that can visualize the business of a company. BMC learning excellence can visualize business on one sheet of canvas. Students pour a business plan on one sheet of the canvas by filling 9 area blocks. The goodness of this model can be used for each type and business model. Another advantage is that students

are required from the beginning to know who the customer segment is, what value proposition they have, who the business partners are, the potential for profit to know the cost components that must be spent. Through BMC, students from the beginning are more realistic and comprehensive in understanding a business. If students have understood the business more realistically and comprehensively, it is suspected that it can increase knowledge and entrepreneurial intentions. The nine blocks, according to Osterwalder & Pigneur, (2010), they are: (1) Customer Segment, (2) Value Proposition, (3) Customer Relationship, (4) Channel, (5) Revenue Stream, (6) Key Resources, (7) Key Activities, (8) Key Partnership, (9) Cost Structure. The strengths of this model are that students can develop a business plan by synergizing nine blocks into a single unit, for more details, presented in Figure 1.

Much research has been done on BMC, but it is still limited to using BMC as a business model that is run to improve business performance. No research has been found that examines the role of BMC entrepreneurship learning in improving learning outcomes and entrepreneurial intentions. **This research aims to test; (a) whether the entrepreneurial learning outcomes of the BMC class differ significantly from conventional, (b) whether the entrepreneurial intentions of BMC class students differ significantly from conventional, (c) whether the level of entrepreneurial learning outcomes influences entrepreneurial intentions, and (d) whether there is an interaction of learning models with the level of entrepreneurial learning outcomes on entrepreneurial intentions.**

Commented [HE3]: Tujuan

METHOD

This research uses the quasi-experimental method carried out on the campus of the Faculty of Economics, Medan State University. This study is based on constructivist learning theories that demand students' independence to formulate a business idea, design business, and report it. Students are allowed to set their learning process to complete business plan tasks. The study population was all entrepreneurship classes at the Faculty of Unimed in the odd semester of 2018. The class sample was determined by two classes. One class as a BMC treatment (experimental class) and one other class as a control class and determined by purposive random sampling.

Data collection techniques used were instruments consisting of; (a) instrument (test) of entrepreneurial learning outcomes, and (b) entrepreneurial intentions (adopted from Liñán & Chen,

2009; Liñán et al., 2011) on a scale of 1-7. A score of 1 (one) describes "very weak," and a score of 7 (seven) describes "very strong." To measure the impact of BMC entrepreneurship learning using the "t" and "ANOVA" tests with the help of SPSS version 24.

Table 1. Research Variables and Instruments

No	Variable	Number of Items	question
1	Entrepreneurship Learning Outcomes	18	
2	Entrepreneurial intention	6	<ul style="list-style-type: none"> • I'm ready to be an entrepreneur • My professional goal is to be an entrepreneur • I will make every effort to start and run my own company • I am very seriously thinking about starting a company • I am determined to create a company in the future • I have the intention to start a company in the future

RESULT & DISCUSSION

Result

The number of questions used to measure the level of entrepreneurial knowledge of students was 18 items out of the 20 items tested to students. Then from the 6 statement items used to measure student entrepreneurial intentions, all of them are worth seeing from the validity with the lowest Corrected item-total Correlation score of 0.681 and 0.824 (with criteria > 0.30) and Alpha Cronbach 0.912 (with criteria > 0.60).

The principle of the reaction of the BMC learning model is seen from the responses given by students to the learning instruments and the application of Business Model Canvas, and the results are presented in Table 2.

Table 2. Student Responses to BMC Learning Instruments and Implementation

Aspects	Average Response (%)	
	Happy	Unhappy
Feelings of "Happy or Unhappy" Respondents to the component; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	100	0
"New or Not New" respondents' opinions of the components;	New	Not new

subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	85	15
"Clear or Unclear" respondents' opinions about the language used in the Student Worksheet and learning achievement test	Clear	Unclear
	96,55	3,50
Respondents' opinions about "understanding or not understanding" of the Student Worksheet (Business Plan) and learning achievement test	Understand	Not Understand
	93	7,00
Respondents' opinions about the "exciting or unexciting" towards Student Worksheets (Business Plan) and test results	Exciting	Unexciting
	89,50	10,50

Criteria: 0 % - 20 %	Very low
21% - 40%	Low
41% - 60%	Medium
61% - 80%	High
81% - 100%	Very high

Student responses to the application of BMC viewed from 5 aspects; happy and unhappy feelings, aspects of learning new categories or not, the level of language clarity, the level of understanding, and the level of exciting or unexciting on the BMC Student Worksheet and learning outcomes test, the result is that every aspect received a positive response in 81% and above (category "very high"). Calculation results are presented in Table 2.

To find out whether the data are normally distributed, a normality test has been conducted, the learning outcomes of the conventional class and the BMC class are both eligible because Shapiro-Wilk sig are respectively 0.118 and 0.056 > 0.05 as explained in Table 3. This study uses the Shapiro-criteria Wilk because of the small number of samples.

Table 3 Test Results of Normality Learning Outcomes and Entrepreneurship Intention

	Model	Shapiro-Wilk		
		Statistic	df	Sig.
Learning Outcomes	Conventional	,924	20	,118
	BMC	,914	22	,056
Entrepreneurial Intention	Conventional	,960	20	,549
	BMC	,933	22	,140

The entrepreneurial intentions of both the conventional class and the BMC class are both normally distributed because the Shapiro Wilk sig values are respectively 0.549 and 0.140 > 0.05. Furthermore, the homogeneity test results of learning outcomes data and entrepreneurial intention (Learning model and level of learning outcomes) both meet the requirements because of their respective sig values > 0.05, as presented in Table 4. Because the normality and homogeneity requirements of the data have been fulfilled, the next step is to test hypothesis.

Tabel 4 Test of Homogeneity of Variances

Learning Outcomes				
	Levene Statistic	df1	df2	Sig.
Learning Model	,137	1	40	,713
Level Learning Outcomes	,181	1	40	,673
Entrepreneurial Intention				
Learning Model	,756	1	40	,390
Level Learning Outcomes	,479	1	40	,493

Furthermore, to find out whether there are differences in entrepreneurship learning outcomes between the BMC class and the control class, a "t" test is performed. In Table 5 it is known from the output "Independent Samples Test" in the section "Equal variances assumed" known sig (2-tailed) value of 0.033 < 0.05, meaning that there are significant differences in learning outcomes of the BMC class with the control class.

Tabel 5 Independent Samples Test, Learning Outcomes

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning Outcomes	Equal variances assumed	,137	,713	2,206	40	,033	7,795	3,534
	Equal variances not assumed			2,211	39,880	,033	7,795	3,526

The magnitude of the difference in entrepreneurial learning outcomes between the BMC class and the control class (see Table 6) by looking at the average. The average learning outcomes of the BMC class is 12.52% higher than the control class.

Table 6. Learning Outcomes by Class Group

	Model	N	Mean	Std. Deviation	Std. Error Mean
Learning Outcomes	BMC	22	70,046	11,668	2,490
	Control	20	62,250	11,177	2,499

Entrepreneurship Intention Test Results BMC class with control class (conventional) seen from the total mean is not significantly different, where the average total BMC class is 37.868, and the control class is 35.50 with a difference of 6.67% (see Table 7).

Tabel 7. Entrepreneurial Intention Based on Class and Level of Learning Outcomes

Model	level of learning outcomes	Mean	Std. Deviation	N
Conventional	Low	34,600	2,271	10
	High	38,400	1,713	10
	Total	36,500	2,763	20
BMC	Low	35,545	2,841	11
	High	39,818	1,991	11
	Total	37,682	3,242	22
Total	Low	35,095	2,567	21
	High	39,143	1,957	21
	Total	37,119	3,046	42

Hypothesis test results of the impact of the application of the BMC model and the effect of entrepreneurial learning outcomes on entrepreneurial intentions are presented in Table 8. It is known that the Corrected Model shows a sig value of 0,000 <0.05, meaning that the BMC learning model, the level of entrepreneurial learning outcomes together proved to influence the intention entrepreneurship significantly. The contribution of learning models and the level of entrepreneurial knowledge in influencing entrepreneurial intentions is seen from the R Squared value of 49.2%.

Tabel 8 Test of Between-Subjects Effects.

Dependent Variable: Entrepreneurial Intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	187,241 ^a	3	62,414	12,278	,000
Intercept	57649,870	1	57649,870	11341,136	,000
Model	14,632	1	14,632	2,878	,098
LevelLearning Outcomes	170,681	1	170,681	33,577	,000
Model * LevelLO	,585	1	,585	,115	,736
Error	193,164	38	5,083		
Total	58249,000	42			
Corrected Total	380,405	41			

a. R Squared = ,492 (Adjusted R Squared = ,452)

Partially the BMC model was not proven to be able to increase entrepreneurial intentions because the sig value was $0.98 > 0.05$. However, the level of entrepreneurial learning outcomes proved to significantly influence entrepreneurial intentions because of the sig value of $0,000 < 0.05$. Then found no evidence of an interaction between learning models (BMC and control) and the level of entrepreneurial knowledge of student entrepreneurial intentions, because of the sig value of $0.736 > 0.05$.

Discussion

The essence of learning entrepreneurship by applying business Model Canvas is making a business plan. The business plan is summarized in 9 blocks, as shown in Figure 1. Before preparing a business plan, students are equipped with various business-related knowledge and skills such as; the ability to recognize business opportunities, the ability to take advantage of these opportunities, the ability to organize needed resources, the ability to think critically and creatively, and the ability to prepare financial reports.

8.Key Partnership: Some activities are outsourced and some resources are acquired outside the enterprise	7 Key Activities: ...by performing a number of Key Activities	2. Value Propositions: It seeks to solve customer problems and satisfy customer needs with value propositions	4. Customer Relationships: Customer relationships are established and maintained with each Customer Segment	1. Customer Segment: An organization serves one or several Customer Segments
	6.Key Resource; Key resources are the assets required to offer and deliver the previously described elements...		3. Channels: Value propositions are delivered to customers through communication, distribution, and sales Channels.	
9. Cost Structure: The business model elements result in the cost structure.		5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers		

Figure 1 Business Model Canvas: nine business model building blocks, (Osterwalder & Pigneur, 2010)

After the students are equipped with knowledge and skills about business, they then prepare a business plan that is set out in one sheet of canvas paper that has nine areas. The preparation of a business plan starts with finding a business idea. The business idea must be

based on creativity and have favorable prospects. Then the business idea was poured in one sheet of canvas paper.

Entrepreneurship learning with BMC makes it easy for students to understand a business comprehensively. Students who have no experience of business find it difficult to draw up business plans. However, with this BMC pursuit, students are required to be able to fill each of the nine existing blocks. Each block is related to one another. If students can fill all nine blocks and are related to one another, they have understood the business plan that they will realize. The stages are filled in the following sequence.

First, the Customer segment block, at this stage, students must be able to determine who their customer segment is. The customer segment is to whom the goods or services we offer. Previously it must be known what their needs are not being met and they need. Business ideas usually arise from opportunities. Opportunities, in this case, are the needs of consumers who have not been met, whether they know or do not know it. Soliha, Hubeis, & Maulana, (2014) explains an organization must decide which segments are served and which are ignored, after that, then design the right business model according to needs.

If consumers are not aware of their needs, the seller will introduce them so that consumers are aware of them. Here students need creative ideas to be able to find new business opportunities. Recognizing potential customers can be from various perspectives such as; geographical, demographic, and psychographic. These different characteristics make the type of needs they will also be different.

Second, Value propositions, students must be able to determine the value that is offered to consumers, and that cannot be given by competitors. The ability of new businesses to enter the market and be able to compete with businesses that already exist in the market lies in the added value or something unique that they offer to consumers. Consumers accept this, and they feel it is a necessity and then makes a transaction. Hermawan & Pravitasari, (2013) states that if the Value Propositions offered can address the needs or satisfy the needs of consumers can divert the attention of consumers from one company to another company.

Third, Chanel, in this block, students must be able to determine how to deliver or sell products/services to buyers. What media or means do we use to sell our products to consumers? The media used must be in accordance with the development of information technology or digital-based such as Google, Yahoo, Altavista, Exlopedia, Wikipedia, and others. The market

orientation that is designed should not be limited to the local market but rather to a broader national market, even globally depending on the nature of the product it has.

Fourth, Customer Relationships, in this case, students must be able to design how to guarantee good relations with consumers. Maintaining good relations with consumers is one of the business strategies that students must master from the start. Fifth, Revenue Stream, students must know the primary source of income for the planned business. The main income comes from the sale of their products. Besides, that income can come from selling products from third parties. Sixth, Key Resources, from the beginning, students must be able to determine the resources that must be had to run the main activities of the business. Key resources can be in the form of physical resources (buildings, vehicles, equipment), money, intellectual assets (brands, copyrights, patents, customer databases), and human resources.

Seventh, Key Activities, in this case, students must know the main activities in their business. If students already know the main activities in business, it means that their mastery over the planned business is better. Key activities that determine the success of the business in delivering value propositions to the customer segment. Eighth, Key Patnership, this is related to who the business partners are suppliers of cheap and quality goods, freight forwarding services (JNE, TNT, post offices, and others), advertising agencies, marketplaces (tokopedia, bukalapak, zalora, Shoope, JD .id, etc.). The eighth final step, Cost structures, from the beginning, students can already know what types of costs must be incurred. If the type of trading business consists of the cost of purchasing goods, advertising costs, shipping costs, internet costs, and company employee costs. If students are able to fill the nine blocks that are well available and related to one another, then they already understand the business as a whole. This knowledge and experience will benefit them if they realize their business both when they are students and after graduating from college.

BMC learning received a good response from students. All students said BMC learning was fun because they could collaborate in designing business independently. As many as 85% of students stated that BMC learning was new and different from previous learning. Furthermore, BMC learning is clear, easy to understand, and enjoyable. Of the five aspects observed, 81% of students responded above and are in the "very high" category. When viewed by student activities, they are encouraged to participate actively both individually and in groups. Learning like this

makes them able to work in teams (teamwork), each team member has the responsibility to complete their group assignments.

Then, when viewed from the level of understanding, it can be concluded that the understanding of students is excellent because they can pour business ideas on a canvas sheet by filling in every block and its contents related between one block and another block. Examples of student group work are presented in Figure 2. From the students' assignments, it is known that they can find creative-based business ideas, can set customer segments and can show value propositions or the advantages of their products or services compared to competitors. Students have also been able to determine what strategies will be taken to deliver products or services to prospective buyers or customers. In general, the ability of students in each group is relatively the same. This BMC entrepreneurial learning experience will be useful later if they build their businesses or work with others.

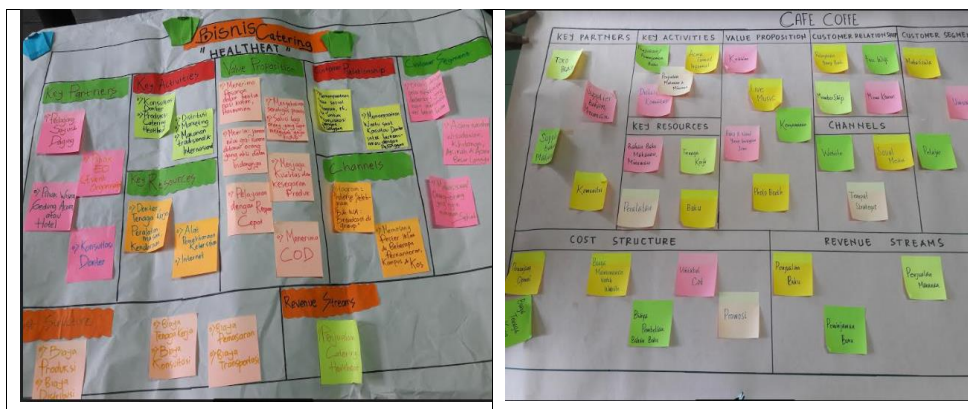


Figure 2 Examples of Student Group Work Results

Based on the results of data analysis, as reported in Table 8, it was found that BMC learning and entrepreneurial learning outcomes together proved to have a significant effect on entrepreneurial intentions. The results of this study support research (Ismail et al., 2009; Kusmintarti, Thoyib, Maskie, & Ashar, 2016) which states entrepreneurship courses or training, (Tessema, Gerba, 2012; Premand, Brodmann, Almeida, Grun, & Mahdi Barouni, 2016); Patricia & Silangen, 2016 ; Nowiński et al., 2017) entrepreneurship education contributes to entrepreneurial intentions. Then Dehghanpour, (2013) added that the entrepreneurship course that

was followed could increase entrepreneurial intentions. Furthermore, Kusmintarti et al., (2016) added that people who participated in entrepreneurship training had the provision of business ideas and social networking and had the desire to build a business going forward. This research provides a theoretical foundation for the development of entrepreneurial intentions through entrepreneurial learning.

Entrepreneurship education is increasingly attracting the attention of researchers. Raposo & Paço, (2011) state that entrepreneurship education provides knowledge in the form of; (a) the ability to recognize opportunities, (b) the ability to take advantage of opportunities, generate new ideas and find needed resources, (c) the ability to create and operate new devices, and (d) the ability to think critically and creatively. According to Jose Sanchez, (2011), in addition to business knowledge and skills, entrepreneurship education also develops beliefs, values, and attitudes, and aims to make students confident and consider entrepreneurship as an alternative job or as unemployment. Furthermore, Ismail et al., (2009) stated that the entrepreneurship course, Fayolle & Gailly, (2015) added that entrepreneurship education has a positive effect on students who either have low or non-existent entrepreneurial intentions.

The completion of one entrepreneurship course can increase entrepreneurial intentions by 1.3 times (Dehghanpour, 2013). Then Martin, McNally, & Kay, (2013) found a significant relationship between Entrepreneurship Education and Training (EET) with the preparation of entrepreneurial human capital assets. Kusmintarti et al., (2016) stated similarly that students who participated in entrepreneurship training had the intention to build a new business in the future because they were equipped with business ideas and social networking. Previously Nursito & Nugroho, (2013) stated that entrepreneurship education could shape entrepreneurial knowledge and have a positive and significant impact on entrepreneurial intentions. Therefore, Barba-Sanches & Atienza-Sahuquillo, (2017) need to integrate entrepreneurship education with technical education to increase entrepreneurial intentions. The focus of entrepreneurship education is to develop entrepreneurial attitudes, skills, and entrepreneurial behavior (Dogan, 2015). The results of the latest research Solesvik, (2019) explains that business education positively influences the formation of entrepreneurial skills and competencies. Students who study business also exhibit higher levels of entrepreneurial intentions than those who do not participate in business education.

Čapienė & Ragauskaitė, (2018) support the entrepreneurship teaching method by increasing collaboration between stakeholders in entrepreneurship education and getting closer to the business environment. According to P. Kyrp, (2003) entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge, and entrepreneurship. Entrepreneurship learning in universities examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006). Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana, Suhud, & Wibowo, 2018).

Furthermore, the partial test results of the application of BMC have not been proven to increase entrepreneurial intentions. This means that there is no difference in the entrepreneurial intentions of students taught by BMC with the control class. So far, no research has been found that examines the effect of BMC learning on entrepreneurial intentions so that none can be used as a comparison. However, the use of BMCs in the field of financial management allows companies to identify customer needs, estimate the potential benefits and costs required (Dudin, Kutsuri, Jur, & Sozrykoevna, 2015). Furthermore, Crotty, Kinney, & Farren, (2017) state that BMC learning is simple, clear, and how business strategy is centered on nine main business area blocks, and more importantly, encourages students or business people to think about how interactions and consequences occur.

Research conducted by Dewobroto, (2013) states that the use of Business Model Canvas can be a simple tool to produce an alternative strategy for the company to achieve financial viability. Then Dudin et al., (2015) stated that the use of the business model of the canvas model could create a competitive advantage in the agricultural industry due to the organizational features of the production and sales cycle. Toro-jarrín, Ponce-jaramillo, & Güemes-castorena, (2016) also argued that Business Model Canvas identifies essential parts of the business, the simplicity of its application makes it more acceptable and disseminated. Furthermore, Baudier & Supérieur, (2017) states that BMC is expected to not only be able to improve organizational performance, enhance the ability of entrepreneurs to communicate, and innovate their business models but also as tools that are adapted for visualization, decision making, creative thinking, collaboration, and reflection

Entrepreneurial learning, according to Fruchter, (2001), needs to change from traditional teaching practices centered on teaching to "knowing-what," to active learning with a focus on teaching to "know-why." BMC learning includes active and student-centered learning. Student-

centered learning makes them more independent and responsible for finding solutions; educators play a role as mentors or facilitators (Doppelt, 2003). The advantages of active learning are very relevant in the field of entrepreneurship, where students have the goal to create and lead their projects, and become a favorite practice for teaching entrepreneurship (Åsvoll & Jacobsen, 2012). Rae, (2011) also proposes that entrepreneurship education requires a holistic and activity-based approach. This model is useful for understanding learning material, practice, and personal development of social and group interactions. Active learning activities make academic results and higher motivation, and more in-depth understanding of content, and have been proven in several studies (Michael, 2006).

The next finding is that the level of entrepreneurial learning achievement has been proven to influence entrepreneurial intentions. This means that student entrepreneurship intentions will be higher if entrepreneurship learning achievement is high, and vice versa, entrepreneurial intentions will be lower in students with lower entrepreneurial learning achievements. High levels of student achievement, illustrating their mastery of entrepreneurial knowledge is higher. In general, entrepreneurial knowledge includes business planning, business development strategies, attitudes, and records and finance. Suryana & Bayu, (2010), explained that an entrepreneur must know the business to be initiated and knowledge of the business environment that will affect entrepreneurial activities; knowledge of roles and responsibilities; knowledge of personality and responsibilities; and the latest knowledge is knowledge about management and business organizations.

Mastery of entrepreneurial knowledge (learning achievement) is essential. Knowledge about entrepreneurship influences entrepreneurial intentions positively and significantly (Anggraeni & Harnanik, 2015; Hutasuhut, 2018; Dogan, 2015, 2015; Roxas, Cayoka, & Jesus, 2008). Mastery of entrepreneurial knowledge will increase the ability of students to run businesses. When he feels he has the ability, there will be an intention to run a business. Previous researchers such as (B. Roxas, 2014; Kütüm, Kallaste, Venesaar, & Kiis, 2014) stated that entrepreneurship education significantly increased entrepreneurial knowledge. Entrepreneurial knowledge is the basis of entrepreneurial resources found in individuals (Hisrich, Peters, & Shepherd, 2008). The results of this research strengthen the theoretical foundation of the importance of providing education in higher education to build entrepreneurs. Entrepreneurship education can help and increase entrepreneurial awareness and acceptance as a valuable career

choice (Mikic et al., 2018). Entrepreneurship education is also able to provide knowledge to recognize opportunities, take advantage of opportunities, create and operate new devices, and the ability to think critically and creatively (Robles & Zárraga, 2015). Raposo & Paço, (2011) added that entrepreneurship education could be competencies and attitudes that can determine future carrier choices.

Further findings, this research did not succeed in proving an interaction between the application of the BMC model and the level of knowledge (entrepreneurial learning achievement) in shaping student entrepreneurial intentions. This is because partially, the BMC learning model does not have an impact on increasing entrepreneurial intentions even though the level of achievement has a partial impact. Although the application of BMC learning directly has not been proven to be able to increase the entrepreneurial intentions of students. However, this research succeeded in proving that the application of BMC can improve entrepreneurial learning outcomes and through moderation of the level of knowledge (learning achievement of entrepreneurship), is proven to increase entrepreneurial intentions. The results of this research strengthen the theoretical foundation of the importance of entrepreneurship education to increase knowledge about entrepreneurship in order to create a generation that is interested in entrepreneurship.

CONCLUSION

Application of Business Model Canvas (BMC) on entrepreneurial learning can be a positive response from students and can increase entrepreneurship learning outcomes, experimental class learning outcomes (BMC) 12.52% higher than the control class learning outcomes. However, the entrepreneurship intentions of BMC class students were not proven to be higher than the control class. However, together, the application of BMC and the level of entrepreneurial learning achievement can increase student entrepreneurial intentions. The class learning process that applies BMC can create a pleasant learning atmosphere for all students (100%) who feel understood 93% and feel drawn 89.5%. This research provides a theoretical foundation that the development of entrepreneurial intentions can be done through entrepreneurship education. Entrepreneurship education can increase knowledge (entrepreneurial learning achievement), and achievement levels can strengthen (moderate) BMC learning to increase entrepreneurial intentions. For this reason, universities are expected to be able to design

practical and coherent entrepreneurial learning that combines conceptual learning and practical learning. This study has limitations in duration and class of treatment, so it is possible to be reviewed again by adding a broader duration and class.

ACKNOWLEDGEMENT

The researcher thanked the Rector of Universitas Negeri Medan for financial assistance through the Lecturer Study Group Research Grant program and grateful also to the Dean of the Faculty of Economics for the research permission given and thanks to the students for their participation in this research..

REFERENCES

- Alias, C., Goudz, A., Jawale, M., & Noche, B. (2015). Generating a business model canvas for Future-Internet-based logistics control towers. *2015 4th IEEE International Conference on Advanced Logistics and Transport, IEEE ICALT 2015*, 257–262. <https://doi.org/10.1109/ICAdLT.2015.7136592>
- Anggraeni, B., & Harnanik. (2015). Pengaruh Pengetahuan Kewirausahaan dan Lingkungan Keluarga Terhadap Minat Berwirausahaan Siswa Kelas XISMK Islam Nusantara Comal Kabupaten Pematang. *Jurnal Pendidikan Ekonomi/Dinamika Pendidikan X*(1).
- Åsvoll, H., & Jacobsen, P. J. (2012). A Case Study: Action Based Entrepreneurship Education How Experience Problem Can Collaboration Problem Mitigated. *Journal of Entrepreneurship Education*, 15, 75–93.
- Barba-Sanches, V., & Atienza-Sahuquillo, C. (2017). entrepreneurship education. *European Research on Management and Business Economics*.
- Baudier, M. L. et P., & Supérieur, D. D. B. (2017). Business Model Canvas Acceptance Among French Entrepreneurship Students: Principle for Enhancing Innovation Artefact in Business Education. *Journal of Innovation Economics & Management*, 23(2), 159–183.
- Čapienė, A., & Ragauskaitė, A. (2018). Entrepreneurship education at university: innovative models and current trends, 2, 284–291. <https://doi.org/10.22616/rrd.23.2017.080>
- Coes, B. (2014). Critically Assessing Strengths And Limitations of The Business Model Canvas. *University of Twente*, 1 to 99. from https://essay.utwente.nl/64749/1/Coes-_MA_MB.pdf%0Ahttps://www.google.co.uk/search?client=firefox-b&q=essay.uwente.nl%2F64749%2F1%2FCoes_MA_MB.PDF&oq=essay.-uwente.nl%2F64749%2F1%2FCoes_MA_MB.PDF&gs_l=psy-ab.12...16773.34806.0.37240.7.7.0.0.0.1392.2210.3j
- Crotty, Y., Kinney, T., & Farren, M. (2017). Using the Business Model Canvas (BMC) strategy tool to support the Play4Guidance online entrepreneurial game, 4(1), 34–41.
- Dehghanpour, A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention : Study of educational system of Education + Training Article information : *Education + Training*, 55(8/9), 868–884. <https://doi.org/10.1108/ET-04-2013-0053>

- Delmar, F., & Shane, S. (2003). Does business planning facilitate the development of new ventures? *Strategic Management Journal*, 24(12), 1165–1185.
<https://doi.org/10.1002/smj.349>
- Dewobroto, W. S. (2013). Penggunaan Business Model Canvas Sebagai Dasar Untuk Menciptakan Alternatif Strategi Bisnis dan Kelayakan Usaha. *Jurnal Teknik Industri*, 1, 215–230.
- Dogan, E. (2015). The Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Student in Turkey, 0(212), 79–93.
- Dogan, & Ebru. (2015). the Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Students in Turkey. *The Journal of Entrepreneurship*, 23(1), 1–18.
<https://doi.org/10.1177/0971355713513346>
- Doppelt, Y. (2003). Implementation and Assessment of Project-Based Learning in a Flexible Environment, 255–272.
- Dudin, M. N., Kutsuri, G. N., Jur, I., & Sozrykoevna, S. (2015). The Innovative Business Model Canvas in the System of Effective Budgeting, 11(7), 290–296.
<https://doi.org/10.5539/ass.v11n7p290>
- Fayolle, A., & Gailly, B. (2015). on Entrepreneurial Attitudes and Intention : Hysteresis and Persistence, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- Fritscher, B., & Pigneur, Y. (2014). Visualizing Business Model Evolution with the Business Model Canvas : Concept and Tool. <https://doi.org/10.1109/CBI.2014.9>
- Fruchter, R. (2001). Dimensions of Teamwork Education *, 17, 426–430.
- Gerba, D. tessema. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. <https://doi.org/10.1108/20400701211265036>
- Heinonen, J., & Poikkijoki, S. (2006). An entrepreneurial-directed approach to entrepreneurship education : mission impossible ? *Journal of Management Development*, 25(1), 80–94.
<https://doi.org/10.1108/02621710610637981>
- Hermawan, A., & Pravitasari, J. (2013). Business Model Canvas (Kanvas Model Bisnis).
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2008). *Entrepreneurship*.
- Hutasuhut, S. (2018). The Roles of Entrepreneurship Knowledge, Self-Efficacy, Family, Education, and Gender on Entrepreneurial Intention. *Dinamika Pendidikan*, 13(1), 90–105.
<https://doi.org/10.15294/dp.v13i1.13785>
- Indarti, N., & Rostiani, R. (2008). Intensi Kewirausahaan Mahasiswa : Studi Perbandingan Antara Indonesia , Jepang dan Norwegia Intensi Kewirausahaan Mahasiswa : Studi Perbandingan Antara Indonesia , Jepang dan Norwegia. *Jurnal Ekonomika dan Bisnis Indonesia*, 23(4), 1–27.
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial Intention among Malaysian Undergraduates. *International Journal of Business and Management*, 4(10), 54–60. <https://doi.org/10.5539/ijbm.v4n10p54>
- Jakubczak, J., & Rakowska, A. (2013). the Role of Education and Culture in the Development, 997–1004.
- James O Fiet. (2000). The Theoretical Side of Teaching Entrepreneurship. *Journal of Business Venturing*, 16, 1–24.
- Jose Sanchez. (2011). The influence of entrepreneurial competencies on small firm performance. *Revista Latinoamericana de Psicología*, 7(2), 239–254.
- Krueger, J. N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5, 315–330.
- Kusmintarti, A., Thoyib, A., Maskie, G., & Ashar, K. (2016). Entrepreneurial characteristics as a

- mediation of entrepreneurial education influence on entrepreneurial intention. *Journal of Entrepreneurship Education*, 19(1), 24–37.
- Küttim, M., Kallaste, M., Venesaar, U., & Kiis, A. (2014). Entrepreneurship Education at University Level and Students' Entrepreneurial Intentions. *Procedia - Social and Behavioral Sciences*, 110, 658–668. <https://doi.org/10.1016/j.sbspro.2013.12.910>
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship: Theory and Practice*, 33(3), 593–617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, 7(2), 195–218. <https://doi.org/10.1007/s11365-010-0154-z>
- Martin, B., McNally, J. J., & Kay, M. (2013). Examining the Formation of Human Capital in Entrepreneurship : A Meta-Analysis of Entrepreneurship Education Outcomes. *Journal of Business Venturing*, 28(2), 211–224. <https://doi.org/10.1016/j.jbusvent.2012.03.002> Elsevier
- Michael, J. (2006). Where 's the evidence that active learning works ?, 30, 159–167. <https://doi.org/10.1152/advan.00053.2006>.
- Mikić, M., Sopta, M., & Horvatinovic, T. (2018). the Role of Entrepreneurial Education in the Development of Entrepreneurship. *Casopis Za Ekonomiju I Trzisne Komunikacije*, 8(2), 385–395. <https://doi.org/10.7251/EMC1802385M>
- Murtini, W. (2008). Success Story Sebagai Pendekatan Pembelajaran Kewirausahaan. *Varia Pendidikan*, 20(2), 173–183.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2017). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 5079(August), 1–19. <https://doi.org/10.1080/03075079.2017.1365359>
- Nursito, S., & Nugroho, A. J. S. (2013). Analisis pengaruh interaksi pengetahuan kewirausahaan dan efikasi diri terhadap intensi kewirausahaan. *Kiat Bisnis*, 5(3), 201–211.
- Osterwalder, A. (2004). The Business Model Ontology A Proposition in a Design Science Approach. de Université de Lausanne. from; <http://eprints.uanl.mx/5481/1/1020149995.PDF>
- Osterwalder, A., & Pigneur, V. (2010). *Business Model Generation A Handbook for Visionaries, Game Changers, and Challengers*.
- P. Kyrp. (2003). Entrepreneurship Pedagogy-The Current Public and Some Future Expectations. In *In the 3rd European Summer University*.
- Patricia, & Silangen, C. (2016). The Effect of Entrepreneurship Education on Entrepreneurial Intention in Indonesia. *DeReMa Jurnal Manajemen*, 11(1), 67–86.
- Premand, P., Brodmann, S., Almeida, R., Grun, R., & Mahdi Barouni. (2016). Entrepreneurship Education and Entry into Self-Employment among University Graduates. *World Development*.
- Pretorius, M. (2001). "A training model to enhance micro and small business start-ups in South Africa." Pretoria.
- Pretorius, M., Nieman, G., & van Vuuren, J. (2005). Critical evaluation of two models for entrepreneurial education. *International Journal of Educational Management*, 19(5), 413–427. <https://doi.org/10.1108/09513540510607743>
- Purwana, D., Suhud, U., & Wibowo, S. F. (2018). Determinant Factors of Students' Entrepreneurial Intention: A Comparative Study. *Dinamika Pendidikan*, 13(1), 1–13.
- Rae, D. (2011). Entrepreneurial learning : a practical model from the creative industries
Entrepreneurial learning : a practical model from the creative industries.

<https://doi.org/10.1108/00400910410569614>

- Raposo, M., & Paço, A. (2011). Entrepreneurship education : Relationship between education, 23(2001), 453–457.
- Robles, L., & Zárraga, M. (2015). Key Competencies for Entrepreneurship. *Procedia Economics and Finance*, 23(October 2014), 828–832. [https://doi.org/10.1016/S2212-5671\(15\)00389-5](https://doi.org/10.1016/S2212-5671(15)00389-5)
- Roxas, B. (2014). Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected South-east Asian business students. *Journal of Education and Work*, 27(4), 432–453. <https://doi.org/10.1080/13639080.2012.760191>
- Roxas, B. G., Cayoka-, R. P., & Jesus, R. M. de. (2008). Entrepreneurial Knowledge and its Effects on Entrepreneurial Intentions : Development of a Conceptual Framework. *Asia-Pacific Social Science Review*, 8(2), 61–77.
- Sirelkhatim, F., & Gangi, Y. (2015). Entrepreneurship education : A systematic literature review of curricula contents and teaching methods, 1–11. <https://doi.org/10.1080/23311975.2015.1052034>
- Solesvik, M. Z. (2019). Entrepreneurial Competencies and Intentions: The Role of Higher Education. *Forum Scientiae Oeconomia*, 7(1), 9–23. <https://doi.org/10.23762/FSO>
- Soliha, *Eius, Hubeis, A. V. S., & Maulana, A. (2014). Analisis Model Bisnis Pada KNM Fish Farm dengan Pendekatan Business Model Canvas (BMC) Business Model Analysis of KNM Fish Farm with Business Model Canvas (BMC) Approach. *J Sosek KP*, 9(2), 185–194.
- Suryana, Y., & Bayu, K. (2010). *Kewirausahaan : pendekatan karakteristik wirausahawan sukses*. Jakarta: Kencana Predana Media Group.
- Toro-jarrín, M. A., Ponce-jaramillo, I. E., & Güemes-castorena, D. (2016). Technological Forecasting & Social Change Methodology for the of building process integration of Business Model Canvas and Technological Roadmap, 110, 213–215.
- Türko, E. S. (2016). Business plan vs business model canvas in entrepreneurship trainings: A comparison of students' perceptions. *Asian Social Science*, 12(10), 55–62. <https://doi.org/10.5539/ass.v12n10p55>

- 99+
- Compose
- Mail
- Inbox 1,671
- Starred
- Snoozed
- Important
- Sent
- Drafts 16
- Categories
- Social 234
- Updates 670
- Forums
- Promotions 416
- More

Labels

[CP] Submission Acknowledgement Inbox x



Prof. Dr. Burhan Nurgiyantoro <cakrawala@uny.ac.id>
to me

Sun, Nov 24, 2019, 2:12 PM

Dear - Saidun - Hutasuhut,

Thank you for submitting the manuscript, "INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)" to Jurnal Cakrawala Pendidikan. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL:
<https://journal.uny.ac.id/index.php/cp/author/submission/28308>
Username: saidu30-8-66

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Sincerely,

Prof. Dr. Burhan Nurgiyantoro
Jurnal Cakrawala Pendidikan

INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)

¹⁾Saidun Hutasuhut, ²⁾Irwansyah, ³⁾Agus Rahmadsyah, ⁴⁾Reza Aditia

^{1, 2, 3)}, Faculty of Economics, Universitas Negeri Medan, Indonesia

^{**)} Postgraduate Student, Universitas Negeri Medan, Indonesia

e-mail: saidun@unimed.ac.id

Abstract : This study examines the impact of entrepreneurial learning by using the Business Model Canvas (BMC) on learning outcomes and enhancing student entrepreneurial intentions. The interaction of entrepreneurial learning achievement levels was also tested for its impact on entrepreneurial intentions. However, existing research has not explicitly stated the learning model used to increase entrepreneurial intentions. This study is a quasi-experiment involving two classes of entrepreneurship courses at the Faculty of Economics Universitas Negeri Medan. Each class act as experimental class and control class. Hypothesis testing is done by the "t" and ANOVA tests. The analysis showed that entrepreneurial learning outcomes and entrepreneurial intentions of the BMC class proved significantly different from the control class. Entrepreneurship learning outcomes are 12.74% higher, and entrepreneurial intentions are 3.14% higher in the BMC class. BMC learning has not been proven to increase entrepreneurial intentions. However, the level of learning achievement proved to be positive and can significantly increase entrepreneurial intentions. There is no interaction between learning models, either BMC or conventional, with the high and low levels of entrepreneurial learning achievement on increasing entrepreneurial intentions. The results of this study are useful for instructors to design entrepreneurial learning that can increase entrepreneurial intentions.

Keywords : BMC, learning outcome, entrepreneurial intention

TINGKAT INTENSI KEWIRAUSAHAAN MAHASISWA; DAMPAK PENERAPAN PEMBELAJARAN MODEL BISNIS CANVAS (BMC)

Abstrak : Penelitian ini secara spesifik menguji dampak penerapan pembelajaran kewirausahaan Model Bisnis Canvas (BMC) terhadap peningkatan hasil belajar dan intensi kewirausahaan mahasiswa. Interaksi tingkat prestasi belajar kewirausahaan juga diuji dampaknya terhadap intensi kewirausahaan. Sementara penelitian yang ada belum spesifik menyatakan model pembelajaran yang digunakan untuk meningkatkan intensi kewirausahaan. Metode yang digunakan dalam penelitian ini adalah quasi eksperimen dengan melibatkan dua kelas mata kuliah kewirausahaan di Fakultas Ekonomi Unimed. Satu kelas sebagai kelas eksperimen dan satu kelas sebagai kelas kontrol. Pengujian hipotesis dilakukan dengan uji "t" dan anova. Hasil analisis menunjukkan hasil belajar kewirausahaan dan intensi kewirausahaan kelas BMC terbukti secara signifikan berbeda dengan kelas kontrol. Hasil belajar kewirausahaan lebih tinggi 12,74% dan intensi kewirausahaan lebih tinggi 3,14% kelas BMC dibandingkan kelas kontrol. Pembelajaran kewirausahaan kelas BMC tidak terbukti dapat meningkatkan intensi kewirausahaan. Akan tetapi tingkat prestasi belajar terbukti positif dan signifikan dapat meningkatkan intensi kewirausahaan. Kemudian tidak terbukti ada interaksi model pembelajaran (BMC dan konvensional) dengan tinggi rendahnya prestasi belajar kewirausahaan terhadap peningkatan intensi kewirausahaan. Hasil penelitian ini berguna bagi pengajar kewirausahaan untuk merancang pembelajaran kewirausahaan yang dapat meningkatkan intensi kewirausahaan.

Keywords : BMC, hasil belajar, intensi kewirausahaan

INTRODUCTION

Higher education, only able to produce job seekers, and very rarely are willing and able to create jobs, both for themselves and others. Even the job seekers produced are not ready for use, both in terms of knowledge, skills, and attitudes. So that tertiary graduates prefer to look for work rather than create their jobs. This condition causes the unemployment rate at the undergraduate level in February 2018 to be 6.31%, higher than the national total of 5.13% and in February 2019 the unemployment rate at the undergraduate level also remains higher, at 6.24% and nationally total of 5.01% (BPS, 2019). So the bachelor's program as explained in the Law of Republic of Indonesia number 12 of 2012 article 18 paragraph 2 concerning Higher Education is tasked with preparing students to be cultured intellectuals and/or scientists, able to enter and/or create jobs, and able to develop themselves into professionals yet works well.

This phenomenon is the impact that the entrepreneurial intentions of Indonesian students are still weak (Indarti & Rostiani, 2008). Meanwhile, according to Krueger & Carsrud, (1993), entrepreneurial intentions are the best predictors for entrepreneurial actors. Globally, entrepreneurship education is the fastest-growing field of education (Sirelkhatim & Gangi, 2015). In the European Union introduces high-quality entrepreneurship education to equip knowledge, and enhance the attractiveness of entrepreneurial careers to young people (Jakubczak & Rakowska, 2013). In Indonesia, efforts to foster entrepreneurial enthusiasm were carried out through Presidential Instruction of the Republic of Indonesia Number 4, 1995 concerning the "National Movement to Promote and Cultivate Entrepreneurship." In 2008 the Ministry of Cooperatives and SMEs launched the National Shoot Entrepreneurship Movement program for high school students and students (Murtini, 2008). Then since 2009, universities in Indonesia must enter entrepreneurship courses into the curriculum as compulsory subjects in 2 semesters. However, the degree to which entrepreneurship education affects students is still a matter of debate in various circles (James O. Fiet, 2000).

Entrepreneurship Education and Entrepreneurial Intention

Entrepreneurship education is essential to help increase entrepreneurial intentions (Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2017). They explain that entrepreneurship education provides knowledge and influences one's mindset. Entrepreneurship education can

influence the attitudes and aspirations of young people towards entrepreneurship (Robles & Zárrega, 2015). Knowledge about entrepreneurship (learning achievement) positively correlates significantly with entrepreneurial intentions (Dogan & Ebru, 2015). The results of the Mikic, Sopta, & Horvatinovic, (2018) also show there is a positive relationship between entrepreneurship education and entrepreneurial intentions, and this confirms the success of the current entrepreneurship education program and the importance of further enhancing and developing these programs..

The role of entrepreneurship education in increasing entrepreneurship is increasingly essential. Although until now, there has been no useful entrepreneurial learning model to increase entrepreneurial intentions. Türko, (2016) has researched students' perceptions of entrepreneurial learning, applying the business plan model and the canvas business model. The result was that 62% of students stated that it was more challenging to prepare a business plan on a business plan model, while the Business Model Canvas (BMC) had advantages in several ways.. Research that conducted by Coes, (2014) explains that the power of BMC is useful as a visual representation of business models, the simplicity of designing and communicating business models to employees, partners, and customers. Research on BMC has so far been limited to its benefits in preparing business plans. No research has been found that examines the role of BMC entrepreneurship learning in increasing entrepreneurial intentions. Therefore, this study examines the learning role of the Canvas business model in increasing entrepreneurial intentions.

According to Fritscher & Pigneur, (2014), the canvas business model is a visual modeling method used to capture the business model of a company. BMC is learning entrepreneurship by creating a one-page business plan with nine business area blocks. The goodness of this model can be used for each type and business model. Another advantage is that students are required from the beginning to know who their business partners are, the main activities of the business, the value offered, channels, customer segmentation, key resources, cost structures, and business profit potential. Through this BMC, students from the beginning are more realistic and comprehensive in understanding business. If students have understood the business more realistically and comprehensively, it is suspected that it can increase entrepreneurial intentions.

The Learning of Business Model Canvas (BMC)

Fritscher & Pigneur, (2014) explained that there are two entrepreneurship education models, namely the Entrepreneurial performance education model (E / P model) and the Entrepreneurial education model (E / E model). While Pretorius, (2001) proposes entrepreneurship training with a model of five relevant constructs to improve the ability to start a business (start-up). The five constructs are entrepreneurial success, business knowledge and skills, learning approaches, business plans, and facilitators. Furthermore, Pretorius, Nieman, & van Vuuren, (2005) combined the Entrepreneurial Performance Model and the Entrepreneurial Education Model into an integrative model with the case study method. The aim is to increase the number of new businesses. The success of this model is measured by the extent to which the behavior of students wants to take responsibility for starting a business. All proposed model constructs contribute through certain synergies to improve the results of entrepreneurship training programs. However, if construction is ignored, the program results will fail (Pretorius et al., 2005).

Alexander Osterwalder, in 2004, introduced a business model, the Business Model Canvas (BMC). BMC is a tool to describe business models based on nine elements (Osterwalder, 2004; Fritscher & Pigneur, 2014). Meanwhile, according to Pigneur (2010) BMC, an abstract concept design of a business model that represents business strategies and processes. This model illustrates and visualizes business ideas that are planned and suitable for innovative startup companies (Alias, Goudz, Jawale, & Noche, 2015).

One of the documents that must be prepared before running a business is the right business plan. According to Delmar & Shane, (2003) business planning can be a useful tool for new businesses than established businesses. The BMC model in entrepreneurship learning is considered relevant for making business plans. The advantages of this model can overcome the difficulties of students in making a viable business plan and at the same time, be able to know the advantages and disadvantages of business, the needs analysis, and profit analysis process quickly. According to Fritscher & Pigneur, (2014), BMC is a business model that can visualize the business of a company. BMC learning excellence can visualize business on one sheet of canvas. Students pour a business plan on one sheet of the canvas by filling 9 area blocks. The goodness of this model can be used for each type and business model. Another advantage is that students are required from the beginning to know who the customer segment is, what value proposition

they have, who the business partners are, the potential for profit to know the cost components that must be spent. Through BMC, students from the beginning are more realistic and comprehensive in understanding a business. If students have understood the business more realistically and comprehensively, it is suspected that it can increase knowledge and entrepreneurial intentions. The nine blocks, according to Osterwalder & Pigneur, (2010), they are: (1) Customer Segment, (2) Value Proposition, (3) Customer Relationship, (4) Channel, (5) Revenue Stream, (6) Key Resources, (7) Key Activities, (8) Key Partnership, (9) Cost Structure. The strengths of this model are that students can develop a business plan by synergizing nine blocks into a single unit, for more details, presented in Figure 1.

Much research has been done on BMC, but it is still limited to using BMC as a business model that is run to improve business performance. No research has been found that examines the role of BMC entrepreneurship learning in improving learning outcomes and entrepreneurial intentions. This research aims to test; (a) whether the entrepreneurial learning outcomes of the BMC class differ significantly from conventional, (b) whether the entrepreneurial intentions of BMC class students differ significantly from conventional, (c) whether the level of entrepreneurial learning outcomes influences entrepreneurial intentions, and (d) whether there is an interaction of learning models with the level of entrepreneurial learning outcomes on entrepreneurial intentions.

METHOD

This research uses the quasi-experimental method carried out on the campus of the Faculty of Economics, Medan State University. This study is based on constructivist learning theories that demand students' independence to formulate a business idea, design business, and report it. Students are allowed to set their learning process to complete business plan tasks. The study population was all entrepreneurship classes at the Faculty of Unimed in the odd semester of 2018. The class sample was determined by two classes. One class as a BMC treatment (experimental class) and one other class as a control class and determined by purposive random sampling.

Data collection techniques used were instruments consisting of; (a) instrument (test) of entrepreneurial learning outcomes, and (b) entrepreneurial intentions (adopted from Liñán & Chen, 2009; Liñán et al., 2011) on a scale of 1-7. A score of 1 (one) describes "very weak," and a score of 7

(seven) describes "very strong." To measure the impact of BMC entrepreneurship learning using the "t" and "ANOVA" tests with the help of SPSS version 24.

Table 1. Research Variables and Instruments

No	Variable	Number of Items	question
1	Entrepreneurship Learning Outcomes	18	
2	Entrepreneurial intention	6	<ul style="list-style-type: none"> • I'm ready to be an entrepreneur • My professional goal is to be an entrepreneur • I will make every effort to start and run my own company • I am very seriously thinking about starting a company • I am determined to create a company in the future • I have the intention to start a company in the future

RESULT & DISCUSSION

Result

The number of questions used to measure the level of entrepreneurial knowledge of students was 18 items out of the 20 items tested to students. Then from the 6 statement items used to measure student entrepreneurial intentions, all of them are worth seeing from the validity with the lowest Corrected item-total Correlation score of 0.681 and 0.824 (with criteria > 0.30) and Alpha Cronbach 0.912 (with criteria > 0.60).

The principle of the reaction of the BMC learning model is seen from the responses given by students to the learning instruments and the application of Business Model Canvas, and the results are presented in Table 2.

Table 2. Student Responses to BMC Learning Instruments and Implementation

Aspects	Average Response (%)	
	Happy	Unhappy
Feelings of "Happy or Unhappy" Respondents to the component; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	100	0
"New or Not New" respondents' opinions of the components; subject matter, BMC Model. Student Worksheet (Business Plan),	New	Not new
	85	15

learning atmosphere, instructor/lecturer appearance, how to teach		
"Clear or Unclear" respondents' opinions about the language used in the Student Worksheet and learning achievement test	Clear	Unclear
	96,55	3,50
Respondents' opinions about "understanding or not understanding" of the Student Worksheet (Business Plan) and learning achievement test	Understand	Not Understand
	93	7,00
Respondents' opinions about the "exciting or unexciting" towards Student Worksheets (Business Plan) and test results	Exciting	Unexciting
	89,50	10,50

Criteria: 0 % - 20 %	Very low
21% - 40%	Low
41% - 60%	Medium
61% - 80%	High
81% - 100%	Very high

Student responses to the application of BMC viewed from 5 aspects; happy and unhappy feelings, aspects of learning new categories or not, the level of language clarity, the level of understanding, and the level of exciting or unexciting on the BMC Student Worksheet and learning outcomes test, the result is that every aspect received a positive response in 81% and above (category " very high"). Calculation results are presented in Table 2.

To find out whether the data are normally distributed, a normality test has been conducted, the learning outcomes of the conventional class and the BMC class are both eligible because Shapiro-Wilk sig are respectively 0.118 and 0.056 > from 0.05 as explained in Table 3. This study uses the Shapiro-criteria Wilk because of the small number of samples.

Table 3 Test Results of Normality Learning Outcomes and Entrepreneurship Intention

	Model	Shapiro-Wilk		
		Statistic	df	Sig.
Learning Outcomes	Conventional	,924	20	,118
	BMC	,914	22	,056
Entrepreneurial Intention	Conventional	,960	20	,549
	BMC	,933	22	,140

The entrepreneurial intentions of both the conventional class and the BMC class are both normally distributed because the Shapiro Wilk sig values are respectively 0.549 and 0.140 > 0.05. Furthermore, the homogeneity test results of learning outcomes data and entrepreneurial intention (Learning model and level of learning outcomes) both meet the requirements because of their respective sig values > 0.05, as presented in Table 4. Because the normality and homogeneity requirements of the data have been fulfilled, the next step is to test hypothesis.

Tabel 4 Test of Homogeneity of Variances

Learning Outcomes				
	Levene Statistic	df1	df2	Sig.
Learning Model	,137	1	40	,713
Level Learning Outcomes	,181	1	40	,673
Entrepreneurial Intention				
Learning Model	,756	1	40	,390
Level Learning Outcomes	,479	1	40	,493

Furthermore, to find out whether there are differences in entrepreneurship learning outcomes between the BMC class and the control class, a "t" test is performed. In Table 5 it is known from the output "Independent Samples Test" in the section "Equal variances assumed" known sig (2-tailed) value of 0.033 < 0.05, meaning that there are significant differences in learning outcomes of the BMC class with the control class.

Tabel 5 Independent Samples Test, Learning Outcomes

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning Outcomes	Equal variances assumed	,137	,713	2,206	40	,033	7,79545	3,53371
	Equal variances not assumed			2,211	39,880	,033	7,79545	3,52632

The magnitude of the difference in entrepreneurial learning outcomes between the BMC class and the control class (see Table 6) by looking at the average. The average learning outcomes of the BMC class is 12.52% higher than the control class.

Table 6. Learning Outcomes by Class Group

	Model	N	Mean	Std. Deviation	Std. Error Mean
Learning Outcomes	BMC	22	70,0455	11,66793	2,48761
	Control	20	62,2500	11,17740	2,49934

Entrepreneurship Intention Test Results BMC class with control class (conventional) seen from the total mean is not significantly different, where the average total BMC class is 37.868, and the control class is 35.50 with a difference of 6.67% (see Table 7).

Tabel 7. Entrepreneurial Intention Based on Class and Level of Learning Outcomes

Model	level of learning outcomes	Mean	Std. Deviation	N
Convensional	Low	34,6000	2,27058	10
	High	38,4000	1,71270	10
	Total	36,5000	2,76253	20
BMC	Low	35,5455	2,84125	11
	High	39,8182	1,99089	11
	Total	37,6818	3,24237	22
Total	Low	35,0952	2,56719	21
	High	39,1429	1,95667	21
	Total	37,1190	3,04601	42

Hypothesis test results of the impact of the application of the BMC model and the effect of entrepreneurial learning outcomes on entrepreneurial intentions are presented in Table 8. It is known that the Corrected Model shows a sig value of 0,000 <0.05, meaning that the BMC learning model, the level of entrepreneurial learning outcomes together proved to influence the intention entrepreneurship significantly. The contribution of learning models and the level of entrepreneurial knowledge in influencing entrepreneurial intentions is seen from the R Squared value of 49.2%.

Tabel 8 Test of Between-Subjects Effects.

Dependent Variable: Entrepreneurial Intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	187,241 ^a	3	62,414	12,278	,000
Intercept	57649,870	1	57649,870	11341,136	,000
Model	14,632	1	14,632	2,878	,098
Level Learning Outcomes	170,681	1	170,681	33,577	,000
Model * Level LO	,585	1	,585	,115	,736
Error	193,164	38	5,083		
Total	58249,000	42			
Corrected Total	380,405	41			

a. R Squared = ,492 (Adjusted R Squared = ,452)

Partially the BMC model was not proven to be able to increase entrepreneurial intentions because the sig value was $0.98 > 0.05$. However, the level of entrepreneurial learning outcomes proved to significantly influence entrepreneurial intentions because of the sig value of $0,000 < 0.05$. Then found no evidence of an interaction between learning models (BMC and control) and the level of entrepreneurial knowledge of student entrepreneurial intentions, because of the sig value of $0.736 > 0.05$.

Discussion

The essence of learning entrepreneurship by applying business Model Canvas is making a business plan. The business plan is summarized in 9 blocks, as shown in Figure 1. Before preparing a business plan, students are equipped with various business-related knowledge and skills such as; the ability to recognize business opportunities, the ability to take advantage of these opportunities, the ability to organize needed resources, the ability to think critically and creatively, and the ability to prepare financial reports.

8.Key Partnership: Some activities are outsourced and some resources are acquired outside the enterprise	7 Key Activities: ...by performing a number of Key Activities 6.Key Resource; Key resources are the assets required to offer and deliver the previously described elements...	2. Value Propositions: It seeks to solve customer problems and satisfy customer needs with value propositions	4. Customer Relationships: Customer relationships are established and maintained with each Customer Segment 3. Chanel: Value propositions are delivered to customers through communication, distribution, and sales Channels.	1. Customer Segment: An organization serves one or several Customer Segments
9. Cost Structure: The business model elements result in the cost structure.		5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers		

Figure 1 Business Model Canvas: nine business model building blocks, (Osterwalder & Pigneur, 2010)

After the students are equipped with knowledge and skills about business, they then prepare a business plan that is set out in one sheet of canvas paper that has nine areas. The preparation of a business plan starts with finding a business idea. The business idea must be

based on creativity and have favorable prospects. Then the business idea was poured in one sheet of canvas paper.

Entrepreneurship learning with BMC makes it easy for students to understand a business comprehensively. Students who have no experience of business find it difficult to draw up business plans. However, with this BMC pursuit, students are required to be able to fill each of the nine existing blocks. Each block is related to one another. If students can fill all nine blocks and are related to one another, they have understood the business plan that they will realize. The stages are filled in the following sequence.

First, the Customer segment block, at this stage, students must be able to determine who their customer segment is. The customer segment is to whom the goods or services we offer. Previously it must be known what their needs are not being met and they need. Business ideas usually arise from opportunities. Opportunities, in this case, are the needs of consumers who have not been met, whether they know or do not know it. Soliha, Hubeis, & Maulana, (2014) explains an organization must decide which segments are served and which are ignored, after that, then design the right business model according to needs.

If consumers are not aware of their needs, the seller will introduce them so that consumers are aware of them. Here students need creative ideas to be able to find new business opportunities. Recognizing potential customers can be from various perspectives such as; geographical, demographic, and psychographic. These different characteristics make the type of needs they will also be different.

Second, Value propositions, students must be able to determine the value that is offered to consumers, and that cannot be given by competitors. The ability of new businesses to enter the market and be able to compete with businesses that already exist in the market lies in the added value or something unique that they offer to consumers. Consumers accept this, and they feel it is a necessity and then makes a transaction. Hermawan & Pravitasari, (2013) states that if the Value Propositions offered can address the needs or satisfy the needs of consumers can divert the attention of consumers from one company to another company.

Third, Chanel, in this block, students must be able to determine how to deliver or sell products/services to buyers. What media or means do we use to sell our products to consumers? The media used must be in accordance with the development of information technology or digital-based such as Google, Yahoo, Altavista, Exclopedia, Wikipedia, and others. The market

orientation that is designed should not be limited to the local market but rather to a broader national market, even globally depending on the nature of the product it has.

Fourth, Customer Relationships, in this case, students must be able to design how to guarantee good relations with consumers. Maintaining good relations with consumers is one of the business strategies that students must master from the start. Fifth, Revenue Stream, students must know the primary source of income for the planned business. The main income comes from the sale of their products. Besides, that income can come from selling products from third parties. Sixth, Key Resources, from the beginning, students must be able to determine the resources that must be had to run the main activities of the business. Key resources can be in the form of physical resources (buildings, vehicles, equipment), money, intellectual assets (brands, copyrights, patents, customer databases), and human resources.

Seventh, Key Activities, in this case, students must know the main activities in their business. If students already know the main activities in business, it means that their mastery over the planned business is better. Key activities that determine the success of the business in delivering value propositions to the customer segment. Eighth, Key Partnership, this is related to who the business partners are suppliers of cheap and quality goods, freight forwarding services (JNE, TNT, post offices, and others), advertising agencies, marketplaces (tokopedia, bukalapak, zalora, Shoope, JD .id, etc.). The eighth final step, Cost structures, from the beginning, students can already know what types of costs must be incurred. If the type of trading business consists of the cost of purchasing goods, advertising costs, shipping costs, internet costs, and company employee costs. If students are able to fill the nine blocks that are well available and related to one another, then they already understand the business as a whole. This knowledge and experience will benefit them if they realize their business both when they are students and after graduating from college.

BMC learning received a good response from students. All students said BMC learning was fun because they could collaborate in designing business independently. As many as 85% of students stated that BMC learning was new and different from previous learning. Furthermore, BMC learning is clear, easy to understand, and enjoyable. Of the five aspects observed, 81% of students responded above and are in the "very high" category. When viewed by student activities, they are encouraged to participate actively both individually and in groups. Learning like this

makes them able to work in teams (teamwork), each team member has the responsibility to complete their group assignments.

Then, when viewed from the level of understanding, it can be concluded that the understanding of students is excellent because they can pour business ideas on a canvas sheet by filling in every block and its contents related between one block and another block. Examples of student group work are presented in Figure 2. From the students' assignments, it is known that they can find creative-based business ideas, can set customer segments and can show value propositions or the advantages of their products or services compared to competitors. Students have also been able to determine what strategies will be taken to deliver products or services to prospective buyers or customers. In general, the ability of students in each group is relatively the same. This BMC entrepreneurial learning experience will be useful later if they build their businesses or work with others.

Based on the results of data analysis, as reported in Table 8, it was found that BMC learning and entrepreneurial learning outcomes together proved to have a significant effect on entrepreneurial intentions. The results of this study support research (Ismail et al., 2009; Kusmintarti, Thoyib, Maskie, & Ashar, 2016) which states entrepreneurship courses or training, (Tessema, Gerba, 2012 ; Premand, Brodmann, Almeida, Grun, & Mahdi Barouni, 2016); Patricia & Silangen, 2016 ; Nowiński et al., 2017) entrepreneurship education contributes to entrepreneurial intentions. Then Dehghanpour, (2013) added that the entrepreneurship course that was followed could increase entrepreneurial intentions. Furthermore, Kusmintarti et al., (2016) added that people who participated in entrepreneurship training had the provision of business ideas and social networking and had the desire to build a business going forward. This research provides a theoretical foundation for the development of entrepreneurial intentions through entrepreneurial learning.

Entrepreneurship education is increasingly attracting the attention of researchers. Raposo & Paço, (2011) state that entrepreneurship education provides knowledge in the form of; (a) the ability to recognize opportunities, (b) the ability to take advantage of opportunities, generate new ideas and find needed resources, (c) the ability to create and operate new devices, and (d) the ability to think critically and creatively. According to Jose Sanchez, (2011), in addition to business knowledge and skills, entrepreneurship education also develops beliefs, values, and attitudes, and aims to make students confident and consider entrepreneurship as an alternative job

or as unemployment. Furthermore, Ismail et al., (2009) stated that the entrepreneurship course, Fayolle & Gailly, (2015) added that entrepreneurship education has a positive effect on students who either have low or non-existent entrepreneurial intentions.

The completion of one entrepreneurship course can increase entrepreneurial intentions by 1.3 times (Dehghanpour, 2013). Then Martin, McNally, & Kay, (2013) found a significant relationship between Entrepreneurship Education and Training (EET) with the preparation of entrepreneurial human capital assets. Kusmintarti et al., (2016) stated similarly that students who participated in entrepreneurship training had the intention to build a new business in the future because they were equipped with business ideas and social networking. Previously Nursito & Nugroho, (2013) stated that entrepreneurship education could shape entrepreneurial knowledge and have a positive and significant impact on entrepreneurial intentions. Therefore, Barba-Sanches & Atienza-Sahuquillo, (2017) need to integrate entrepreneurship education with technical education to increase entrepreneurial intentions. The focus of entrepreneurship education is to develop entrepreneurial attitudes, skills, and entrepreneurial behavior (Dogan, 2015). The results of the latest research Solesvik, (2019) explains that business education positively influences the formation of entrepreneurial skills and competencies. Students who study business also exhibit higher levels of entrepreneurial intentions than those who do not participate in business education.

Čapienė & Ragauskaitė, (2018) support the entrepreneurship teaching method by increasing collaboration between stakeholders in entrepreneurship education and getting closer to the business environment. According to P. Kyrp, (2003) entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge, and entrepreneurship. Entrepreneurship learning in universities examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006) . Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana, Suhud, & Wibowo, 2018).

Furthermore, the partial test results of the application of BMC have not been proven to increase entrepreneurial intentions. This means that there is no difference in the entrepreneurial intentions of students taught by BMC with the control class. So far, no research has been found that examines the effect of BMC learning on entrepreneurial intentions so that none can be used as a comparison. However, the use of BMCs in the field of financial management allows companies to identify customer needs, estimate the potential benefits and costs required (Dudin,

Kutsuri, Jur, & Sozrykoevna, 2015). Furthermore, Crotty, Kinney, & Farren, (2017) state that BMC learning is simple, clear, and how business strategy is centered on nine main business area blocks, and more importantly, encourages students or business people to think about how interactions and consequences occur.

Research conducted by Dewobroto, (2013) states that the use of Business Model Canvas can be a simple tool to produce an alternative strategy for the company to achieve financial viability. Then Dudin et al., (2015) stated that the use of the business model of the canvas model could create a competitive advantage in the agricultural industry due to the organizational features of the production and sales cycle. Toro-jarrín, Ponce-jaramillo, & Güemes-castorena, (2016) also argued that Business Model Canvas identifies essential parts of the business, the simplicity of its application makes it more acceptable and disseminated. Furthermore, Baudier & Supérieur, (2017) states that BMC is expected to not only be able to improve organizational performance, enhance the ability of entrepreneurs to communicate, and innovate their business models but also as tools that are adapted for visualization, decision making, creative thinking, collaboration, and reflection

Entrepreneurial learning, according to Fruchter, (2001), needs to change from traditional teaching practices centered on teaching to "knowing-what," to active learning with a focus on teaching to "know-why." BMC learning includes active and student-centered learning. Student-centered learning makes them more independent and responsible for finding solutions; educators play a role as mentors or facilitators (Doppelt, 2003). The advantages of active learning are very relevant in the field of entrepreneurship, where students have the goal to create and lead their projects, and become a favorite practice for teaching entrepreneurship (Åsvoll & Jacobsen, 2012). Rae, (2011) also proposes that entrepreneurship education requires a holistic and activity-based approach. This model is useful for understanding learning material, practice, and personal development of social and group interactions. Active learning activities make academic results and higher motivation, and more in-depth understanding of content, and have been proven in several studies (Michael, 2006).

The next finding is that the level of entrepreneurial learning achievement has been proven to influence entrepreneurial intentions. This means that student entrepreneurship intentions will be higher if entrepreneurship learning achievement is high, and vice versa, entrepreneurial intentions will be lower in students with lower entrepreneurial learning achievements. High

levels of student achievement, illustrating their mastery of entrepreneurial knowledge is higher. In general, entrepreneurial knowledge includes business planning, business development strategies, attitudes, and records and finance. Suryana & Bayu, (2010), explained that an entrepreneur must know the business to be initiated and knowledge of the business environment that will affect entrepreneurial activities; knowledge of roles and responsibilities; knowledge of personality and responsibilities; and the latest knowledge is knowledge about management and business organizations.

Mastery of entrepreneurial knowledge (learning achievement) is essential. Knowledge about entrepreneurship influences entrepreneurial intentions positively and significantly (Anggraeni & Harnanik, 2015; Hutasuhut, 2018; Dogan, 2015, 2015; Roxas, Cayoka, & Jesus, 2008). Mastery of entrepreneurial knowledge will increase the ability of students to run businesses. When he feels he has the ability, there will be an intention to run a business. Previous researchers such as (B. Roxas, 2014; Küttim, Kallaste, Venesaar, & Kiis, 2014) stated that entrepreneurship education significantly increased entrepreneurial knowledge. Entrepreneurial knowledge is the basis of entrepreneurial resources found in individuals (Hisrich, Peters, & Shepherd, 2008). The results of this research strengthen the theoretical foundation of the importance of providing education in higher education to build entrepreneurs. Entrepreneurship education can help and increase entrepreneurial awareness and acceptance as a valuable career choice (Mikic et al., 2018). Entrepreneurship education is also able to provide knowledge to recognize opportunities, take advantage of opportunities, create and operate new devices, and the ability to think critically and creatively (Robles & Zárraga, 2015). Raposo & Paço, (2011) added that entrepreneurship education could be competencies and attitudes that can determine future carrier choices.

Further findings, this research did not succeed in proving an interaction between the application of the BMC model and the level of knowledge (entrepreneurial learning achievement) in shaping student entrepreneurial intentions. This is because partially, the BMC learning model does not have an impact on increasing entrepreneurial intentions even though the level of achievement has a partial impact. Although the application of BMC learning directly has not been proven to be able to increase the entrepreneurial intentions of students. However, this research succeeded in proving that the application of BMC can improve entrepreneurial learning outcomes and through moderation of the level of knowledge (learning achievement of

entrepreneurship), is proven to increase entrepreneurial intentions. The results of this research strengthen the theoretical foundation of the importance of entrepreneurship education to increase knowledge about entrepreneurship in order to create a generation that is interested in entrepreneurship.

CONCLUSION

Application of Business Model Canvas (BMC) on entrepreneurial learning can be a positive response from students and can increase entrepreneurship learning outcomes, experimental class learning outcomes (BMC) 12.52% higher than the control class learning outcomes. However, the entrepreneurship intentions of BMC class students were not proven to be higher than the control class. However, together, the application of BMC and the level of entrepreneurial learning achievement can increase student entrepreneurial intentions. The class learning process that applies BMC can create a pleasant learning atmosphere for all students (100%) who feel understood 93% and feel drawn 89.5%. This research provides a theoretical foundation that the development of entrepreneurial intentions can be done through entrepreneurship education. Entrepreneurship education can increase knowledge (entrepreneurial learning achievement), and achievement levels can strengthen (moderate) BMC learning to increase entrepreneurial intentions. For this reason, universities are expected to be able to design practical and coherent entrepreneurial learning that combines conceptual learning and practical learning. This study has limitations in duration and class of treatment, so it is possible to be reviewed again by adding a broader duration and class.

ACKNOWLEDGEMENT

The researcher thanked the Rector of Universitas Negeri Medan for financial assistance through the Lecturer Study Group Research Grant program and grateful also to the Dean of the Faculty of Economics for the research permission given and thanks to the students for their participation in this research..

REFERENCES

Alias, C., Goudz, A., Jawale, M., & Noche, B. (2015). Generating a business model canvas for Future-Internet-based logistics control towers. *2015 4th IEEE International Conference on*

- Advanced Logistics and Transport, IEEE ICALT 2015*, 257–262.
<https://doi.org/10.1109/ICAdLT.2015.7136592>
- Anggraeni, B., & Harnanik. (2015). Pengaruh Pengetahuan Kewirausahaan dan Lingkungan Keluarga Terhadap Minat Berwirausahaan Siswa Kelas XI SMK Islam Nusantara Com al Kabupaten Pematang. *Jurnal Pendidikan Ekonomi/Dinamika Pendidikan* X(1).
- Åsvoll, H., & Jacobsen, P. J. (2012). A Case Study: Action Based Entrepreneurship Education How Experience Problem Can Collaboration Problem Mitigated. *Journal of Entrepreneurship Education*, 15, 75–93.
- Barba-Sanches, V., & Atienza-Sahuquillo, C. (2017). entrepreneurship education. *European Research on Management and Business Economics*.
- Baudier, M. L. et P., & Supérieur, D. D. B. (2017). Business Model Canvas Acceptance Among French Entrepreneurship Students: Princiole for Enhancing Innovation Artefact in Business Education. *Journal of Innovation Economics & Management*, 23(2), 159–183.
- Čapienè, A., & Ragauskaitè, A. (2018). Entrepreneurship education at university: innovative models and current trends, 2, 284–291. <https://doi.org/10.22616/rrd.23.2017.080>
- Coes, B. (2014). Critically Assessing Strngths And Limitations of The Business Model Canvas. *University of Twente*, 1 to 99. from https://essay.utwente.nl/64749/1/Coes-_MA_MB.pdf%0Ahttps://www.google.co.uk/search?client=firefox-b&q=essay.uwente.nl%2F64749%2F1%2FCoes_MA_MB.PDF&oq=essay.-uwente.nl%2F64749%2F1%2FCoes_MA_MB.PDF&gs_l=psy-ab.12...16773.34806.0.37240.7.7.0.0.0.1392.2210.3j
- Crotty, Y., Kinney, T., & Farren, M. (2017). Using the Business Model Canvas (BMC) strategy tool to support the Play4Guidance online entrepreneurial game, 4(1), 34–41.
- Dehghanpour, A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention : Study of educational system of Education + Training Article information : *Education + Training*, 55(8/9), 868–884.
<https://doi.org/10.1108/ET-04-2013-0053>
- Delmar, F., & Shane, S. (2003). Does business planning facilitate the development of new ventures? *Strategic Management Journal*, 24(12), 1165–1185.
<https://doi.org/10.1002/smj.349>
- Dewobroto, W. S. (2013). Penggunaan Business Model Canvas Sebagai Dasar Untuk Menciptakan Alternatif Strategi Bisnis dan Kelayakan Usaha. *Jurnal Teknik Industri*, 1, 215–230.
- Dogan, E. (2015). The Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Student in Turkey, 0(212), 79–93.
- Dogan, & Ebru. (2015). the Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Students in Turkey. *The Journal of Entrepreneurship*, 23(1), 1–18.
<https://doi.org/10.1177/0971355713513346>
- Doppelt, Y. (2003). Implementation and Assessment of Project-Based Learning in a Flexible Environment, 255–272.
- Dudin, M. N., Kutsuri, G. N., Jur, I., & Sozrykoevna, S. (2015). The Innovative Business Model Canvas in the System of Effective Budgeting, 11(7), 290–296.
<https://doi.org/10.5539/ass.v11n7p290>
- Fayolle, A., & Gailly, B. (2015). on Entrepreneurial Attitudes and Intention : Hysteresis and Persistence, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- Fritscher, B., & Pigneur, Y. (2014). Visualizing Business Model Evolution with the Business Model Canvas : Concept and Tool. <https://doi.org/10.1109/CBI.2014.9>

- Fruchter, R. (2001). Dimensions of Teamwork Education *, *17*, 426–430.
- Gerba, D. tessema. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. <https://doi.org/10.1108/20400701211265036>
- Heinonen, J., & Poikkijoki, S. (2006). An entrepreneurial-directed approach to entrepreneurship education : mission impossible ? *Journal of Management Development*, *25*(1), 80–94. <https://doi.org/10.1108/02621710610637981>
- Hermawan, A., & Pravitasari, J. (2013). Business Model Canvas (Kanvas Model Bisnis).
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2008). *Entrepreneurship*.
- Hutasuhut, S. (2018). The Roles of Entrepreneurship Knowledge, Self-Efficacy, Family, Education, and Gender on Entrepreneurial Intention. *Dinamika Pendidikan*, *13*(1), 90–105. <https://doi.org/10.15294/dp.v13i1.13785>
- Indarti, N., & Rostiani, R. (2008). Intensi Kewirausahaan Mahasiswa : Studi Perbandingan Antara Indonesia , Jepang dan Norwegia Intensi Kewirausahaan Mahasiswa : Studi Perbandingan Antara Indonesia , Jepang dan Norwegia. *Jurnal Ekonomika dan Bisnis Indonesia*, *23*(4), 1–27.
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial Intention among Malaysian Undergraduates. *International Journal of Business and Management*, *4*(10), 54–60. <https://doi.org/10.5539/ijbm.v4n10p54>
- Jakubczak, J., & Rakowska, A. (2013). the Role of Education and Culture in the Development, 997–1004.
- James O Fiet. (2000). The Theoretical Side of Teaching Entrepreneurship. *Journal of Business Venturing*, *16*, 1–24.
- Jose Sanchez. (2011). The influence of entrepreneurial competencies on small firm performance. *Revista Latinoamericana de Psicología*, *7*(2), 239–254.
- Krueger, J. N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, *5*, 315–330.
- Kusmintarti, A., Thoyib, A., Maskie, G., & Ashar, K. (2016). Entrepreneurial characteristics as a mediation of entrepreneurial education influence on entrepreneurial intention. *Journal of Entrepreneurship Education*, *19*(1), 24–37.
- Küttim, M., Kallaste, M., Venesaar, U., & Kiis, A. (2014). Entrepreneurship Education at University Level and Students' Entrepreneurial Intentions. *Procedia - Social and Behavioral Sciences*, *110*, 658–668. <https://doi.org/10.1016/j.sbspro.2013.12.910>
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship: Theory and Practice*, *33*(3), 593–617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, *7*(2), 195–218. <https://doi.org/10.1007/s11365-010-0154-z>
- Martin, B., McNally, J. J., & Kay, M. (2013). Examining the Formation of Human Capital in Entrepreneurship : A Meta-Analysis of Entrepreneurship Education Outcomes. *Journal of Business Venturing*, *28*(2), 211–224. <https://doi.org/10.1016/j.jbusvent.2012.03.002>Elsevier
- Michael, J. (2006). Where 's the evidence that active learning works ?, *30*, 159–167. <https://doi.org/10.1152/advan.00053.2006>.
- Mikic, M., Sopta, M., & Horvatinovic, T. (2018). the Role of Entrepreneurial Education in the Development of Entrepreneurship. *Casopis Za Ekonomiju I Trzisne Komunikacije*, *8*(2), 385–395. <https://doi.org/10.7251/EMC1802385M>
- Murtini, W. (2008). Success Story Sebagai Pendekatan Pembelajaran Kewirausahaan. *Varia*

- Pendidikan*, 20(2), 173–183.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2017). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 5079(August), 1–19. <https://doi.org/10.1080/03075079.2017.1365359>
- Nursito, S., & Nugroho, A. J. S. (2013). Analisis pengaruh interaksi pengetahuan kewirausahaan dan efikasi diri terhadap intensi kewirausahaan. *Kiat Bisnis*, 5(3), 201–211.
- Osterwalder, A. (2004). The Business Model Ontology A Proposition in a Design Science Approach. de Université de Lausanne. from; <http://eprints.uanl.mx/5481/1/1020149995.PDF>
- Osterwalder, A., & Pigneur, V. (2010). *Business Model Generation A Handbook for Visionaries, Game Changers, and Challengers*.
- P. Kyrp. (2003). Entrepreneurship Pedagogy-The Current Public and Some Future Expectations. In *In the 3rd European Summer University*.
- Patricia, & Silangen, C. (2016). The Effect of Entrepreneurship Education on Entrepreneurial Intention in Indonesia. *DeReMa Jurnal Manajemen*, 11(1), 67–86.
- Premand, P., Brodmann, S., Almeida, R., Grun, R., & Mahdi Barouni. (2016). Entrepreneurship Education and Entry into Self-Employment among University Graduates. *World Development*.
- Pretorius, M. (2001). “A training model to enhance micro and small business start-ups in South Africa.” Pretoria.
- Pretorius, M., Nieman, G., & van Vuuren, J. (2005). Critical evaluation of two models for entrepreneurial education. *International Journal of Educational Management*, 19(5), 413–427. <https://doi.org/10.1108/09513540510607743>
- Purwana, D., Suhud, U., & Wibowo, S. F. (2018). Determinant Factors of Students’ Entrepreneurial Intention: A Comparative Study. *Dinamika Pendidikan*, 13(1), 1–13.
- Rae, D. (2011). Entrepreneurial learning : a practical model from the creative industries
Entrepreneurial learning : a practical model from the creative industries.
<https://doi.org/10.1108/00400910410569614>
- Raposo, M., & Paço, A. (2011). Entrepreneurship education : Relationship between education, 23(2001), 453–457.
- Robles, L., & Zárraga, M. (2015). Key Competencies for Entrepreneurship. *Procedia Economics and Finance*, 23(October 2014), 828–832. [https://doi.org/10.1016/S2212-5671\(15\)00389-5](https://doi.org/10.1016/S2212-5671(15)00389-5)
- Roxas, B. (2014). Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected South-east Asian business students. *Journal of Education and Work*, 27(4), 432–453. <https://doi.org/10.1080/13639080.2012.760191>
- Roxas, B. G., Cayoka-, R. P., & Jesus, R. M. de. (2008). Entrepreneurial Knowledge and its Effects on Entrepreneurial Intentions : Development of a Conceptual Framework. *Asia-Pacific Social Science Review*, 8(2), 61–77.
- Sirelkhatim, F., & Gangi, Y. (2015). Entrepreneurship education : A systematic literature review of curricula contents and teaching methods, 1–11.
<https://doi.org/10.1080/23311975.2015.1052034>
- Solesvik, M. Z. (2019). Entrpreneurial Competencies and Intentions: The Role of Higher Education. *Forum Scientiae Oeconomia*, 7(1), 9–23. <https://doi.org/10.23762/FSO>
- Soliha, *Eius, Hubeis, A. V. S., & Maulana, A. (2014). Analisis Model Bisnis Pada KNM Fish Farm dengan Pendekatan Business Model Canvas (BMC) Business Model Analysis of KNM Fish Farm with Business Model Canvas (BMC) Approach. *J Sosek KP*, 9(2), 185–194.

- Suryana, Y., & Bayu, K. (2010). *Kewirausahaan : pendekatan karakteristik wirausahawan sukses*. Jakarta: Kencana Predana Media Group.
- Toro-jarrín, M. A., Ponce-jaramillo, I. E., & Güemes-castorena, D. (2016). Technological Forecasting & Social Change Methodology for the of building process integration of Business Model Canvas and Technological Roadmap, *110*, 213–215.
- Türko, E. S. (2016). Business plan vs business model canvas in entrepreneurship trainings: A comparison of students' perceptions. *Asian Social Science*, *12*(10), 55–62.
<https://doi.org/10.5539/ass.v12n10p55>

- 99+
- Compose
- Mail
- Inbox 1,671
- Starred
- Snoozed
- Important
- Sent
- Drafts 16
- Categories
- Social 234
- Updates 670
- Forums
- Promotions 416
- More

Labels

[CP] Editor Decision Inbox x



Nur Hidayanto Pancoro Setyo Putro <nur_hidayanto@uny.ac.id>
to me

Thu, Jan 23, 2020, 5:18 AM

Dear - Saidun - Hutasuhut,

We have reached a decision regarding your submission to Jurnal Cakrawala Pendidikan, "INTENTION LEVEL OF STUDENT ENTREPRENEURSHIP; THE IMPACT OF CANVAS BUSINESS MODEL LEARNING (BMC)".

However we require you to revise your manuscript. Please see notes from the reviewer, and also the comments in the soft-copy of your article. You can download these from your dashboard account.

On behalf of the editorial board,
Nur Hidayanto Pancoro Setyo Putro
(Scopus ID: 57194874971) Universitas Negeri Yogyakarta
nur_hidayanto@uny.ac.id
nhd

Cakrawala Pendidikan
<http://ejournal.uny.ac.id/index.php/cp>

IMPACT OF BUSINESS MODELS CANVAS LEARNING ON IMPROVING LEARNING ACHIEVEMENT AND ENTREPRENEURIAL INTENTION

¹⁾Saidun Hutasuhut, ²⁾Irwansyah, ³⁾Agus Rahmadsyah, ⁴⁾Reza Aditia
<sup>1), 2), 3, 4), Universitas Negeri Medan, Medan, Indonesia
e-mail: saidun@unimed.ac.id</sup>

Abstract : Higher education still not optimal in producing graduates in entering the workforce or creating jobs. Undergraduate unemployment rate is higher than national unemployment. Entrepreneurship education is a way to overcome it. However, what the best entrepreneurship education model has not been agreed among researchers. This study examines the application of Business Model Canvas (BMC) on enhancing student achievement and student entrepreneurial intentions and the interaction of entrepreneurial learning achievement levels and the application of BMC on entrepreneurial intentions. The method used in this research is quasi-experiment by assigning two classes of entrepreneurship courses at the Faculty of Economics, Medan State University. One class as an experimental class (BMC) and one control class. Hypothesis testing with the t-test and ANOVA tests. The findings showed the average entrepreneurial learning achievement of the BMC class was 12.52% higher. Entrepreneurial intentions of the BMC class was only 6.15% higher. BMC is proven to be positive and significantly improve learning achievement. The level of learning achievement is proven to be positive and significantly increase entrepreneurial intentions. However, BMC learning has not been proven to increase entrepreneurial intentions. The results of this study are useful for entrepreneurial instructors to design learning that can increase entrepreneurial intentions

Keywords : *BMC, entrepreneurial intention, learning outcome,*

Abstrak : Kemampuan Lulusan perguruan tinggi Indonesia bersaing atau menciptakan lapangan kerja belum optimal. Tingkat pengangguran sarjana justru lebih tinggi dibandingkan pengangguran nasional secara total. Selama ini pendidikan kewirausahaan telah diselenggarakan untuk mengatasinya. Akan tetapi model pendidikan kewirausahaan seperti apa belum ada kesepakatan para peneliti. Penelitian ini menguji dampak penerapan pembelajaran kewirausahaan Business Model Canvas (BMC) terhadap peningkatan prestasi belajar dan intensi kewirausahaan mahasiswa dan bagaimana interaksi tingkat prestasi belajar kewirausahaan dan penerapan BMC terhadap intensi kewirausahaan. Metode yang digunakan dalam penelitian ini adalah quasi eksperimen dengan menetapkan dua kelas mata kuliah kewirausahaan di Fakultas Ekonomi Unimed. Satu kelas sebagai kelas eksperimen (kelas BMC) dan satu kelas kontrol. Pengujian hipotesis dengan uji "t" dan anova. Temuan menunjukkan rata-rata prestasi belajar kewirausahaan kelas BMC lebih tinggi 12,52% dari pada kelas kontrol. Intensi kewirausahaan kelas BMC skor rata-ratanya hanya lebih tinggi 6,15%. Pembelajaran kewirausahaan dengan BMC terbukti positif dan signifikan dapat meningkatkan prestasi belajar. Tingkat prestasi belajar terbukti positif dan signifikan dapat meningkatkan intensi kewirausahaan. Akan tetapi pembelajaran BMC tidak terbukti dapat meningkatkan intensi kewirausahaan. Hasil penelitian ini berguna bagi pengajar kewirausahaan untuk merancang pembelajaran kewirausahaan yang dapat meningkatkan intensi kewirausahaan.

Keywords : *BMC, intensi kewirausahaan, prestasi belajar*

INTRODUCTION

Higher education, only able to produce job seekers, and very rarely are willing and able to create jobs, both for themselves and others. Even the job seekers produced are not ready for use, both in terms of knowledge, skills, and attitudes. So that tertiary graduates prefer to look for work rather than create their jobs. This condition causes the unemployment rate at the undergraduate level in February 2018 to be 6.31%, higher than the national total of 5.13% and in February 2019 the unemployment rate at the undergraduate level also remains higher, at 6.24% and nationally total of 5.01% (BPS, 2019). So the bachelor's program as explained in the Law of Republic of Indonesia number 12 year of 2012 article 18 paragraph 2 concerning Higher Education is responsible to prepare students to be cultured intellectuals and/or scientists, able to enter and/or create jobs, and able to develop themselves into professionals yet works well.

This phenomenon is the impact that the entrepreneurial intentions of Indonesian students are still weak (Indarti dan Rostiani, 2008). Meanwhile, Krueger dan Carsrud (1993) state that entrepreneurial intentions are the best predictors for entrepreneurial actors. That is why entrepreneurial intentions urgently to be known and improved. Entrepreneurship education is vital to help increase entrepreneurial intentions (Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2017). Entrepreneurship education provides knowledge and influences students' mindset. Not only that, entrepreneurship education can influence the attitudes and aspirations of young people towards entrepreneurship. (Robles & Zárraga, 2015). Furthermore, entrepreneurship knowledge (learning achievement) possessed a significant positive correlation with entrepreneurial intentions (Dogan & Ebru, 2015). Meta analysis result conducted by Mikic, Sopta, & Horvatinovic, (2018) also shows a positive relationship between entrepreneurship education and entrepreneurial intentions, this confirms the success of the current entrepreneurship education program and the importance of further enhancing and developing these programs.

Globally, entrepreneurship education is the fastest-growing field of education (Sirelkhatim & Gangi, 2015). In the European Union introduces high-quality entrepreneurship education to equip knowledge, and enhance the attractiveness of entrepreneurial careers to young people (Jakubczak & Rakowska, 2013). In Indonesia,

efforts to foster entrepreneurial enthusiasm were carried out through Presidential Instruction of the Republic of Indonesia Number 4, 1995 concerning the "National Movement to Promote and Cultivate Entrepreneurship." In 2008 the Ministry of Cooperatives and SMEs launched the National Shoot Entrepreneurship Movement program for high school and tertiary students (Murtini, 2008). Then since 2009, universities in Indonesia must put entrepreneurship courses into the curriculum as compulsory subjects in 2 semesters. However, the degree to which entrepreneurship education affects students is still a matter of debate in various circles (Fiet, 2000). The debate is related to the accuracy and effectiveness of entrepreneurial teaching methods (Westhead, Storey, & Martin, 2010). Čapienė & Ragauskaitė (2018) supports entrepreneurial teaching methods by increasing collaboration between entrepreneurship education stakeholders and bringing them closer to the business environment. Kyro (2003) states entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge and entrepreneurship. Entrepreneurship learning at the university examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006). Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana, D., Suhud, U., & Wibowo, S., 2018).

The role of entrepreneurship education in increasing entrepreneurship is frequently essential. Although until now there has been no research that states what learning models are the most effective in increasing entrepreneurial intentions, there are at least two ways that can be done in teaching entrepreneurship, namely through the business plan model and Business Model Canvas. In 2004, Alexander Osterwalder introduced the Business Model Canvas (BMC). BMC is an abstract concept of a business model that represents business strategies and processes (Pigneur, 2010). BMC is a tool to describe business models based on nine elements (Osterwalder, 2004; Fritscher & Pigneur, 2014). This model illustrates and visualizes business ideas that are planned and suitable for innovative startup companies (Alias, Goudz, Jawale, & Noche, 2015). Türko (2016) has conducted research on students' perceptions of entrepreneurial learning that applies the business plan model and BMC. The result, 62% of students stated that it was difficult to prepare on business plan model because it was more complicated, longer and tedious. Meanwhile, the BMC is easier to understand because business logic has been summarized in BMC. BMC is able to explain business

value and feasibility propositions through concise logic. Coes (2014) also explained the power of BMC being able to visually represent business models, the simplicity of designing and communicating business models to employees, partners and customers. Fritscher & Pigneur (2014) added that the advantages of BMC are visual modelling methods that can capture the business model of a company. Research on BMC has so far been limited to its benefits in preparing business plans, and no research has been found that examines the role of BMC in increasing entrepreneurial intentions.

This study examines the learning role of BMC through the final task of making a business plan on one page with nine business area blocks. The goodness of this model can be used for each business model. Another advantage is that students are required from the beginning to know who their business partners are, the main activities of the business, the value offered, channels, customer segmentation, key resources, cost structures and business profit potential. Through this BMC, students from the beginning are more realistic and comprehensive in understanding a business. Therefore, this is thought to increase entrepreneurial intentions.

METHOD

This research uses the quasi-experimental method carried out on the campus of the Faculty of Economics, Medan State University. This study is based on constructivist learning theories that demand students' independence to formulate a business idea, design business, and report it. Mahasiswa diberi kesempatan untuk mengatur proses belajar sendiri untuk menyelesaikan tugas bisnis plan. Students are allowed to set their learning process to complete business plan tasks. The study population was all entrepreneurship classes at the Faculty of Unimed in the odd semester of 2018, amounting to 15 classes. Each class has a relatively homogeneous condition because it is in semester V and has not gotten an entrepreneurship course in the previous semester. Class samples were determined as many as two classes utilizing purposive sampling with consideration of equal teaching staff. One class as a BMC treatment (experimental class) and the other class as a control class did not apply BMC, determined by simple random sampling.

Data collection techniques used were instruments consisting of; (a) instrument (test) of entrepreneurial learning outcomes, and (b) entrepreneurial intentions (adopted from Liñán & Chen, 2009; Liñán et al., 2011) on a scale of 1-7. A score of 1 (one) describes "very weak," and a score of 7 (seven) describes "very strong." Before being distributed, the learning achievement test instrument was tested to ensure validity. Normality and homogeneity tests are carried out to ascertain whether the data is normally distributed and homogeneous as a condition of using a hypothesis test tool. To measure the impact of BMC entrepreneurship learning, researchers using "t-test" and "anova test". The tool for running statistical test is using SPSS version 24..

Table1. Variable and Indicator

No	Variable	Indicator	Item
1	Entrepreneurship learning outcomes	<ul style="list-style-type: none"> • Business opportunities, • Entrepreneurial character • Entrepreneurial process • Resources • Business planning 	5, 14 3,4,7,8,9, 12, 16 10,17 1, 2, 11, 15 6, 13, 18
2	Entrepreneurial intension	<ul style="list-style-type: none"> • Work orientation • Readiness to start a business • Entrepreneurial determinatiion 	1,2 3,6 4, 5

RESULT & DISCUSSION

Result

The number of questions used to measure the level of entrepreneurial knowledge of students was 17 multiple choice items. Moreover, that to find out students' ability to build a business, an assignment is given to build business plans in groups. Students first tested the questions. From 20 multiple choice items tested, there were 17 items valid (with criteria $r_{pbis} > 0.361$). Then from the 6 statement items used to measure student entrepreneurial intentions, all of them can be used, seen from the validity with the lowest Corrected Item-Total Correlation score of 0.681 and the highest 0.824 (with criteria > 0.30) and Alpha Cronbach 0.912 (with criteria $> 0, 60$).

Students Response Toward Tools and Implementation of BMC Learning

The principle of the reaction of BMC learning is seen from the responses given by students to the learning instruments and the application of BMC, and the results are presented in Table 2.

Tabel 2 Student Responses to BMC Learning Instruments and Implementation

Aspects	Average Response (%)	
	Happy	Unhappy
Feelings of "Happy or Unhappy" Respondents to the component; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	100	0
"New or Not New" respondents' opinions of the components; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	New	Not new
	85	15
"Clear or Unclear" respondents' opinions about the language used in the Student Worksheet and learning achievement test	Clear	Unclear
	96,55	3,50
Respondents' opinions about "understanding or not understanding" of the Student Worksheet (Business Plan) and learning achievement test	Understand	Not Understand
	93	7,00
Respondents' opinions about the "exciting or unexciting" towards Student Worksheets (Business Plan) and test results	Exciting	Unexciting
	89,50	10,50

Criteria: 0 % - 20 %	Very low
21% - 40%	Low
41% - 60%	Medium
61% - 80%	High
81% - 100%	Very high

Student responses to the application of BMC viewed from 5 aspects; happy and unhappy feelings, aspects of learning new categories or not, the level of language clarity, the level of understanding, and the level of exciting or unexciting on the BMC Student Worksheet and learning outcomes test, the result is that every aspect received a positive response in 81% and above (category " very high"). Calculation results are presented in Table 2.

A pretest was performed to find out the initial conditions of the students' abilities, and the results are presented in Table 3. The data were proven to be normally distributed between the BMC class and the control class because each sig value > 0.05 both the Kolmogorov-Smirnov and Shapiro-Wilk tests. Then the homogeneity of the data is also fulfilled because of the sig Test of Homogeneity of Variances > 0.05 . These results state there is no difference in the ability of BMC class students with control classes.

Table 3. Test Results for Normality and Homogeneity in Pretest

		BMC Classroom	Control Classroom
Number		33	31
Average learning achievements		61,121	57,710
Normality test	Kolmogorov-Smirnov ^a	0,167	0,200
	Shapiro-Wilk	0,357	0,238
Test of Homogeneity of Variances	Levene Statistic	0,106	
	Sig.	0,746	

The next step is to test the assumptions of normality and homogeneity. Referring to Table 4, entrepreneurial learning achievement data for BMC class and control class are both normally distributed because they meet the Shapiro-Wilk requirements where sig values are 0.056 and 0.118 > 0.05 , respectively. Then the data on entrepreneurship intentions both the BMC class and the control class are both normally distributed because the Shapiro Wilk sig values are respectively 0.140 and 0.549 > 0.05 . Specifically for the normality of learning achievement only the Shapiro-Wilk criteria meet this requirement because of the small sample size.

Table 4 Test Results of Normality Learning Achievements and Entrepreneurial Intention

	Model	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Learning achievements s	BMC	0,252	22	0,001	0,914	22	0,056
	Control	0,242	20	0,003	0,924	20	0,118
Entrepreneurial Intention	BMC	0,126	22	0,200*	0,933	22	0,140
	Control	0,144	20	0,200*	0,960	20	0,549

Furthermore, the homogeneity test results of learning achievement data and entrepreneurial intention (Learning model and learning achievement level) both meet the requirements because of each sig value > 0.05 as presented in Table 5. Because the normality and homogeneity requirements of the data have been fulfilled, the next step is carried out hypothesis testing.

Table 5 Test of Homogeneity of Variances

Learning Achievements				
	Levene Statistic	df1	df2	Sig.
Learning Model	0,137	1	40	0,713
Level Learning achievements	0,181	1	40	0,673
Entrepreneurial Intention				
Learning Model	0,756	1	40	0,390
Level Learning achievements	0,479	1	40	0,493

Furthermore, to find out whether there are differences in entrepreneurship learning outcomes between the BMC class and the control class as the impact of using learning models (BMC application and conventional learning) and the impact of the level of learning achievement the t-test is performed. The results are presented in Table 5, where learning achievement between the BMC class and the control class fulfills the homogeneity requirements because the sig values are respectively 0.713 and 0.673 $>$ of 0.05. Likewise, the students' entrepreneurial intentions also meet the data criteria of homogeneity because each sig value > 0.05 . Then the test results of differences in learning achievement based on the output "Independent Samples Test" in the "Equal variances assumed" section known sig (2-tailed) value of 0.033 $<$ 0.05, (see Table 6) means that there are significant differences in BMC class learning outcomes with control.

Table 6 Independent Samples Test, Learning Achievements

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning achievements	Equal variances assumed	0,137	0,713	2,206	40	0,033	7,795	3,534
	Equal variances not assumed			2,211	39,880	0,033	7,795	3,526

The difference in entrepreneurship learning achievement between the BMC class and the control class based on the average BMC class is 12.52% higher than the control class (see Table 7).

Table 7 Learning Achievements by Class Group

	Model	N	Mean	Std. Deviation	Std. Error Mean
Learning achievements	BMC	22	70,046	11,668	2,488
	Control	20	62,250	11,177	2,499

Entrepreneurship Intention Test Results BMC class with control class(conventional) seen from the total mean is not significantly different, where the average total BMC class is 37,682 and the control class is 35.50 with a difference of 6.15% (see Table 8).

Table 8 Entrepreneurial Intention Based on Class and Level of Learning Achievements

Model	level of learning Achievements	Mean	Std. Deviation	N
BMC	Low	35,545	2,841	11
	High	39,818	1,991	11
	Total	37,682	3,242	22
Control	Low	34,600	2,271	10
	High	38,400	1,713	10
	Total	36,500	2,763	20
Total	Low	35,095	2,567	21
	High	39,143	1,957	21
	Total	37,119	3,046	42

Hypothesis test results of the impact of the application of the BMC model and the effect of entrepreneurial learning outcomes on entrepreneurial intentions are presented in Table 9. It is known that the Corrected Model shows a sig value of $0,000 < 0.05$, meaning that the BMC learning model and the level of entrepreneurial learning achievement together prove to have a significant effect on intention entrepreneurship. The contribution of learning models and the level of entrepreneurial knowledge in influencing entrepreneurial intentions is seen from the R Squared value of 49.2%.

Tabel 9 Test of Between-Subjects Effects.

Dependent Variable: Entrepreneurial Intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	187,241 ^a	3	62,414	12,278	0,000
Intercept	57649,870	1	57649,870	11341,136	0,000
Model	14,632	1	14,632	2,878	0,098
LevelLearning Achievements	170,681	1	170,681	33,577	0,000
Model *	0,585	1	0,585	0,115	0,736
LevelLA					
Error	193,164	38	5,083		
Total	58249,000	42			
Corrected Total	380,405	41			

a. R Squared = 0,492 (Adjusted R Squared = 0,452)

Partially the BMC model was not proven to be able to increase entrepreneurial intentions because the sig value was $0.98 > 0.05$. However, the high and low levels of entrepreneurial learning achievement proved to significantly influence entrepreneurial intentions because the sig value of $0,000 < 0.05$. Then the results of the interaction test of learning models (BMC and control) and the level of entrepreneurial learning achievement towards entrepreneurial intentions are not proven, because the sig value of $0.736 > 0.05$.

Discussion

The essence of learning entrepreneurship by applying business Model Canvas is making a business plan. The business plan is summarized in 9 blocks. Based on the canvas, a more detailed business plan has been prepared. Before preparing a business plan, students are equipped with various business-related knowledge and skills such as; the ability to recognize business opportunities, the ability to take advantage of these opportunities, the ability to organize needed resources, the ability to think critically and creatively, and the ability to prepare financial reports. How to fill each block and the order in which to fill the blocks are presented in Figure 1.

8. Key Partnerships: Some activities are outsourced and some resources are acquired outside the enterprise	7. Key Activities: ...by performing a number of Key Activities	2. Value Propositions: It seeks to solve customer problems and satisfy customer needs with value propositions	4. Customer Relationships: Customer relationships are established and maintained with each Customer Segment	1. Customer Segment: An organization serves one or several Customer Segments
	6. Key Resource; Key resources are the assets required to offer and deliver the previously described elements...		3. Channels: Value propositions are delivered to customers through communication, distribution, and sales Channels.	
9. Cost Structure: The business model elements result in the cost structure.		5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers		

Figure 1 BMC: nine business model building blocks, Osterwalder & Pigneur (2010)

Knowledge and skills about a business that students already have are very helpful for filling every area of the nine BMC blocks and preparing business plans. The preparation of a business plan starts by finding a business idea. The business idea must be based on creativity and have favorable prospects. Then the business idea was poured in one sheet of canvas paper. Entrepreneurship learning with BMC makes it easy for students to understand a business comprehensively. Students who have no experience of business find it difficult to draw up business plans. However, with this BMC pursuit, students are required to be able to fill each of the nine existing blocks. Each block is related to one another. If students can fill all nine blocks and are related to one another, they have understood the business plan that they will realize. The stages are filled in the following sequence.

First, the Customer segment block, at this stage, students must be able to determine who their customer segment is. The customer segment is to whom the goods or services we offer. Previously it must be known what their needs are not being met and they need. Business ideas usually arise from opportunities. Opportunities, in this case, are the needs of consumers who have not been met, whether they know or do not know it. Soliha, Hubeis, & Maulana, (2014) explains an organization must decide which segments are served and which are ignored, after that, then design the right business model according to needs.

If consumers are not aware of their needs, the seller will introduce them so that consumers are aware of them. Here students need creative ideas to be able to find new business opportunities. Recognizing potential customers can be from various perspectives such as; geographical, demographic, and psychographic. These different characteristics make the type of needs they will also be different.

Second, Value propositions, students must be able to determine the value that is offered to consumers, and that cannot be given by competitors. The ability of new businesses to enter the market and be able to compete with businesses that already exist in the market lies in the added value or something unique that they offer to consumers. Consumers accept this, and they feel it is a necessity and then makes a transaction. Hermawan & Pravitasari, (2013) states that if the Value Propositions offered can address the needs or satisfy the needs of consumers can divert the attention of consumers from one company to another company.

Third, Chanel, in this block, students must be able to determine how to deliver or sell products/services to buyers. What media or means do we use to sell our products to consumers? The media used must be in accordance with the development of information technology or digital-based such as Google, Yahoo, Altavista, Exclopedia, Wikipedia, and others. The market orientation that is designed should not be limited to the local market but rather to a broader national market, even globally depending on the nature of the product it has.

Fourth, Customer Relationships, in this case, students must be able to design how to guarantee good relations with consumers. Maintaining good relations with consumers is one of the business strategies that students must master from the start. Fifth, Revenue Stream, students must know the primary source of income for the planned business. The main income comes from the sale of their products. Besides, that income can come from selling products from third parties. Sixth, Key Resources, from the beginning, students must be able to determine the resources that must be had to run the main activities of the business. Key resources can be in the form of physical resources (buildings, vehicles, equipment), money, intellectual assets (brands, copyrights, patents, customer databases), and human resources.

Seventh, Key Activities, in this case, students must know the main activities in their business. If students already know the main activities in business, it means that their mastery over the planned business is better. Key activities that determine the success of the business in delivering value propositions to the customer segment. Eighth, Key Patnership, this is related to who the business partners are suppliers of cheap and quality goods, freight forwarding services (JNE, TNT, post offices, and others), advertising agencies, marketplaces (tokopedia, bukalapak, zalora, Shoope, JD .id, etc.). The eighth final step, Cost structures, from the beginning, students can already know what types of costs must be incurred. If the type of trading business consists of the cost of purchasing goods, advertising costs, shipping costs, internet costs, and company employee costs. If students are able to fill the nine blocks that are well available and related to one another, then they already understand the business as a whole. This knowledge and experience will benefit them if they realize their business both when they are students and after graduating from college.

BMC learning received a good response from students. All students said BMC learning was fun because they could collaborate in designing business independently. As many as 85% of students stated that BMC learning was new and different from previous learning. Furthermore, BMC learning is clear, easy to understand, and enjoyable. Of the five aspects observed, 81% of students responded above and are in the "very high" category. When viewed by student activities, they are encouraged to participate actively both individually and in groups. Learning like this makes them able to work in teams (teamwork), each team member has the responsibility to complete their group assignments.

Then, when viewed from the level of understanding, it can be concluded that the understanding of students is excellent because they can pour business ideas on a canvas sheet by filling in every block and its contents related between one block and another block. Examples of student group work are presented in Figure 2. From the students' assignments, it is known that they can find creative-based business ideas, can set customer segments and can show value propositions or the advantages of their products or services compared to competitors. Students have also been able to determine what strategies will be taken to deliver products or services to prospective buyers or customers. In general, the ability of

students in each group is relatively the same. This BMC entrepreneurial learning experience will be useful later if they build their businesses or work with others.



Figure 2 Examples of BMC Students' assignment

Based on the results of data analysis, as reported in Table 8, it was found that BMC learning and entrepreneurial learning outcomes together proved to have a significant effect on entrepreneurial intentions. The results of this study support research (Ismail et al., 2009; Kusmintarti, Thoyib, Maskie, & Ashar, 2016) which states entrepreneurship courses or training, (Tessema, Gerba, 2012; Premand, Brodmann, Almeida, Grun, & Mahdi Barouni, 2016); Patricia & Silangen, 2016 ; Nowiński et al., 2017) entrepreneurship education contributes to entrepreneurial intentions. Then Dehghanpour, (2013) added that the entrepreneurship course that was followed could increase entrepreneurial intentions. Furthermore, Kusmintarti et al., (2016) added that people who participated in entrepreneurship training had the provision of business ideas and social networking and had the desire to build a business going forward. This research provides a theoretical foundation for the development of entrepreneurial intentions through entrepreneurial learning.

Entrepreneurship education is increasingly attracting the attention of researchers. Raposo & Paço, (2011) state that entrepreneurship education provides knowledge in the form of; (a) the ability to recognize opportunities, (b) the ability to take advantage of opportunities, generate new ideas and find needed resources, (c) the ability to create and operate new devices, and (d) the ability to think critically and creatively. According to Jose

Shanchez, (2011), in addition to business knowledge and skills, entrepreneurship education also develops beliefs, values, and attitudes, and aims to make students confident and consider entrepreneurship as an alternative job or as unemployment. Furthermore, Ismail et al., (2009) stated that the entrepreneurship course, Fayolle & Gailly, (2015) added that entrepreneurship education has a positive effect on students who either have low or non-existent entrepreneurial intentions.

The completion of one entrepreneurship course can increase entrepreneurial intentions by 1.3 times (Dehghanpour, 2013). Then Martin, McNally, & Kay, (2013) found a significant relationship between Entrepreneurship Education and Training (EET) with the preparation of entrepreneurial human capital assets. Kusmintarti et al., (2016) stated similarly that students who participated in entrepreneurship training had the intention to build a new business in the future because they were equipped with business ideas and social networking. Previously Nursito & Nugroho, (2013) stated that entrepreneurship education could shape entrepreneurial knowledge and have a positive and significant impact on entrepreneurial intentions. Therefore, Barba-Sanches & Atienza-Sahuquillo, (2017) need to integrate entrepreneurship education with technical education to increase entrepreneurial intentions. The focus of entrepreneurship education is to develop entrepreneurial attitudes, skills, and entrepreneurial behavior (Dogan, 2015). The results of the latest research Solesvik, (2019) explains that business education positively influences the formation of entrepreneurial skills and competencies. Students who study business also exhibit higher levels of entrepreneurial intentions than those who do not participate in business education.

Čapienė & Ragauskaitė (2018) support the entrepreneurship teaching method by increasing collaboration between stakeholders in entrepreneurship education and getting closer to the business environment. Kyro (2003) states entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge, and entrepreneurship. Entrepreneurship learning in universities examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006). Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana et al. 2018).

Furthermore, the partial test results of the application of BMC have not been proven to increase entrepreneurial intentions. This means that there is no difference in the entrepreneurial intentions of students taught by BMC with the control class. So far, no research has been found that examines the effect of BMC learning on entrepreneurial intentions so that none can be used as a comparison. However, the use of BMCs in the field of financial management allows companies to identify customer needs, estimate the potential benefits and costs required (Dudin, Kutsuri, Jur, & Sozrykoevna, 2015). Furthermore, Crotty & Farren (2017) state that BMC learning is simple, clear, and how business strategy is centered on nine main business area blocks, and more importantly, encourages students or business people to think about how interactions and consequences occur.

Research conducted by Dewobroto, (2013) states that the use of Business Model Canvas can be a simple tool to produce an alternative strategy for the company to achieve financial viability. Then, Dudin, M. N., Lyasnikov, N. V. E., Leont'eva, L. S., Reshetov, K. J. E., & Sidorenko, V. N. (2015) stated that the use of the business model of the canvas model could create a competitive advantage in the agricultural industry due to the organizational features of the production and sales cycle. Toro-Jarrín, M. A., Ponce-Jaramillo, I. E., & Güemes-Castorena, D. (2016) also argued that Business Model Canvas identifies essential parts of the business, the simplicity of its application makes it more acceptable and disseminated. Furthermore, Baudier & Supérieur, (2017) states that BMC is expected to not only be able to improve organizational performance, enhance the ability of entrepreneurs to communicate, and innovate their business models but also as tools that are adapted for visualization, decision making, creative thinking, collaboration, and reflection.

Entrepreneurial learning, according to Fruchter, (2001), needs to change from traditional teaching practices centered on teaching to "knowing-what," to active learning with a focus on teaching to "know-why." BMC learning includes active and student-centered learning. Student-centered learning makes them more independent and responsible for finding solutions; educators play a role as mentors or facilitators (Doppelt, 2003). The advantages of active learning are very relevant in the field of entrepreneurship, where students have the goal to create and lead their projects, and become a favorite practice for teaching entrepreneurship (Åsvoll & Jacobsen, 2012). Rae, (2011) also proposes that

entrepreneurship education requires a holistic and activity-based approach. This model is useful for understanding learning material, practice, and personal development of social and group interactions. Active learning activities make academic results and higher motivation, and more in-depth understanding of content, and have been proven in several studies (Michael, 2006).

The next finding is that the level of entrepreneurial learning achievement has been proven to influence entrepreneurial intentions. This means that student entrepreneurship intentions will be higher if entrepreneurship learning achievement is high, and vice versa, entrepreneurial intentions will be lower in students with lower entrepreneurial learning achievements. High levels of student achievement, illustrating their mastery of entrepreneurial knowledge is higher. In general, entrepreneurial knowledge includes business planning, business development strategies, attitudes, and records and finance. Suryana & Bayu, (2010), explained that an entrepreneur must know the business to be initiated and knowledge of the business environment that will affect entrepreneurial activities; knowledge of roles and responsibilities; knowledge of personality and responsibilities; and the latest knowledge is knowledge about management and business organizations.

Mastery of entrepreneurial knowledge (learning achievement) is essential. Knowledge about entrepreneurship influences entrepreneurial intentions positively and significantly (Anggraeni & Harnanik, 2015; Hutasuhut, 2018; Dogan, 2015, 2015; Roxas, Cayoka, & Jesus, 2008). Mastery of entrepreneurial knowledge will increase the ability of students to run businesses. When he feels he has the ability, there will be an intention to run a business. Previous researchers such as (B. Roxas, 2014; Küttim, Kallaste, Venesaar, & Kiis, 2014) stated that entrepreneurship education significantly increased entrepreneurial knowledge. Entrepreneurial knowledge is the basis of entrepreneurial resources found in individuals (Hisrich, Peters, & Shepherd, 2008). The results of this research strengthen the theoretical foundation of the importance of providing education in higher education to build entrepreneurs. Entrepreneurship education can help and increase entrepreneurial awareness and acceptance as a valuable career choice (Mikic et al., 2018). Entrepreneurship education is also able to provide knowledge to recognize opportunities, take advantage of opportunities, create and operate new devices, and the ability to think critically and

creatively (Robles & Zárraga, 2015). Raposo & Paço, (2011) added that entrepreneurship education could be competencies and attitudes that can determine future carrier choices.

Further findings, this research did not succeed in proving an interaction between the application of the BMC model and the level of knowledge (entrepreneurial learning achievement) in shaping student entrepreneurial intentions. This is because partially, the BMC learning model does not have an impact on increasing entrepreneurial intentions even though the level of achievement has a partial impact. Although the application of BMC learning directly has not been proven to be able to increase the entrepreneurial intentions of students. However, this research succeeded in proving that the application of BMC can improve entrepreneurial learning outcomes and through moderation of the level of knowledge (learning achievement of entrepreneurship), is proven to increase entrepreneurial intentions. The results of this research strengthen the theoretical foundation of the importance of entrepreneurship education to increase knowledge about entrepreneurship in order to create a generation that is interested in entrepreneurship.

CONCLUSION

Application of Business Model Canvas (BMC) on entrepreneurial learning can be a positive response from students and can increase entrepreneurship learning outcomes, experimental class learning outcomes (BMC) 12.52% higher than the control class learning outcomes. However, the entrepreneurship intentions of BMC class students were not proven to be higher than the control class. However, together, the application of BMC and the level of entrepreneurial learning achievement can increase student entrepreneurial intentions. The class learning process that applies BMC can create a pleasant learning atmosphere for all students (100%) who feel understood 93% and feel drawn 89.5%. This research provides a theoretical foundation that the development of entrepreneurial intentions can be done through entrepreneurship education. Entrepreneurship education can increase knowledge (entrepreneurial learning achievement), and achievement levels can strengthen (moderate) BMC learning to increase entrepreneurial intentions. For this reason, universities are expected to be able to design practical and coherent entrepreneurial learning that combines conceptual learning and practical learning. This study has limitations in

duration and class of treatment, so it is possible to be reviewed again by adding a broader duration and class.

ACKNOWLEDGEMENT

The researcher thanked the Rector of Medan State University for financial assistance through the Lecturer Study Group Research Grant program and grateful also to the Dean of the Faculty of Economics for the research permission given and thanks to the students for their participation in this research.

REFERENCES

- Alias, C., Goudz, A., Jawale, M., & Noche, B. (2015, May). Generating a business model canvas for future-internet-based logistics control towers. In *2015 4th International Conference on Advanced Logistics and Transport (ICALT)* (pp. 257-262). IEEE.
- Anggraeni, B., & Harnanik, H. (2015). Pengaruh pengetahuan kewirausahaan dan lingkungan keluarga terhadap minat berwirausaha siswa kelas xi smk islam nusantara comal kabupaten pemalang. *Dinamika Pendidikan*, *10*(1), 42-52.
- Åsvoll, H., & Jacobsen, P. J. (2012). A case study: Action based Entrepreneurship education how experience problems can be overcome and collaboration problems mitigated. *Journal of Entrepreneurship Education*, *15*(SI), 75-97
- Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2017). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European Research on Management and Business Economics*, *24*(1), 53–61.
<https://doi.org/10.1016/j.iedeen.2017.04.001>
- Čapienė, A., & Ragauskaitė, A. (2018). Entrepreneurship education at university: innovative models and current trends, *2*, 284–291.
<https://doi.org/10.22616/rrd.23.2017.080>
- Coes, D. H. (2014). *Critically assessing the strengths and limitations of the Business Model Canvas* (Master's thesis, University of Twente).
- Crotty, Y., Kinney, T., & Farren, M. (2017). Using the Business Model Canvas (BMC) strategy tool to support the Play4Guidance online entrepreneurial game, *4*(1), 34–41.
- Dehghanpour, A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention : Study of educational system of Education + Training Article information : *Education + Training*, *55*(8/9), 868–884.
<https://doi.org/10.1108/ET-04-2013-0053>
- Dogan, & Ebru. (2015). the Effect of Entrepreneurship Education on Entrepreneurial Intentions of University Students in Turkey. *The Journal of Entrepreneurship*, *23*(1), 1–18. <https://doi.org/10.1177/0971355713513346>
- Doppelt, Y. (2003). Implementation and assessment of project-based learning in a flexible

- environment. *International journal of technology and design education*, 13(3), 255-272.
- Dudin, M. N., Kutsuri, G. N., Jur, I., & Sozrykoevna, S. (2015). The Innovative Business Model Canvas in the System of Effective Budgeting, 11(7), 290–296. From <https://doi.org/10.5539/ass.v11n7p290>.
- Dudin, M. N., Lyasnikov, N. V. E., Leont'eva, L. S., Reshetov, K. J. E., & Sidorenko, V. N. (2015). Business model canvas as a basis for the competitive advantage of enterprise structures in the industrial agriculture. *Biosciences Biotechnology Research Asia*, 12(1), 887-894. from <http://dx.doi.org/10.13005/bbra/1736>
- Fayolle, A., & Gailly, B. (2015). on Entrepreneurial Attitudes and Intention : Hysteresis and Persistence, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- Fiet, J. O. (2001). The theoretical side of teaching entrepreneurship. *Journal of business venturing*, 16(1), 1-24.
- Fritscher, B., & Pigneur, Y. (2014). Visualizing Business Model Evolution with the Business Model Canvas : Concept and Tool. <https://doi.org/10.1109/CBI.2014.9>
- Fruchter, R. (2001). Dimensions of teamwork education. *International Journal of Engineering Education*, 17(4/5), 426-430.
- Gerba, D.Tessema (2012), "Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia", *African Journal of Economic and Management Studies*, Vol. 3 No. 2, pp. 258-277. From <https://doi.org/10.1108/20400701211265036>
- Heinonen, J., & Poikkijoki, S. (2006). An entrepreneurial-directed approach to entrepreneurship education : mission impossible ? *Journal of Management Development*, 25(1), 80–94. <https://doi.org/10.1108/02621710610637981>
- Hermawan, A., & Pravitasari, R. J. (2010). Business Model Canvas. *Akselerasi. id*. From akselerasi.id/media/Materi_13__Busi_ness_Model_Canvas.pdf
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2008). *Entrepreneurship*.
- Hutasuhut, S. (2018). The Roles of Entrepreneurship Knowledge, Self-Efficacy, Family, Education, and Gender on Entrepreneurial Intention. *Dinamika Pendidikan*, 13(1), 90–105. <https://doi.org/10.15294/dp.v13i1.13785>
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial Intention among Malaysian Undergraduates. *International Journal of Business and Management*, 4(10), 54–60. <https://doi.org/10.5539/ijbm.v4n10p54>
- Jakubczak, J., & Rakowska, A. (2013). the Role of Education and Culture in the Development, 997–1004.
- Jose Sanchez. (2011). The influence of entrepreneurial competencies on small firm performance. *Revista Latinoamericana de Psicología*, 7(2), 239–254.
- Kyro, P.. (2003). Entrepreneurship Pedagogy-The Current Public and Some Future Expectations. In *the 3rd European Summer University*.
- Kusmintarti, A., Thoyib, A., Maskie, G., & Ashar, K. (2016). Entrepreneurial characteristics as a mediation of entrepreneurial education influence on entrepreneurial intention. *Journal of Entrepreneurship Education*, 19(1), 24–37.
- Küttim, M., Kallaste, M., Venesaar, U., & Kiis, A. (2014). Entrepreneurship Education at University Level and Students' Entrepreneurial Intentions. *Procedia - Social and*

- Behavioral Sciences*, 110, 658–668. <https://doi.org/10.1016/j.sbspro.2013.12.910>
- Lima, M., & Baudier, P. (2017). Business model canvas acceptance among French entrepreneurship students: Principles for enhancing innovation artefacts in business education. *Journal of Innovation Economics Management*, (2), 159-183.
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship: Theory and Practice*, 33(3), 593–617. <https://doi.org/10.1111/j.1540-6520.2009.00318.x>
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, 7(2), 195–218. <https://doi.org/10.1007/s11365-010-0154-z>
- Martin, B. C., McNally, J. J., & Kay, M. J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28(2), 211–224. <https://doi.org/10.1016/j.jbusvent.2012.03.002>
- Michael, J. (2006). Where 's the evidence that active learning works ?, 30, 159–167. <https://doi.org/10.1152/advan.00053.2006>.
- Mikic, M., Sopta, M., & Horvatinovic, T. (2018). the Role of Entrepreneurial Education in the Development of Entrepreneurship. *Casopis Za Ekonomiju I Trzisne Komunikacije*, 8(2), 385–395. <https://doi.org/10.7251/EMC1802385M>
- Murtini, W. (2008). Success Story Sebagai Pendekatan Pembelajaran Kewirausahaan. *Varia Pendidikan*, 20(2), 173–183.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2017). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 5079(August), 1–19. <https://doi.org/10.1080/03075079.2017.1365359>
- Nursito, S., Julianto, A., & Nugroho, S. (2013). Analisis Pengaruh Interaksi Pengetahuan Kewirausahaan Dan Efikasi Diri Terhadap Intensi Kewirausahaan. *Kiat Bisnis*, 5(2), 148–158.
- Osterwalder, A. (2004). *The business model ontology a proposition in a design science approach* (Doctoral dissertation, Université de Lausanne, Faculté des hautes études commerciales).
- Patricia, & Silangen, C. (2016). The Effect of Entrepreneurship Education on Entrepreneurial Intention in Indonesia. *DeReMa Jurnal Manajemen*, 11(1), 67–86.
- Premand, P., Brodmann, S., Almeida, R., Grun, R., & Mahdi Barouni. (2016). Entrepreneurship Education and Entry into Self-Employment among University Graduates. *World Development*.
- Purwana, D., Suhud, U., & Wibowo, S. F. (2018). Determinant Factors of Students' Entrepreneurial Intention: A Comparative Study. *Dinamika Pendidikan*, 13(1), 1–13. <https://DOI: 10.15294/dp.v13i1.12971>.
- Rae, D. (2011). Entrepreneurial learning : a practical model from the creative industries Entrepreneurial learning : a practical model from the creative industries. <https://doi.org/10.1108/00400910410569614>
- Raposo, M., & Paço, A. (2011). Entrepreneurship education : Relationship between education, 23(2001), 453–457.
- Robles, L., & Zárraga, M. (2015). Key Competencies for Entrepreneurship. *Procedia*

- Economics and Finance*, 23(October 2014), 828–832. From [https://doi.org/10.1016/S2212-5671\(15\)00389-5](https://doi.org/10.1016/S2212-5671(15)00389-5)
- Roxas, B. G., Cayoka-, R. P., & Jesus, R. M. de. (2008). Entrepreneurial Knowledge and its Effects on Entrepreneurial Intentions : Development of a Conceptual Framework. *Asia-Pacifik Social Science Review*, 8(2), 61–77.
- Roxas, B. (2014). Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected South-east Asian business students. *Journal of Education and Work*, 27(4), 432–453. <https://doi.org/10.1080/13639080.2012.760191>
- Sirelkhathim, F., & Gangi, Y. (2015). Entrepreneurship education : A systematic literature review of curricula contents and teaching methods, 1–11. <https://doi.org/10.1080/23311975.2015.1052034>
- Solesvik, M. Z. (2019). Entrepreneurial competencies and intentions: The role of higher education. In *Forum Scientiae Oeconomia* (Vol. 7, No. 1, pp. 9-23). Wydawnictwo Naukowe Akademii WSB.
- Solihah, E., Hubeis, A. V. S., & Maulana, A. (2014). Analisis Model Bisnis Pada KNM Fish Farm Dengan Pendekatan Business Model Canvas (BMC). *Jurnal Sosial Ekonomi Kelautan dan Perikanan*, 9(2).
- Suryana, Y., & Bayu, K. (2010). *Kewirausahaan : pendekatan karakteristik wirausahawan sukses*. Jakarta: Kencana Predana Media Group.
- Toro-Jarrín, M. A., Ponce-Jaramillo, I. E., & Güemes-Castorena, D. (2016). Methodology for the of building process integration of Business Model Canvas and Technological Roadmap. *Technological Forecasting and Social Change*, 110, 213-225. From <https://doi.org/10.1016/j.techfore.2016.01.009>
- Türko, E. S. (2016). Business Plan Vs Business Model Canvas in Entrepreneurship Trainings: A Comparison of Students' Perceptions. *Asian Social Science*, 12(10), 55.
- Westhead, P., Storey, D. J., & Martin, F. (2010). Entrepreneurship & Regional Development : An International Outcomes reported by students who participated in the 1994 Shell Technology Enterprise Programme. *ENTREPRENEURSHIP & REGIONAL DEVELOPMENT*, (December 2014), 37–41. <https://doi.org/10.1080/08985620010018273>.

- 99+
- Compose
- Mail
 - Starred
 - Snoozed
 - Important
 - Sent
 - Drafts** 16
 - Categories
 - Social** 234
 - Updates** 670
 - Forums
 - Promotions** 416
 - More
- Chat
- Spaces
- Meet

Labels

[CP] Editor Decision: Accept Inbox x



Endah Retnowati, Ph.D <e.retno@uny.ac.id>
to me

Wed, Feb 19, 2020, 7:19 PM

Dear - Saidun - Hutasuhut,

We have reached a decision regarding your submission to Jurnal Cakrawala Pendidikan, "IMPACT OF BUSINESS MODELS CANVAS LEARNING ON IMPROVING LEARNING ACHIEVEMENT AND ENTREPRENEURIAL INTENTION".

Our decision is to: "Accept Your Manuscript".

We will send your manuscript to the copyeditor for preparing the format and layout, and afterwards you will be asked to give approval prior to publication.

Congratulations, and thank you for your kind attention.

Sincerely,

Endah Retnowati, Ph.D
Department of Mathematics Education

99+

Compose

Mail

Starred

Snoozed

Chat

Important

Spaces

Sent

Drafts 16

Meet

Categories

Social 234

Updates 670

Forums

Promotions 416

More

Labels

[CP] Update on your manuscript: missing references

Inbox x



Endah Retnowati <e.retno@uny.ac.id>
to me

Feb 21, 2020, 6:52 AM

Dear Bapak Saidun,

We have done further editing on your manuscript, as you can see attached. We found that there are six citations in the text that are missing references (see the yellow highlights). Please complete the reference list in the attached file or clarify.

Please send it back to this email.

Deadline: 23 February 2020

Regards,

Endah Retnowati

--
===

Endah Retnowati

Cognitive psychology, instructional design, mathematics education

IMPACT OF BUSINESS MODELS CANVAS LEARNING ON IMPROVING LEARNING ACHIEVEMENT AND ENTREPRENEURIAL INTENTION

Saidun Hutasuhut*, Irwansyah, Agus Rahmadsyah, & Reza Aditia

Universitas Negeri Medan, Indonesia

*e-mail: saidun@unimed.ac.id

Abstract : Indonesian university graduates skills in creating job opportunities or entering the workforce are still low. It can be seen from the facts that the undergraduate unemployment rate is still higher than the national unemployment rate. Although entrepreneurship education has been considered as one solution to this problem, the best entrepreneurship education model has not been agreed among researchers. This study examines the application of Business Model Canvas (BMC) on enhancing student achievement and student entrepreneurial intentions and the interaction of entrepreneurial learning achievement levels and the application of BMC on entrepreneurial intentions. The method used in this research is quasi-experiment by assigning two classes of entrepreneurship courses at the Faculty of Economics, Medan State University, one class as an experimental class (BMC) and the other class as the control class. Hypothesis testing was conducted with t-test and ANOVA. The findings showed that the average entrepreneurial learning achievement of the BMC class was 12.52% higher than that of the control class. Entrepreneurial intentions of the BMC class was only 6.15% higher than that of the control class. BMC is proven to be positive and significantly improves learning achievement. The level of learning achievement is proven to be positive and it significantly increases entrepreneurial intentions. However, BMC learning has not been proven to increase entrepreneurial intentions. The results of this study are useful for entrepreneurial instructors to design learning that can increase entrepreneurial intentions.

Keywords: *BMC, entrepreneurial intention, learning outcome*

PENGARUH PEMBELAJARAN *BUSINESS MODEL CANVAS (BMC)* TERHADAP PRESTASI BELAJAR DAN MINAT BERWIRASWASTA

Abstrak: Kemampuan lulusan perguruan tinggi Indonesia bersaing atau menciptakan lapangan kerja belum optimal. Tingkat pengangguran sarjana justru lebih tinggi dibandingkan pengangguran nasional secara total. Selama ini pendidikan kewirausahaan telah diselenggarakan untuk mengatasinya. Akan tetapi, belum ada kesepakatan para ahli perihal model pendidikan kewirausahaan. Penelitian ini menguji dampak penerapan pembelajaran kewirausahaan Business Model Canvas (BMC) terhadap peningkatan prestasi belajar dan intensi kewirausahaan mahasiswa dan bagaimana interaksi tingkat prestasi belajar kewirausahaan dan penerapan BMC terhadap intensi kewirausahaan. Metode yang digunakan adalah quasi eksperimen dengan menetapkan dua kelas mata kuliah kewirausahaan di Fakultas Ekonomi Unimed. Satu kelas sebagai kelas eksperimen (kelas BMC) dan satu kelas kontrol. Pengujian hipotesis dengan uji “t” dan anova. Temuan menunjukkan rata-rata prestasi belajar kewirausahaan kelas BMC lebih tinggi 12,52% dari pada kelas kontrol. Intensi kewirausahaan kelas BMC skor rata-ratanya hanya lebih tinggi 6,15%. Pembelajaran kewirausahaan dengan BMC terbukti positif dan signifikan dapat meningkatkan prestasi belajar. Tingkat prestasi belajar terbukti positif dan signifikan dapat meningkatkan intensi kewirausahaan. Akan tetapi, pembelajaran BMC tidak terbukti dapat meningkatkan intensi kewirausahaan. Hasil penelitian ini berguna bagi pengajar kewirausahaan untuk merancang pembelajaran kewirausahaan yang dapat meningkatkan intensi kewirausahaan.

Kata Kunci: *BMC, intensi kewirausahaan, prestasi belajar*

INTRODUCTION

Higher education, only able to produce job seekers, and very rarely are willing and able to create jobs, both for themselves and others. Even the job seekers produced are not ready for use, both in terms of knowledge, skills, and attitudes. So that tertiary graduates prefer to look for work rather than create their jobs. This condition causes the unemployment rate at the undergraduate level in February 2018 to be 6.31%, higher than the national total of 5.13% and in February 2019 the unemployment rate at the undergraduate level also remains higher, at 6.24% and nationally total of 5.01% (BPS, 2019). So the bachelor's program as explained in the Law of Republic of Indonesia number 12 year of 2012 article 18 paragraph 2 concerning Higher Education is responsible to prepare students to be cultured intellectuals and/or scientists, able to enter and/or create jobs, and able to develop themselves into professionals yet works well.

This phenomenon is the impact that the entrepreneurial intentions of Indonesian students are still weak (Indarti & Rostiani, 2008). Meanwhile, Krueger & Carsrud (1993) state that entrepreneurial intentions are the best predictors for entrepreneurial actors. That is why entrepreneurial intentions urgently to be known and improved. Entrepreneurship education is vital to help increase entrepreneurial intentions (Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2017). Entrepreneurship education provides knowledge and influences students' mindset. Not only that, entrepreneurship education can influence the attitudes and aspirations of young people towards entrepreneurship (Robles & Zárraga, 2015). Furthermore, entrepreneurship knowledge (learning achievement) possessed a significant positive correlation with entrepreneurial intentions (Doğan, 2015). Meta analysis result conducted by Mikic, Sopta, & Horvatinovic (2018) also shows a positive relationship between entrepreneurship education and entrepreneurial intentions, this confirms the success of the current entrepreneurship education program and the importance of further enhancing and developing these programs.

Globally, entrepreneurship education is the fastest-growing field of education (Sirelkhathim & Gangi, 2015). In the European Union introduces high-quality entrepreneurship education to equip knowledge, and enhance the attractiveness of entrepreneurial careers to young people (Jakubczak & Rakowska, 2013). In Indonesia, efforts to foster entrepreneurial enthusiasm were carried out through Presidential Instruction of the Republic of Indonesia Number 4, 1995 concerning the "National Movement to Promote and Cultivate Entrepreneurship." In 2008 the Ministry of Cooperatives and SMEs launched the National Shoot Entrepreneurship Movement program for high school and tertiary students (Murtini, 2008). Then since 2009, universities in Indonesia must put entrepreneurship courses into the curriculum as compulsory subjects in 2 semesters.

However, the degree to which entrepreneurship education affects students is still a matter of debate in various circles (Fiet, 2001). The debate is related to the accuracy and effectiveness of entrepreneurial teaching methods (Westhead, Storey, & Martin, 2001). Čapienė & Ragauskaitė (2018) supports entrepreneurial teaching methods by increasing collaboration between entrepreneurship education stakeholders and bringing them closer to the business environment. Kyro (2003) states entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge and entrepreneurship. Entrepreneurship learning at the university examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006). Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana, Suhud, & Wibowo, 2018).

The role of entrepreneurship education in increasing entrepreneurship is frequently essential. Although until now there has been no research that states what learning models are the most effective in increasing entrepreneurial intentions, there are at least two ways that can

be done in teaching entrepreneurship, namely through the business plan model and Business Model Canvas. In 2004, Alexander Osterwalder introduced the Business Model Canvas (BMC). BMC is an abstract concept of a business model that represents business strategies and processes (Pigneur, 2010). BMC is a tool to describe business models based on nine elements (Osterwalder, 2004; Fritscher & Pigneur, 2014). This model illustrates and visualizes business ideas that are planned and suitable for innovative startup companies (Alias, Goudz, Jawale, & Noche, 2015). Türko (2016) has conducted research on students' perceptions of entrepreneurial learning that applies the business plan model and BMC. The result, 62% of students stated that it was difficult to prepare on business plan model because it was more complicated, longer and tedious.

Meanwhile, the BMC is easier to understand because business logic has been summarized in BMC. BMC is able to explain business value and feasibility propositions through concise logic. Coes (2014) also explained the power of BMC being able to visually represent business models, the simplicity of designing and communicating business models to employees, partners and customers. Fritscher & Pigneur (2014) added that the advantages of BMC are visual modelling methods that can capture the business model of a company. Research on BMC has so far been limited to its benefits in preparing business plans, and no research has been found that examines the role of BMC in increasing entrepreneurial intentions.

This study examines the learning role of BMC through the final task of making a business plan on one page with nine business area blocks. The goodness of this model can be used for each business model. Another advantage is that students are required from the beginning to know who their business partners are, the main activities of the business, the value offered, channels, customer segmentation, key resources, cost structures and business profit potential. Through this BMC, students from the beginning are more realistic and comprehensive in understanding a business. Therefore, this is thought to increase entrepreneurial intentions.

METHOD

This research uses the quasi-experimental method carried out on the campus of the Faculty of Economics, Medan State University. This study is based on constructivist learning theories that demand students' independence to formulate a business idea, design business, and report it. Students are allowed to set their learning process to complete business plan tasks. The study population was all entrepreneurship classes at the Faculty of Unimed in the odd semester of 2018, amounting to 15 classes. Each class has a relatively homogeneous condition because it is in semester V and has not gotten an entrepreneurship course in the previous semester. Class samples were determined as many as two classes utilizing purposive sampling with consideration of equal teaching staff. One class as a BMC treatment (experimental class) and the other class as a control class did not apply BMC, determined by simple random sampling.

Data collection techniques used were instruments consisting of: (a) instrument (test) of entrepreneurial learning outcomes, and (b) entrepreneurial intentions (adopted from Liñán & Chen, 2009; Liñán, Rodríguez-Cohard, & Rueda-Cantucho, 2011) on a scale of 1-7. A score of 1 describes "very weak," and a score of 7 describes "very strong.". Before being distributed, the learning achievement test instrument was tested to ensure validity. Normality and homogeneity tests are carried out to ascertain whether the data is normally distributed and homogeneous as a condition of using a hypothesis test tool. To measure the impact of BMC entrepreneurship learning, researchers using "t-test" and "anova test". The tool for running statistical test is using SPSS version 24.

Table 1. Variable and Indicator

No.	Variable	Indicator	Item
-----	----------	-----------	------

1.	Entrepreneurship learning outcomes	Business opportunities, Entrepreneurial character Entrepreneurial process Resources Business planning	5, 14 3, 4, 7, 8, 9, 12, 16 10, 17 1, 2, 11, 15 6, 13, 18
2.	Entrepreneurial intension	Work orientation Readiness to start a business Entrepreneurial determinatiion	1, 2 3, 6 4, 5

RESULT AND DISCUSSION

Result

The number of questions used to measure the level of entrepreneurial knowledge of students was 17 multiple choice items. Moreover, that to find out students' ability to build a business, an assignment is given to build business plans in groups. Students first tested the questions. From 20 multiple choice items tested, there were 17 items valid (with criteria $r_{pbis} > .361$). Then from the 6 statement items used to measure student entrepreneurial intentions, all of them can be used, seen from the validity with the lowest Corrected Item-Total Correlation score of .681 and the highest .824 (with criteria $> .30$) and Alpha Cronbach .912 (with criteria $> .60$).

Students Response Toward Tools and Implementation of BMC Learning

The principle of the reaction of BMC learning is seen from the responses given by students to the learning instruments and the application of BMC, and the results are presented in Table 2.

Table 2. Student Responses to BMC Learning Instruments and Implementation

Aspects	Average Response (%)	
	Happy	Unhappy
Feelings of "Happy or Unhappy" Respondents to the component; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	100	0
"New or Not New" respondents' opinions of the components; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	85	15
"Clear or Unclear" respondents' opinions about the language used in the Student Worksheet and learning achievement test	96.55	3.50
Respondents' opinions about "understanding or not understanding" of the Student Worksheet (Business Plan) and learning achievement test	93	7.00
Respondents' opinions about the "exciting or unexciting" towards Student Worksheets (Business Plan) and test results	89.50	10.50
Criteria:		
0 % - 20 %	Very low	
21% - 40%	Low	
41% - 60%	Medium	
61% - 80%	High	
81% - 100%	Very high	

Student responses to the application of BMC viewed from 5 aspects; happy and unhappy feelings, aspects of learning new categories or not, the level of language clarity, the level of understanding, and the level of exciting or unexciting on the BMC Student Worksheet and

learning outcomes test, the result is that every aspect received a positive response in 81% and above (category " very high"). Calculation results are presented in Table 2.

A pretest was performed to find out the initial conditions of the students' abilities, and the results are presented in Table 3. The data were proven to be normally distributed between the BMC class and the control class because each sig value $> .05$ both the Kolmogorov-Smirnov and Shapiro-Wilk tests. Then the homogeneity of the data is also fulfilled because of the sig Test of Homogeneity of Variances $> .05$. These results state there is no difference in the ability of BMC class students with control classes.

Table 3. Test Results for Normality and Homogeneity in Pretest

		BMC Classroom	Control Classroom
Number		33	31
Average learning achievements		61.121	57.710
Normality test	Kolmogorov-Smirnov ^a	.167	.200
	Shapiro-Wilk	.357	.238
Test of Homogeneity of Variances	Levene Statistic		.106
	Sig.		.746

The next step is to test the assumptions of normality and homogeneity. Referring to Table 4, entrepreneurial learning achievement data for BMC class and control class are both normally distributed because they meet the Shapiro-Wilk requirements where sig values are .056 and .118 $> .05$, respectively. Then the data on entrepreneurship intentions both the BMC class and the control class are both normally distributed because the Shapiro Wilk sig values are respectively .140 and .549 $> .05$. Specifically for the normality of learning achievement only the Shapiro-Wilk criteria meet this requirement because of the small sample size.

Table 4. Test Results of Normality Learning Achievements and Entrepreneurial Intention

	Model	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Learning achievements	BMC	.252	22	.001	.914	22	.056
	Control	.242	20	.003	.924	20	.118
Entrepreneurial intention	BMC	.126	22	.200*	.933	22	.140
	Control	.144	20	.200*	.960	20	.549

Furthermore, the homogeneity test results of learning achievement data and entrepreneurial intention (Learning model and learning achievement level) both meet the requirements because of each sig value $> .05$ as presented in Table 5. Because the normality and homogeneity requirements of the data have been fulfilled, the next step is carried out hypothesis testing.

Table 5. Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Learning achievements				
Learning model	.137	1	40	.713
Level learning achievements	.181	1	40	.673
Entrepreneurial intention				

Learning model	.756	1	40	.390
Level learning achievements	.479	1	40	.493

Furthermore, to find out whether there are differences in entrepreneurship learning outcomes between the BMC class and the control class as the impact of using learning models (BMC application and conventional learning) and the impact of the level of learning achievement the t-test is performed. The results are presented in Table 5, where learning achievement between the BMC class and the control class fulfills the homogeneity requirements because the sig values are respectively .713 and .673 > of .05. Likewise, the students' entrepreneurial intentions also meet the data criteria of homogeneity because each sig value > .05. Then the test results of differences in learning achievement based on the output "Independent Samples Test" in the "Equal variances assumed" section known *sig (2-tailed)* value of .033 < .05, (see Table 6) means that there are significant differences in BMC class learning outcomes with control.

Table 6. Independent Samples Test, Learning Achievements

		Levene's Test for Equality of Variances		<i>t</i> -test for Equality of Means				
		F	Sig.	<i>t</i>	df	Sig. (2- tailed)	Mean Difference	Std. Error Difference
Learning achievements	Equal variances assumed	.137	.713	2.206	40	.033	7.795	3.534
	Equal variances not assumed			2.211	39.88	.033	7.795	3.526

The difference in entrepreneurship learning achievement between the BMC class and the control class based on the average BMC class is 12.52% higher than the control class (see Table 7).

Table 7. Learning Achievements by Class Group

	Model	N	Mean	Std. Deviation	Std. Error Mean
Learning achievements	BMC	22	70.046	11.668	2.488
	Control	20	62.250	11.177	2.499

Entrepreneurship Intention Test Results BMC class with control class (conventional) seen from the total mean is not significantly different, where the average total BMC class is 37.682 and the control class is 35.50 with a difference of 6.15% (see Table 8).

Table 8. Entrepreneurial Intention Based on Class and Level of Learning Achievements

Model	Level of Learning Achievements	Mean	Std. Deviation	N
BMC	Low	35.545	2.841	11
	High	39.818	1.991	11
	Total	37.682	3.242	22
Control	Low	34.600	2.271	10
	High	38.400	1.713	10
	Total	36.500	2.763	20
Total	Low	35.095	2.567	21
	High	39.143	1.957	21

Hypothesis test results of the impact of the application of the BMC model and the effect of entrepreneurial learning outcomes on entrepreneurial intentions are presented in Table 9. It is known that the Corrected Model shows a sig value of $.000 < .05$, meaning that the BMC learning model and the level of entrepreneurial learning achievement together prove to have a significant effect on intention entrepreneurship. The contribution of learning models and the level of entrepreneurial knowledge in influencing entrepreneurial intentions is seen from the *R Squared* value of 49.2%.

Tabel 9. Test of Between-Subjects Effects

Dependent Variable: Entrepreneurial Intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected model	187.241 ^a	3	62.414	12.278	.000
Intercept	57649.870	1	57649.870	11341.136	.000
Model	14.632	1	14.632	2.878	.098
LevelLearning achievements	170.681	1	170.681	33.577	.000
Model * levelLA	.585	1	.585	.115	.736
Error	193.164	38	5.083		
Total	58249.000	42			
Corrected total	380.405	41			

a. *R Squared* = .492 (*Adjusted R Squared* = .452)

Partially the BMC model was not proven to be able to increase entrepreneurial intentions because the sig value was $.98 > .05$. However, the high and low levels of entrepreneurial learning achievement proved to significantly influence entrepreneurial intentions because the sig value of $.000 < .05$. Then the results of the interaction test of learning models (BMC and control) and the level of entrepreneurial learning achievement towards entrepreneurial intentions are not proven, because the sig value of $.736 > .05$.

Discussion

The essence of learning entrepreneurship by applying business Model Canvas is making a business plan. The business plan is summarized in 9 blocks. Based on the canvas, a more detailed business plan has been prepared. Before preparing a business plan, students are equipped with various business-related knowledge and skills such as; the ability to recognize business opportunities, the ability to take advantage of these opportunities, the ability to organize needed resources, the ability to think critically and creatively, and the ability to prepare financial reports. How to fill each block and the order in which to fill the blocks are presented in Figure 1.

8. Key Partnership: Some activities are outsourced and some resources are acquired	7 Key Activities: ...by performing a number of Key Activities	2. Value Propositions: It seeks to solve customer problems and satisfy customer needs	4. Customer Relationships: Customer relationships are established and maintained with each Customer Segment	1. Customer Segment: An organization serves one or several Customer Segments
--	---	---	---	--

outside the enterprise	6.Key Resource; Key resources are the assets required to offer and deliver the previously described elements...	with value propositions	3. Chanel: Value propositions are delivered to customers through communication, distribution, and sales Channels.	
9. Cost Structure: The business model elements result in the cost structure.		5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers		

Figure 1. BMC: Nine Business Model Building Blocks
(Osterwalder& Pigneur, 2010)

Knowledge and skills about a business that students already have are very helpful for filling every area of the nine BMC blocks and preparing business plans. The preparation of a business plan starts by finding a business idea. The business idea must be based on creativity and have favorable prospects. Then the business idea was poured in one sheet of canvas paper. Entrepreneurship learning with BMC makes it easy for students to understand a business comprehensively. Students who have no experience of business find it difficult to draw up business plans. However, with this BMC pursuit, students are required to be able to fill each of the nine existing blocks. Each block is related to one another. If students can fill all nine blocks and are related to one another, they have understood the business plan that they will realize. The stages are filled in the following sequence.

First, the Customer segment block, at this stage, students must be able to determine who their customer segment is. The customer segment is to whom the goods or services we offer. Previously it must be known what their needs are not being met and they need. Business ideas usually arise from opportunities. Opportunities, in this case, are the needs of consumers who have not been met, whether they know or do not know it. Solihah, Hubeis, & Maulana (2014) explains an organization must decide which segments are served and which are ignored, after that, then design the right business model according to needs.

If consumers are not aware of their needs, the seller will introduce them so that consumers are aware of them. Here students need creative ideas to be able to find new business opportunities. Recognizing potential customers can be from various perspectives such as; geographical, demographic, and psychographic. These different characteristics make the type of needs they will also be different.

Second, Value propositions, students must be able to determine the value that is offered to consumers, and that cannot be given by competitors. The ability of new businesses to enter the market and be able to compete with businesses that already exist in the market lies in the added value or something unique that they offer to consumers. Consumers accept this, and they feel it is a necessity and then makes a transaction. Hermawan & Pravitasari (2010) states that if the Value Propositions offered can address the needs or satisfy the needs of consumers can divert the attention of consumers from one company to another company.

Third, Chanel, in this block, students must be able to determine how to deliver or sell products/services to buyers. What media or means do we use to sell our products to consumers?

The media used must be in accordance with the development of information technology or digital-based such as Google, Yahoo, Altavista, Exclopedia, Wikipedia, and others. The market orientation that is designed should not be limited to the local market but rather to a broader national market, even globally depending on the nature of the product it has.

Fourth, Customer Relationships, in this case, students must be able to design how to guarantee good relations with consumers. Maintaining good relations with consumers is one of the business strategies that students must master from the start. Fifth, Revenue Stream, students must know the primary source of income for the planned business. The main income comes from the sale of their products. Besides, that income can come from selling products from third parties. Sixth, Key Resources, from the beginning, students must be able to determine the resources that must be had to run the main activities of the business. Key resources can be in the form of physical resources (buildings, vehicles, equipment), money, intellectual assets (brands, copyrights, patents, customer databases), and human resources.

Seventh, Key Activities, in this case, students must know the main activities in their business. If students already know the main activities in business, it means that their mastery over the planned business is better. Key activities that determine the success of the business in delivering value propositions to the customer segment. Eighth, Key Patnership, this is related to who the business partners are suppliers of cheap and quality goods, freight forwarding services (JNE, TNT, post offices, and others), advertising agencies, marketplaces (tokopedia, bukalapak, zalora, Shoope, JD .id, etc.). The eighth final step, Cost structures, from the beginning, students can already know what types of costs must be incurred. If the type of trading business consists of the cost of purchasing goods, advertising costs, shipping costs, internet costs, and company employee costs. If students are able to fill the nine blocks that are well available and related to one another, then they already understand the business as a whole. This knowledge and experience will benefit them if they realize their business both when they are students and after graduating from college.

BMC learning received a good response from students. All students said BMC learning was fun because they could collaborate in designing business independently. As many as 85% of students stated that BMC learning was new and different from previous learning. Furthermore, BMC learning is clear, easy to understand, and enjoyable. Of the five aspects observed, 81% of students responded above and are in the "very high" category. When viewed by student activities, they are encouraged to participate actively both individually and in groups. Learning like this makes them able to work in teams (teamwork), each team member has the responsibility to complete their group assignments.

Then, when viewed from the level of understanding, it can be concluded that the understanding of students is excellent because they can pour business ideas on a canvas sheet by filling in every block and its contents related between one block and another block. Examples of student group work are presented in Figure 2. From the students' assignments, it is known that they can find creative-based business ideas, can set customer segments and can show value propositions or the advantages of their products or services compared to competitors. Students have also been able to determine what strategies will be taken to deliver products or services to prospective buyers or customers. In general, the ability of students in each group is relatively the same. This BMC entrepreneurial learning experience will be useful later if they build their businesses or work with others.



Figure 2. Examples of BMC Students' Assignment

Based on the results of data analysis, as reported in Table 8, it was found that BMC learning and entrepreneurial learning outcomes together proved to have a significant effect on entrepreneurial intentions. The results of this study support research (Ismail, Khalid, Othman, Jusoff, Rahman, Kassim, & Zain, 2009; Kusmintarti, Thoyib, Maskie, & Ashar, 2016) which states entrepreneurship courses or training, (Gerba, 2012; Premand, Brodmann, Almeida, Grun, & Barouni, 2016); Patricia & Silangen, 2016; Nowiński et al., 2017) entrepreneurship education contributes to entrepreneurial intentions. Then, Dehghanpour (2013) added that the entrepreneurship course that was followed could increase entrepreneurial intentions. Furthermore, Kusmintarti et al. (2016) added that people who participated in entrepreneurship training had the provision of business ideas and social networking and had the desire to build a business going forward. This research provides a theoretical foundation for the development of entrepreneurial intentions through entrepreneurial learning.

Entrepreneurship education is increasingly attracting the attention of researchers. Raposo & Paço (2011) state that entrepreneurship education provides knowledge in the form of; (a) the ability to recognize opportunities, (b) the ability to take advantage of opportunities, generate new ideas and find needed resources, (c) the ability to create and operate new devices, and (d) the ability to think critically and creatively. According to Sánchez (2011), in addition to business knowledge and skills, entrepreneurship education also develops beliefs, values, and attitudes, and aims to make students confident and consider entrepreneurship as an alternative job or as unemployment. Furthermore, Ismail et al. (2009) stated that the entrepreneurship course, Fayolle & Gailly (2015) added that entrepreneurship education has a positive effect on students who either have low or non-existent entrepreneurial intentions.

The completion of one entrepreneurship course can increase entrepreneurial intentions by 1.3 times (Dehghanpour, 2013). Then, Martin, McNally, & Kay (2013) found a significant relationship between Entrepreneurship Education and Training (EET) with the preparation of entrepreneurial human capital assets. Kusmintarti et al. (2016) stated similarly that students who participated in entrepreneurship training had the intention to build a new business in the future because they were equipped with business ideas and social networking. Previously Nursito, Julianto, & Nugroho (2013) stated that entrepreneurship education could shape entrepreneurial knowledge and have a positive and significant impact on entrepreneurial intentions. Therefore, Barba-Sánchez & Atienza-Sahuquillo (2017) need to integrate entrepreneurship education with technical education to increase entrepreneurial intentions. The focus of entrepreneurship education is to develop entrepreneurial attitudes, skills, and entrepreneurial behavior (Doğan, 2015). The results of the latest research, Solesvik (2019)

explains that business education positively influences the formation of entrepreneurial skills and competencies. Students who study business also exhibit higher levels of entrepreneurial intentions than those who do not participate in business education.

Čapienė & Ragauskaitė (2018) support the entrepreneurship teaching method by increasing collaboration between stakeholders in entrepreneurship education and getting closer to the business environment. Kyro (2003) states entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge, and entrepreneurship. Entrepreneurship learning in universities examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006). Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana et al., 2018).

Furthermore, the partial test results of the application of BMC have not been proven to increase entrepreneurial intentions. This means that there is no difference in the entrepreneurial intentions of students taught by BMC with the control class. So far, no research has been found that examines the effect of BMC learning on entrepreneurial intentions so that none can be used as a comparison. However, the use of BMCs in the field of financial management allows companies to identify customer needs, estimate the potential benefits and costs required (Dudin, Kutsuri, Jur, & Sozrykoevna, 2015). Furthermore, Crotty, Kinney, & Farren (2017) state that BMC learning is simple, clear, and how business strategy is centered on nine main business area blocks, and more importantly, encourages students or business people to think about how interactions and consequences occur.

Research conducted by Dewobroto (2013) states that the use of Business Model Canvas can be a simple tool to produce an alternative strategy for the company to achieve financial viability. Then, Dudin, Lyasnikov, Leont'eva, Reshetov, & Sidorenko (2015) stated that the use of the business model of the canvas model could create a competitive advantage in the agricultural industry due to the organizational features of the production and sales cycle. Toro-Jarrín, Ponce-Jaramillo, & Güemes-Castorena (2016) also argued that Business Model Canvas identifies essential parts of the business, the simplicity of its application makes it more acceptable and disseminated. Furthermore, Lima & Baudier (2017) states that BMC is expected to not only be able to improve organizational performance, enhance the ability of entrepreneurs to communicate, and innovate their business models but also as tools that are adapted for visualization, decision making, creative thinking, collaboration, and reflection.

Entrepreneurial learning, according to Fruchter (2001) needs to change from traditional teaching practices centered on teaching to "knowing-what," to active learning with a focus on teaching to "know-why." BMC learning includes active and student-centered learning. Student-centered learning makes them more independent and responsible for finding solutions; educators play a role as mentors or facilitators (Doppelt, 2003). The advantages of active learning are very relevant in the field of entrepreneurship, where students have the goal to create and lead their projects, and become a favorite practice for teaching entrepreneurship (Åsvoll & Jacobsen, 2012). Rae (2011) also proposes that entrepreneurship education requires a holistic and activity-based approach. This model is useful for understanding learning material, practice, and personal development of social and group interactions. Active learning activities make academic results and higher motivation, and more in-depth understanding of content, and have been proven in several studies (Michael, 2006).

The next finding is that the level of entrepreneurial learning achievement has been proven to influence entrepreneurial intentions. This means that student entrepreneurship intentions will be higher if entrepreneurship learning achievement is high, and vice versa, entrepreneurial intentions will be lower in students with lower entrepreneurial learning achievements. High levels of student achievement, illustrating their mastery of entrepreneurial knowledge is higher. In general, entrepreneurial knowledge includes business planning, business development strategies, attitudes, and records and finance. Suryana & Bayu (2010), explained that an

entrepreneur must know the business to be initiated and knowledge of the business environment that will affect entrepreneurial activities; knowledge of roles and responsibilities; knowledge of personality and responsibilities; and the latest knowledge is knowledge about management and business organizations.

Mastery of entrepreneurial knowledge (learning achievement) is essential. Knowledge about entrepreneurship influences entrepreneurial intentions positively and significantly (Anggraeni & Harnanik, 2015; Hutasuhut, 2018; Doğan, 2015, 2015; Roxas, Cayoka, & Jesus, 2008). Mastery of entrepreneurial knowledge will increase the ability of students to run businesses. When he feels he has the ability, there will be an intention to run a business. Previous researchers such as (Roxas, 2014; Küttim, Kallaste, Venesaar, & Kiis, 2014) stated that entrepreneurship education significantly increased entrepreneurial knowledge. Entrepreneurial knowledge is the basis of entrepreneurial resources found in individuals (Hisrich, Peters, & Shepherd, 2008). The results of this research strengthen the theoretical foundation of the importance of providing education in higher education to build entrepreneurs. Entrepreneurship education can help and increase entrepreneurial awareness and acceptance as a valuable career choice (Mikic et al., 2018). Entrepreneurship education is also able to provide knowledge to recognize opportunities, take advantage of opportunities, create and operate new devices, and the ability to think critically and creatively (Robles & Zárraga, 2015). Raposo & Paço (2011) added that entrepreneurship education could be competencies and attitudes that can determine future carrier choices.

Further findings, this research did not succeed in proving an interaction between the application of the BMC model and the level of knowledge (entrepreneurial learning achievement) in shaping student entrepreneurial intentions. This is because partially, the BMC learning model does not have an impact on increasing entrepreneurial intentions even though the level of achievement has a partial impact. Although the application of BMC learning directly has not been proven to be able to increase the entrepreneurial intentions of students. However, this research succeeded in proving that the application of BMC can improve entrepreneurial learning outcomes and through moderation of the level of knowledge (learning achievement of entrepreneurship), is proven to increase entrepreneurial intentions. The results of this research strengthen the theoretical foundation of the importance of entrepreneurship education to increase knowledge about entrepreneurship in order to create a generation that is interested in entrepreneurship.

CONCLUSION

Application of Business Model Canvas (BMC) on entrepreneurial learning can be a positive response from students and can increase entrepreneurship learning outcomes, experimental class learning outcomes (BMC) 12.52% higher than the control class learning outcomes. However, the entrepreneurship intentions of BMC class students were not proven to be higher than the control class. However, together, the application of BMC and the level of entrepreneurial learning achievement can increase student entrepreneurial intentions. The class learning process that applies BMC can create a pleasant learning atmosphere for all students (100%) who feel understood 93% and feel drawn 89.5%. This research provides a theoretical foundation that the development of entrepreneurial intentions can be done through entrepreneurship education. Entrepreneurship education can increase knowledge (entrepreneurial learning achievement), and achievement levels can strengthen (moderate) BMC learning to increase entrepreneurial intentions. For this reason, universities are expected to be able to design practical and coherent entrepreneurial learning that combines conceptual learning and practical learning. This study has limitations in duration and class of treatment, so it is possible to be reviewed again by adding a broader duration and class.

ACKNOWLEDGEMENT

The researcher thanked the Rector of Medan State University for financial assistance through the Lecturer Study Group Research Grant program and grateful also to the Dean of the Faculty of Economics for the research permission given and thanks to the students for their participation in this research.

REFERENCES

- Alias, C., Goudz, A., Jawale, M., & Noche, B. (2015, May). Generating a business model canvas for future-internet-based logistics control towers. *Proceeding of the 2015 4th International Conference on Advanced Logistics and Transport (ICALT)*, 257-262.
- Anggraeni, B., & Harnanik, H. (2015). Pengaruh pengetahuan kewirausahaan dan lingkungan keluarga terhadap minat berwirausaha siswa kelas XI SMK Islam Nusantara Comal Kabupaten Pematang. [The influence of entrepreneurial knowledge and family environment on the entrepreneurial interest of XI grade students of SMK Islam Nusantara Comal, Pematang Regency]. *Dinamika Pendidikan*, 10(1), 42-52. doi:10.15294/dp.v10i1.5093.
- Åsvoll, H., & Jacobsen, P. J. (2012). A case study: Action based entrepreneurship education how experience problems can be overcome and collaboration problems mitigated. *Journal of Entrepreneurship Education*, 15(SI), 75-97. <https://ntnuopen.ntnu.no/>.
- Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2017). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European Research on Management and Business Economics*, 24(1), 53-61. doi:10.1016/j.iedeen.2017.04.001.
- Čapienė, A., & Ragauskaitė, A. (2018). Entrepreneurship education at university: Innovative models and current trends, 2, 284-291. doi:10.22616/rrd.23.2017.080.
- Coes, D. H. (2014). *Critically assessing the strengths and limitations of the Business Model Canvas* (Master's thesis, University of Twente). <https://essay.utwente.nl/>.
- Crotty, Y., Kinney, T., & Farren, M. (2017). Using the Business Model Canvas (BMC) strategy tool to support the Play4Guidance online entrepreneurial game, 4(1), 34-41. doi:10.1515/ijtr-2017-0005.
- Dehghanpour, A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention: Study of educational system of Iran. *Education and Training*, 55(8-9), 868-884. doi:10.1108/ET-04-2013-0053.
- Doğan, E. (2015). The effect of entrepreneurship education on entrepreneurial intentions of university students in Turkey. *The Journal of Entrepreneurship*, 23(1), 1-18. doi:10.1177/0971355713513346.
- Doppelt, Y. (2003). Implementation and assessment of project-based learning in a flexible environment. *International journal of technology and design education*, 13(3), 255-272. doi:10.1023/A:1026125427344.

- Dudin, M. N., Kutsuri, G. N., Jur, I., & Sozrykoevna, S. (2015). The innovative Business Model Canvas in the system of effective budgeting, *11(7)*, 290-296. doi:10.5539/ass.v11n7p290.
- Dudin, M. N., Lyasnikov, N. V. E., Leont'eva, L. S., Reshetov, K. J. E., & Sidorenko, V. N. (2015). Business model canvas as a basis for the competitive advantage of enterprise structures in the industrial agriculture. *Biosciences Biotechnology Research Asia*, *12(1)*, 887-894. doi:10.13005/bbra/1736.
- Fayolle, A., & Gailly, B. (2015). Fayolle, A., & Gailly, B. (2013). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, *53(1)*, 75-93. doi:10.1111/jsbm.12065.
- Fiet, J. O. (2001). The theoretical side of teaching entrepreneurship. *Journal of business venturing*, *16(1)*, 1-24. doi:10.1016/S0883-9026(99)00041-5.
- Fritscher, B., & Pigneur, Y. (2014). Visualizing business model evolution with the Business Model Canvas : Concept and tool. *Proceedings of the 2014 IEEE 16th Conference on Business Informatics*, 151-158. doi:10.1109/CBI.2014.9.
- Fruchter, R. (2001). Dimensions of teamwork education. *International Journal of Engineering Education*, *17(4/5)*, 426-430. <https://dialnet.unirioja.es/servlet/revista?codigo=14394>.
- Gerba, D. T. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. *African Journal of Economic and Management Studies*, *3(2)*, 258-277. doi:10.1108/20400701211265036.
- Heinonen, J., & Poikkijoki, S. (2006). An entrepreneurial-directed approach to entrepreneurship education: Mission impossible ? *Journal of Management Development*, *25(1)*, 80-94. doi:10.1108/02621710610637981.
- Hermawan, A., & Pravitasari, R. J. (2010). *Business Model Canvas*. <http://akselerasi.id/>.
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2008). *Entrepreneurship*. Boston, MA: McGraw-Hill Irwin.
- Hutasuhut, S. (2018). The roles of entrepreneurship knowledge, self-efficacy, family, education, and gender on entrepreneurial intention. *Dinamika Pendidikan*, *13(1)*, 90-105. doi:10.15294/dp.v13i1.13785.
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial intention among Malaysian undergraduates. *International Journal of Business and Management*, *4(10)*, 54-60. doi:10.5539/ijbm.v4n10p54.
- Jakubczak, J., & Rakowska, A. (2013, 19-21 June). *The role of education and culture in the development of youth entrepreneurship in European Union*. Paper presented at Management, Knowledge and Learning Internafional Conference, Zadar, Croatia. <http://www.toknowpress.net/I>.
- Kyro, P. (2003). *Entrepreneurship pedagogy-the current public and some future expectations*.

Paper presented at the 3rd European Summer University, Paris, France.

- Kusmintarti, A., Thoyib, A., Maskie, G., & Ashar, K. (2016). Entrepreneurial characteristics as a mediation of entrepreneurial education influence on entrepreneurial intention. *Journal of Entrepreneurship Education*, 19(1), 24-37.
- Küttim, M., Kallaste, M., Venesaar, U., & Kiis, A. (2014). Entrepreneurship education at university level and students' entrepreneurial intentions. *Procedia-Social and Behavioral Sciences*, 110(2014), 658-668. doi:10.1016/j.sbspro.2013.12.910.
- Lima, M., & Baudier, P. (2017). Business model canvas acceptance among French entrepreneurship students: Principles for enhancing innovation artefacts in business education. *Journal of Innovation Economics Management*, (2), 159-183. doi:10.3917/jie.pr1.0008.
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship: Theory and Practice*, 33(3), 593-617. doi:10.1111/j.1540-6520.2009.00318.x.
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantuche, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, 7(2), 195-218. doi:10.1007/s11365-010-0154-z.
- Martin, B. C., McNally, J. J., & Kay, M. J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28(2), 211-224. doi:10.1016/j.jbusvent.2012.03.002.
- Michael, J. (2006). Where's the evidence that active learning works? 30(4), 159-167. doi:10.1152/advan.00053.2006.
- Mikic, M., Sopta, M., & Horvatinovic, T. (2018). The role of entrepreneurial education in the development of entrepreneurship. *Casopis Za Ekonomiju I Trzisne Komunikacije*, 8(2), 385-395. doi:10.7251/EMC1802385M.
- Murtini, W. (2008). Success story sebagai pendekatan pembelajaran kewirausahaan. [Success story as an entrepreneurial learning approach]. *Varia Pendidikan*, 20(2), 173-183.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2017). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 5079(August), 1-19. doi:10.1080/03075079.2017.1365359.
- Nursito, S., Julianto, A., & Nugroho, S. (2013). Analisis pengaruh interaksi pengetahuan kewirausahaan dan efikasi diri terhadap intensi kewirausahaan. [Analysis of the effect of the interaction of entrepreneurial knowledge and self-efficacy on entrepreneurial intentions]. *Kiat Bisnis*, 5(3), 201-211. <http://journal.unwidha.ac.id/index.php/KIATBISNIS/article/view/1042>.
- Osterwalder, A. (2004). *The business model ontology a proposition in a design science approach* (Doctoral dissertation, Université de Lausanne, Faculté des hautes études

comerciales).

- Patricia, P., & Silangen, C. (2016). The effect of entrepreneurship education on entrepreneurial intention in Indonesia. *DeReMa Jurnal Manajemen*, 11(1), 67-86. doi:10.19166/derema.v11i1.184.
- Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (2016). Entrepreneurship education and entry into self-employment among university graduates. *World Development*, 77(C), 311-327. doi:10.1016/j.worlddev.2015.08.028.
- Purwana, D., Suhud, U., & Wibowo, S. F. (2018). Determinant factors of students' entrepreneurial intention: A comparative study. *Dinamika Pendidikan*, 13(1), 1-13. doi:10.15294/dp.v13i1.12971.
- Rae, D. (2011). Entrepreneurial learning: A practical model from the creative industries. *Education and Training*, 46(8/9), 492-500. doi:10.1108/00400910410569614.
- Raposo, M., & Paço, A. (2011). Entrepreneurship education: Relationship between education. *Psicothema*, 23(3), 453-457. <http://www.psicothema.com/>.
- Robles, L., & Zárraga, M. (2015). Key competencies for entrepreneurship. *Procedia Economics and Finance*, 23(October 2014), 828-832. doi:10.1016/S2212-5671(15)00389-5.
- Roxas, B. G., Cayoka-, R. P., & Jesus, R. M. de. (2008). Entrepreneurial knowledge and its effects on entrepreneurial intentions: Development of a conceptual framework. *Asia-Pacific Social Science Review*, 8(2), 61-77. doi:10.3860/apssr.v8i2.784.
- Roxas, B. (2014). Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected South-east Asian business students. *Journal of Education and Work*, 27(4), 432-453. doi:10.1080/13639080.2012.760191.
- Sánchez, J. (2011). The influence of entrepreneurial competencies on small firm performance. *Revista Latinoamericana de Psicología*, 44(2), 165-177. <http://www.scielo.org.co/>.
- Sirelkhatim, F., & Gangi, Y. (2015). Entrepreneurship education: A systematic literature review of curricula contents and teaching methods. *Cogent Business & Management*, 2(1), 1-11. doi:10.1080/23311975.2015.1052034.
- Solesvik, M. Z. (2019). Entrepreneurial competencies and intentions: The role of higher education. *Forum Scientiae Oeconomia*, 7(1), 9-23. doi:10.23762/FSO_VOL7_NO1_1.
- Solihah, E., Hubeis, A. V. S., & Maulana, A. (2014). Analisis model bisnis pada KNM fish farm dengan pendekatan Business Model Canvas (BMC). [Analysis of business models on KNM fish farm with the Business Model Canvas (BMC) approach]. *Jurnal Sosial Ekonomi Kelautan dan Perikanan*, 9(2), 185-194. doi:10.15578/jsekp.v9i2.1220.
- Suryana, Y., & Bayu, K. (2010). *Kewirausahaan: Pendekatan karakteristik wirausahawan sukses*. [Entrepreneurship: A characteristic approach to successful entrepreneurs]. Jakarta: Kencana Predana Media Group.

Toro-Jarrín, M. A., Ponce-Jaramillo, I. E., & Güemes-Castorena, D. (2016). Methodology for the of building process integration of Business Model Canvas and technological roadmap. *Technological Forecasting and Social Change*, 110(2016), 213-225. doi:10.1016/j.techfore.2016.01.009.

Türko, E. S. (2016). Business plan Vs Business Model Canvas in entrepreneurship trainings: A comparison of students' perceptions. *Asian Social Science*, 12(10), 55-62. doi:10.5539/ass.v12n10p55.

Westhead, P., Storey, D. J., & Martin, F. (2001). Outcomes reported by students who participated in the 1994 Shell Technology Enterprise Programme. *Entrepreneurship & Regional Development*, 13(2), 163-185. doi:10.1080/08985620010018273.

- 99+
- Compose
- Mail
- Starred
- Snoozed
- Chat
- Important
- Spaces
- Sent
- Drafts** 16
- Categories
- Social** 234
- Updates** 670
- Forums
- Promotions** 417
- More

Labels

[CP] Final version of your manuscript

Inbox x



Cakrawala Pendidikan <cakrawala@uny.ac.id>
to me

Mar 1, 2020, 3:31PM

Dear Saidun Hutasuhut, Irwansyah Irwansyah, Agus Rahmadsyah, Reza Aditia,

Congratulations, your paper has been accepted to be published at Cakrawala Pendidikan. As part of the publishi see the attached file. We have edited your manuscript and ask you to accept it as is or further clarification.

Should you have any questions, please do not hesitate to contact us.

Sincerely,

Endah Retnowati, Ph.D.
Associate Editor

Untuk mendukung "Gerakan UNY Hijau", disarankan tidak mencetak email ini dan lampirannya.
(To support the "Green UNY movement", it is recommended not to print the contents of this email and its attachments)

IMPACT OF BUSINESS MODELS CANVAS LEARNING ON IMPROVING LEARNING ACHIEVEMENT AND ENTREPRENEURIAL INTENTION

Saidun Hutasuhut*, Irwansyah, Agus Rahmadsyah, & Reza Aditia

Universitas Negeri Medan, Indonesia

*e-mail: saidun@unimed.ac.id

Abstract: Indonesian university graduates skills in creating job opportunities or entering the workforce are still low. It can be seen from the facts that the undergraduate unemployment rate is still higher than the national unemployment rate. Although entrepreneurship education has been considered as one solution to this problem, the best entrepreneurship education model has not been agreed among researchers. This study examines the application of Business Model Canvas (BMC) on enhancing student achievement and student entrepreneurial intentions and the interaction of entrepreneurial learning achievement levels and the application of BMC on entrepreneurial intentions. The method used in this research is quasi-experiment by assigning two classes of entrepreneurship courses at the Faculty of Economics, Medan State University, one class as an experimental class (BMC) and the other class as the control class. Hypothesis testing was conducted with t-test and ANOVA. The findings showed that the average entrepreneurial learning achievement of the BMC class was 12.52% higher than that of the control class. Entrepreneurial intentions of the BMC class was only 6.15% higher than that of the control class. BMC is proven to be positive and significantly improves learning achievement. The level of learning achievement is proven to be positive and it significantly increases entrepreneurial intentions. However, BMC learning has not been proven to increase entrepreneurial intentions. The results of this study are useful for entrepreneurial instructors to design learning that can increase entrepreneurial intentions.

Keywords: *BMC, entrepreneurial intention, learning outcome*

PENGARUH PEMBELAJARAN *BUSINESS MODEL CANVAS* (BMC) TERHADAP PRESTASI BELAJAR DAN MINAT BERWIRASWASTA

Abstrak: Kemampuan lulusan perguruan tinggi Indonesia bersaing atau menciptakan lapangan kerja belum optimal. Tingkat pengangguran sarjana justru lebih tinggi dibandingkan pengangguran nasional secara total. Selama ini pendidikan kewirausahaan telah diselenggarakan untuk mengatasinya. Akan tetapi, belum ada kesepakatan para ahli perihal model pendidikan kewirausahaan. Penelitian ini menguji dampak penerapan pembelajaran kewirausahaan Business Model Canvas (BMC) terhadap peningkatan prestasi belajar dan intensi kewirausahaan mahasiswa dan bagaimana interaksi tingkat prestasi belajar kewirausahaan dan penerapan BMC terhadap intensi kewirausahaan. Metode yang digunakan adalah quasi eksperimen dengan menetapkan dua kelas mata kuliah kewirausahaan di Fakultas Ekonomi Unimed. Satu kelas sebagai kelas eksperimen (kelas BMC) dan satu kelas kontrol. Pengujian hipotesis dengan uji "t" dan anova. Temuan menunjukkan rata-rata prestasi belajar kewirausahaan kelas BMC lebih tinggi 12,52% dari pada kelas kontrol. Intensi kewirausahaan kelas BMC skor rata-ratanya hanya lebih tinggi 6,15%. Pembelajaran kewirausahaan dengan BMC terbukti positif dan signifikan dapat meningkatkan prestasi belajar. Tingkat prestasi belajar terbukti positif dan signifikan dapat meningkatkan intensi kewirausahaan. Akan tetapi, pembelajaran BMC tidak terbukti dapat meningkatkan intensi kewirausahaan. Hasil penelitian ini berguna bagi pengajar kewirausahaan untuk merancang pembelajaran kewirausahaan yang dapat meningkatkan intensi kewirausahaan.

Kata Kunci: *BMC, intensi kewirausahaan, prestasi belajar*

INTRODUCTION

Higher education, only able to produce job seekers, and very rarely are willing and able to create jobs, both for themselves and others. Even the job seekers produced are not ready for use, both in terms of knowledge, skills, and attitudes. So that tertiary graduates prefer to look for work rather than create their jobs. This condition causes the unemployment rate at the undergraduate level in February 2018 to be 6.31%, higher than the national total of 5.13% and in February 2019 the unemployment rate at the undergraduate level also remains higher, at 6.24% and nationally total of 5.01% (BPS, 2019). So the bachelor's program as explained in the Law of Republic of Indonesia number 12 year of 2012 article 18 paragraph 2 concerning Higher Education is responsible to prepare students to be cultured intellectuals and/or scientists, able to enter and/or create jobs, and able to develop themselves into professionals yet works well.

This phenomenon is the impact that the entrepreneurial intentions of Indonesian students are still weak (Indarti & Rostiani, 2008). Meanwhile, Krueger & Carsrud (1993) state that entrepreneurial intentions are the best predictors for entrepreneurial actors. That is why entrepreneurial intentions urgently to be known and improved. Entrepreneurship education is vital to help increase entrepreneurial intentions (Nowiński, Haddoud, Lančarič, Egerová, & Czeglédi, 2017). Entrepreneurship education provides knowledge and influences students' mindset. Not only that, entrepreneurship education can influence the attitudes and aspirations of young people towards entrepreneurship (Robles & Zárraga, 2015). Furthermore, entrepreneurship knowledge (learning achievement) possessed a significant positive correlation with entrepreneurial intentions (Doğan, 2015). Meta analysis result conducted by Mikic, Sopta, & Horvatinovic (2018) also shows a positive relationship between entrepreneurship education and entrepreneurial intentions, this confirms the success of the current entrepreneurship education program and the importance of further enhancing and developing these programs.

Globally, entrepreneurship education is the fastest-growing field of education (Sirelkhatim & Gangi, 2015). In the European Union introduces high-quality entrepreneurship education to equip knowledge, and enhance the attractiveness

of entrepreneurial careers to young people (Jakubczak & Rakowska, 2013). In Indonesia, efforts to foster entrepreneurial enthusiasm were carried out through Presidential Instruction of the Republic of Indonesia Number 4, 1995 concerning the "National Movement to Promote and Cultivate Entrepreneurship." In 2008 the Ministry of Cooperatives and SMEs launched the National Shoot Entrepreneurship Movement program for high school and tertiary students (Murtini, 2008). Then since 2009, universities in Indonesia must put entrepreneurship courses into the curriculum as compulsory subjects in 2 semesters.

However, the degree to which entrepreneurship education affects students is still a matter of debate in various circles (Fiet, 2001). The debate is related to the accuracy and effectiveness of entrepreneurial teaching methods (Westhead, Storey, & Martin, 2001). Čapienė & Ragauskaitė (2018) supports entrepreneurial teaching methods by increasing collaboration between entrepreneurship education stakeholders and bringing them closer to the business environment. Kyro (2003) states entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge and entrepreneurship. Entrepreneurship learning at the university examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006). Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana, Suhud, & Wibowo, 2018).

The role of entrepreneurship education in increasing entrepreneurship is frequently essential. Although until now there has been no research that states what learning models are the most effective in increasing entrepreneurial intentions, there are at least two ways that can be done in teaching entrepreneurship, namely through the business plan model and Business Model Canvas. In 2004, Alexander Osterwalder introduced the Business Model Canvas (BMC). BMC is an abstract concept of a business model that represents business strategies and processes (Osterwalder & Pigneur, 2010). BMC is a tool to describe business models based on nine elements (Osterwalder, 2004; Fritscher & Pigneur, 2014). This model illustrates and visualizes business ideas that are planned and

suitable for innovative startup companies (Alias, Goudz, Jawale, & Noche, 2015). Türko (2016) has conducted research on students' perceptions of entrepreneurial learning that applies the business plan model and BMC. The result, 62% of students stated that it was difficult to prepare on business plan model because it was more complicated, longer and tedious.

Meanwhile, the BMC is easier to understand because business logic has been summarized in BMC. BMC is able to explain business value and feasibility propositions through concise logic. Coes (2014) also explained the power of BMC being able to visually represent business models, the simplicity of designing and communicating business models to employees, partners and customers. Fritscher & Pigneur (2014) added that the advantages of BMC are visual modelling methods that can capture the business model of a company. Research on BMC has so far been limited to its benefits in preparing business plans, and no research has been found that examines the role of BMC in increasing entrepreneurial intentions.

This study examines the learning role of BMC through the final task of making a business plan on one page with nine business area blocks. The goodness of this model can be used for each business model. Another advantage is that students are required from the beginning to know who their business partners are, the main activities of the business, the value offered, channels, customer segmentation, key resources, cost structures and business profit potential. Through this BMC, students from the beginning are more realistic and comprehensive in understanding a business. Therefore, this is thought to increase entrepreneurial intentions.

METHOD

This research uses the quasi-experimental method carried out on the campus of the Faculty of Economics, Medan State University. This study is based on constructivist learning theories that demand students' independence to formulate a business idea, design business, and report it. Students are allowed to set their learning process to complete business plan tasks. The study population was all entrepreneurship classes at the Faculty of Unimed in the odd semester of 2018, amounting to 15 classes. Each class has a relatively homogeneous condition because it is in semester V and has not gotten an entrepreneurship course in the previous semester. Class samples were determined as many as two classes utilizing purposive sampling with consideration of equal teaching staff. One class as a BMC treatment (experimental class) and the other class as a control class did not apply BMC, determined by simple random sampling.

Data collection techniques used were instruments consisting of: (a) instrument (test) of entrepreneurial learning outcomes, and (b) entrepreneurial intentions (adopted from Liñán & Chen, 2009; Liñán, Rodríguez-Cohard, & Rueda-Cantuche, 2011) on a scale of 1-7. A score of 1 describes "very weak," and a score of 7 describes "very strong." Before being distributed, the learning achievement test instrument was tested to ensure validity. Normality and homogeneity tests are carried out to ascertain whether the data is normally distributed and homogeneous as a condition of using a hypothesis test tool. To measure the impact of BMC entrepreneurship learning, researchers using "t-test" and "anova test". The tool for running statistical test is using SPSS version 24.

Table 1. Variable and Indicator

No.	Variable	Indicator	Item
1.	Entrepreneurship learning outcomes	Business opportunities,	5, 14
		Entrepreneurial character	3, 4, 7, 8, 9, 12, 16
		Entrepreneurial process	10, 17
		Resources	1, 2, 11, 15
		Business planning	6, 13, 18
2.	Entrepreneurial intension	Work orientation	1, 2
		Readiness to start a business	3, 6
		Entrepreneurial determinatiion	4, 5

RESULT AND DISCUSSION

Result

The number of questions used to measure the level of entrepreneurial knowledge of students was 17 multiple choice items. Moreover, that to find out students' ability to build a business, an assignment is given to build business plans in groups. Students first tested the questions. From 20 multiple choice items tested, there were 17 items valid (with criteria $r_{pbis} > .361$). Then from the 6 statement items used to measure student entrepreneurial intentions, all of them can be used, seen from the validity with the lowest Corrected Item-Total Correlation score of .681 and the highest .824 (with criteria $> .30$) and Alpha Cronbach .912 (with criteria $> .60$).

Students Response Toward Tools and Implementation of BMC Learning

The principle of the reaction of BMC learning is seen from the responses given by students to the learning instruments and the application of BMC, and the results are presented in Table 2.

Student responses to the application of BMC viewed from 5 aspects; happy and unhappy feelings, aspects of learning new categories or not, the level of language clarity, the level of understanding, and the level of exciting or unexciting on the BMC Student Worksheet and learning outcomes test, the result is that every aspect received a positive response in 81% and above (category "very high"). Calculation results are presented in Table 2.

A pretest was performed to find out the initial conditions of the students' abilities, and the results are presented in Table 3. The data were proven to be normally distributed between the BMC class and the control class because each sig value $> .05$ both the Kolmogorov-Smirnov and Shapiro-Wilk tests. Then the homogeneity of the data is also fulfilled because of the sig Test of Homogeneity of Variances $> .05$. These results state there is no difference in the ability of BMC class students with control classes.

Table 2. Student Responses to BMC Learning Instruments and Implementation

Aspects	Average Response (%)	
	Happy	Unhappy
Feelings of "Happy or Unhappy" Respondents to the component; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	100	0
"New or Not New" respondents' opinions of the components; subject matter, BMC Model. Student Worksheet (Business Plan), learning atmosphere, instructor/lecturer appearance, how to teach	New 85	Not new 15
"Clear or Unclear" respondents' opinions about the language used in the Student Worksheet and learning achievement test	Clear 96.55	Unclear 3.50
Respondents' opinions about "understanding or not understanding" of the Student Worksheet (Business Plan) and learning achievement test	Understand 93	Not Understand 7.00
Respondents' opinions about the "exciting or unexciting" towards Student Worksheets (Business Plan) and test results	Exciting 89.50	Unexciting 10.50
Criteria: 0 % - 20 %	Very low	
21% - 40%	Low	
41% - 60%	Medium	
61% - 80%	High	
81% - 100%	Very high	

Table 3. Test Results for Normality and Homogeneity in Pretest

		BMC Classroom	Control Classroom
Number		33	31
Average learning achievements		61.121	57.710
Normality test	Kolmogorov-Smirnov ^a	.167	.200
	Shapiro-Wilk	.357	.238
Test of Homogeneity of Variances	Levene Statistic	.106	
	Sig.	.746	

The next step is to test the assumptions of normality and homogeneity. Referring to Table 4, entrepreneurial learning achievement data for BMC class and control class are both normally distributed because they meet the Shapiro-Wilk requirements where sig values are .056 and .118 > .05, respectively. Then the data on entrepreneurship intentions both the BMC class and the control class are both normally distributed because the Shapiro Wilk sig values are respectively .140 and .549 > .05. Specifically for the normality of learning achievement only the Shapiro-Wilk criteria meet this requirement because of the small sample size.

Furthermore, the homogeneity test results of learning achievement data and entrepreneurial intention (Learning model and learning achievement level) both meet the requirements because of each sig value > .05 as presented in Table 5. Because the normality and homogeneity requirements of the data have been fulfilled, the next step is carried out hypothesis testing.

Furthermore, to find out whether there are differences in entrepreneurship learning outcomes between the BMC class and the control class as the impact of using learning models (BMC application and conventional learning) and the impact of the level of learning achievement the t-test is performed. The results are presented in Table 5, where learning achievement between the BMC class and the control class fulfills the homogeneity requirements because the sig values are respectively .713 and .673 > of .05. Likewise, the students' entrepreneurial intentions also meet the data criteria of homogeneity because each sig value > .05. Then the test results of differences in learning achievement based on the output "Independent Samples Test" in the "Equal variances assumed" section known sig (2-tailed) value of .033 < .05, (see Table 6) means that there are significant differences in BMC class learning outcomes with control.

Table 4. Test Results of Normality Learning Achievements and Entrepreneurial Intention

	Model	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Learning achievements	BMC	.252	22	.001	.914	22	.056
	Control	.242	20	.003	.924	20	.118
Entrepreneurial intention	BMC	.126	22	.200*	.933	22	.140
	Control	.144	20	.200*	.960	20	.549

Table 5. Test of Homogeneity of Variances

	Levene Statistic	df1	df2	Sig.
Learning achievements				
Learning model	.137	1	40	.713
Level learning achievements	.181	1	40	.673
Entrepreneurial intention				
Learning model	.756	1	40	.390
Level learning achievements	.479	1	40	.493

Table 6. Independent Samples Test, Learning Achievements

		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Learning achievements	Equal variances assumed	.137	.713	2.206	40	.033	7.795	3.534
	Equal variances not assumed			2.211	39.88	.033	7.795	3.526

The difference in entrepreneurship learning achievement between the BMC class and the control class based on the average BMC class is 12.52% higher than the control class (see Table 7).

Entrepreneurship Intention Test Results BMC class with control class (conventional) seen from the total mean is not significantly different, where the average total BMC class is 37.682 and the control class is 35.50 with a difference of 6.15% (see Table 8).

Hypothesis test results of the impact of the application of the BMC model and the

effect of entrepreneurial learning outcomes on entrepreneurial intentions are presented in Table 9. It is known that the Corrected Model shows a sig value of $.000 < .05$, meaning that the BMC learning model and the level of entrepreneurial learning achievement together prove to have a significant effect on intention entrepreneurship. The contribution of learning models and the level of entrepreneurial knowledge in influencing entrepreneurial intentions is seen from the *R Squared* value of 49.2%.

Table 7. Learning Achievements by Class Group

	Model	N	Mean	Std. Deviation	Std. Error Mean
Learning achievements	BMC	22	70.046	11.668	2.488
	Control	20	62.250	11.177	2.499

Table 8. Entrepreneurial Intention Based on Class and Level of Learning Achievements

Model	Level of Learning Achievements	Mean	Std. Deviation	N
BMC	Low	35.545	2.841	11
	High	39.818	1.991	11
	Total	37.682	3.242	22
Control	Low	34.600	2.271	10
	High	38.400	1.713	10
	Total	36.500	2.763	20
Total	Low	35.095	2.567	21
	High	39.143	1.957	21
	Total	37.119	3.046	42

Table 9. Test of Between-Subjects Effects

Dependent Variable: Entrepreneurial Intention

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected model	187.241 ^a	3	62.414	12.278	.000
Intercept	57649.870	1	57649.870	11341.136	.000
Model	14.632	1	14.632	2.878	.098
Level Learning achievements	170.681	1	170.681	33.577	.000
Model * level LA	.585	1	.585	.115	.736
Error	193.164	38	5.083		
Total	58249.000	42			
Corrected total	380.405	41			

a. *R Squared* = .492 (*Adjusted R Squared* = .452)

Partially the BMC model was not proven to be able to increase entrepreneurial intentions because the sig value was $.98 > .05$. However, the high and low levels of entrepreneurial learning achievement proved to significantly influence entrepreneurial intentions because the sig value of $.000 < .05$. Then the results of the interaction test of learning models (BMC and control) and the level of entrepreneurial learning achievement towards entrepreneurial intentions are not proven, because the sig value of $.736 > .05$.

Discussion

The essence of learning entrepreneurship by applying business Model Canvas is making a business plan. The business plan is summarized in 9 blocks. Based on the canvas, a more detailed business plan has been prepared. Before preparing a business plan, students are equipped with various business-related knowledge and skills such as; the ability to recognize business opportunities, the ability to take advantage of these opportunities, the ability to organize needed resources, the ability to think critically and creatively, and the ability to prepare financial reports. How to fill each block and the order in which to fill the blocks are presented in Figure 1.

Knowledge and skills about a business that students already have are very helpful for filling every area of the nine BMC blocks and preparing business plans. The preparation of a business plan starts by finding a business idea. The business idea must be based on creativity and have favorable prospects. Then the business idea was poured in one sheet of canvas paper. Entrepreneurship learning with BMC makes it easy for students to understand a business comprehensively. Students who have no experience of business find it difficult to draw up business plans. However, with this BMC pursuit, students are required to be able to fill each of the nine existing blocks. Each block is related to one another. If students can fill all nine blocks and are related to one another, they have understood the business plan that they will realize. The stages are filled in the following sequence.

First, the Customer segment block, at this stage, students must be able to determine who their customer segment is. The customer segment is to whom the goods or services we offer. Previously it must be known what their needs are not being met and they need. Business ideas usually arise from opportunities. Opportunities, in this case, are the needs of consumers who have not been met, whether they know or do not know

8.Key Partnership: Some activities are outsourced and some resources are acquired outside the enterprise	7 Key Activities: ...by performing a number of Key Activities	Value Propositions: It seeks to solve customer problems and satisfy customer needs with value propositions 3. Channels: Value propositions are delivered to customers through communication, distribution, and sales Channels.	4. Customer Relationships: Customer relationships are established and maintained with each Customer Segment	Customer Segment: An organization serves one or several Customer Segments
	6.Key Resource; Key resources are the assets required to offer and deliver the previously described elements...			
9. Cost Structure: The business model elements result in the cost structure.			5. Revenue Streams: Revenue streams result from value propositions successfully offered to customers	

Figure 1. BMC: Nine Business Model Building Blocks
(Osterwalder& Pigneur, 2010)

it. Solihah, Hubeis, & Maulana (2014) explains an organization must decide which segments are served and which are ignored, after that, then design the right business model according to needs.

If consumers are not aware of their needs, the seller will introduce them so that consumers are aware of them. Here students need creative ideas to be able to find new business opportunities. Recognizing potential customers can be from various perspectives such as; geographical, demographic, and psychographic. These different characteristics make the type of needs they will also be different.

Second, Value propositions, students must be able to determine the value that is offered to consumers, and that cannot be given by competitors. The ability of new businesses to enter the market and be able to compete with businesses that already exist in the market lies in the added value or something unique that they offer to consumers. Consumers accept this, and they feel it is a necessity and then makes a transaction. Hermawan & Pravitasari (2010) states that if the Value Propositions offered can address the needs or satisfy the needs of consumers can divert the attention of consumers from one company to another company.

Third, Chanel, in this block, students must be able to determine how to deliver or sell products/services to buyers. What media or means do we use to sell our products to consumers? The media used must be in accordance with the development of information technology or digital-based such as Google, Yahoo, Altavista, Exclopedia, Wikipedia, and others. The market orientation that is designed should not be limited to the local market but rather to a broader national market, even globally depending on the nature of the product it has.

Fourth, Customer Relationships, in this case, students must be able to design how to guarantee good relations with consumers. Maintaining good relations with consumers is one of the business strategies that students must master from the start. Fifth, Revenue Stream, students must know the primary source of income for the planned business. The main income comes from the sale of their products. Besides, that income can come from selling products from third parties. Sixth, Key Resources, from the beginning, students must be able to determine

the resources that must be had to run the main activities of the business. Key resources can be in the form of physical resources (buildings, vehicles, equipment), money, intellectual assets (brands, copyrights, patents, customer databases), and human resources.

Seventh, Key Activities, in this case, students must know the main activities in their business. If students already know the main activities in business, it means that their mastery over the planned business is better. Key activities that determine the success of the business in delivering value propositions to the customer segment. Eighth, Key Patnership, this is related to who the business partners are suppliers of cheap and quality goods, freight forwarding services (JNE, TNT, post offices, and others), advertising agencies, marketplaces (tokopedia, bukalapak, zalora, Shoope, JD .id, etc.). The eighth final step, Cost structures, from the beginning, students can already know what types of costs must be incurred. If the type of trading business consists of the cost of purchasing goods, advertising costs, shipping costs, internet costs, and company employee costs. If students are able to fill the nine blocks that are well available and related to one another, then they already understand the business as a whole. This knowledge and experience will benefit them if they realize their business both when they are students and after graduating from college.

BMC learning received a good response from students. All students said BMC learning was fun because they could collaborate in designing business independently. As many as 85% of students stated that BMC learning was new and different from previous learning. Furthermore, BMC learning is clear, easy to understand, and enjoyable. Of the five aspects observed, 81% of students responded above and are in the "very high" category. When viewed by student activities, they are encouraged to participate actively both individually and in groups. Learning like this makes them able to work in teams (teamwork), each team member has the responsibility to complete their group assignments.

Then, when viewed from the level of understanding, it can be concluded that the understanding of students is excellent because they can pour business ideas on a canvas sheet

by filling in every block and its contents related between one block and another block. Examples of student group work are presented in Figure 2. From the students' assignments, it is known that they can find creative-based business ideas, can set customer segments and can show value propositions or the advantages of their products or services compared to competitors. Students have also been able to determine what strategies will be taken to deliver products or services to prospective buyers or customers. In general, the ability of students in each group is relatively the same. This BMC entrepreneurial learning experience will be useful later if they build their businesses or work with others.

Based on the results of data analysis, as reported in Table 8, it was found that BMC learning and entrepreneurial learning outcomes together proved to have a significant effect on entrepreneurial intentions. The results of this study support research (Ismail, Khalid, Othman, Jusoff, Rahman, Kassim, & Zain, 2009; Kusmintarti, Thoyib, Maskie, & Ashar, 2016) which states entrepreneurship courses or training, (Gerba, 2012; Premand, Brodmann, Almeida, Grun, & Barouni, 2016); Patricia & Silangen, 2016; Nowiński et al., 2017) entrepreneurship education contributes to entrepreneurial intentions. Then, Dehghanpour (2013) added that the entrepreneurship course that was followed could increase entrepreneurial intentions. Furthermore, Kusmintarti et al. (2016) added that people who participated in entrepreneurship training had the provision of

business ideas and social networking and had the desire to build a business going forward. This research provides a theoretical foundation for the development of entrepreneurial intentions through entrepreneurial learning.

Entrepreneurship education is increasingly attracting the attention of researchers. Raposo & Paço (2011) state that entrepreneurship education provides knowledge in the form of; (a) the ability to recognize opportunities, (b) the ability to take advantage of opportunities, generate new ideas and find needed resources, (c) the ability to create and operate new devices, and (d) the ability to think critically and creatively. According to Sánchez (2011), in addition to business knowledge and skills, entrepreneurship education also develops beliefs, values, and attitudes, and aims to make students confident and consider entrepreneurship as an alternative job or as unemployment. Furthermore, Ismail et al. (2009) stated that the entrepreneurship course, Fayolle & Gailly (2015) added that entrepreneurship education has a positive effect on students who either have low or non-existent entrepreneurial intentions.

The completion of one entrepreneurship course can increase entrepreneurial intentions by 1.3 times (Dehghanpour, 2013). Then, Martin, McNally, & Kay (2013) found a significant relationship between Entrepreneurship Education and Training (EET) with the preparation of entrepreneurial human capital assets. Kusmintarti et al. (2016) stated similarly that students who participated in entrepreneurship

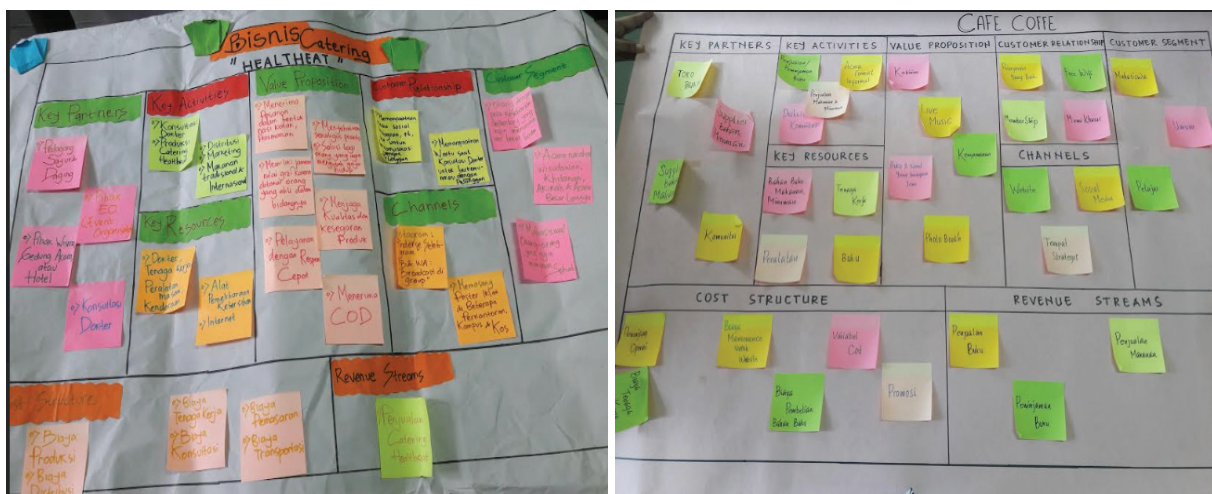


Figure 2. Examples of BMC Students' Assignment

training had the intention to build a new business in the future because they were equipped with business ideas and social networking. Previously Nursito, Julianto, & Nugroho (2013) stated that entrepreneurship education could shape entrepreneurial knowledge and have a positive and significant impact on entrepreneurial intentions. Therefore, Barba-Sánchez & Atienza-Sahuquillo (2017) need to integrate entrepreneurship education with technical education to increase entrepreneurial intentions. The focus of entrepreneurship education is to develop entrepreneurial attitudes, skills, and entrepreneurial behavior (Doğan, 2015). The results of the latest research, Solesvik (2019) explains that business education positively influences the formation of entrepreneurial skills and competencies. Students who study business also exhibit higher levels of entrepreneurial intentions than those who do not participate in business education.

Čapienė & Ragauskaitė (2018) support the entrepreneurship teaching method by increasing collaboration between stakeholders in entrepreneurship education and getting closer to the business environment. Kyro (2003) states entrepreneurship education must focus on learning activities that can enhance understanding, business knowledge, and entrepreneurship. Entrepreneurship learning in universities examines theoretical aspects and practical knowledge (Heinonen & Poikkijoki, 2006). Therefore entrepreneurial instructors must have the knowledge, experience and practical skills on how to start a business (Purwana et al., 2018).

Furthermore, the partial test results of the application of BMC have not been proven to increase entrepreneurial intentions. This means that there is no difference in the entrepreneurial intentions of students taught by BMC with the control class. So far, no research has been found that examines the effect of BMC learning on entrepreneurial intentions so that none can be used as a comparison. However, the use of BMCs in the field of financial management allows companies to identify customer needs, estimate the potential benefits and costs required (Dudin, Kutsuri, Jur, & Sozrykoevna, 2015). Furthermore, Crotty, Kinney, & Farren (2017) state that BMC learning is simple, clear, and how business strategy is centered on nine main

business area blocks, and more importantly, encourages students or business people to think about how interactions and consequences occur.

Research conducted by Dewobroto (2013) states that the use of Business Model Canvas can be a simple tool to produce an alternative strategy for the company to achieve financial viability. Then, Dudin, Lyasnikov, Leont'eva, Reshetov, & Sidorenko (2015) stated that the use of the business model of the canvas model could create a competitive advantage in the agricultural industry due to the organizational features of the production and sales cycle. Toro-Jarrín, Ponce-Jaramillo, & Güemes-Castorena (2016) also argued that Business Model Canvas identifies essential parts of the business, the simplicity of its application makes it more acceptable and disseminated. Furthermore, Lima & Baudier (2017) states that BMC is expected to not only be able to improve organizational performance, enhance the ability of entrepreneurs to communicate, and innovate their business models but also as tools that are adapted for visualization, decision making, creative thinking, collaboration, and reflection.

Entrepreneurial learning, according to Fruchter (2001) needs to change from traditional teaching practices centered on teaching to “knowing-what,” to active learning with a focus on teaching to “know-why.” BMC learning includes active and student-centered learning. Student-centered learning makes them more independent and responsible for finding solutions; educators play a role as mentors or facilitators (Doppelt, 2003). The advantages of active learning are very relevant in the field of entrepreneurship, where students have the goal to create and lead their projects, and become a favorite practice for teaching entrepreneurship (Åsvoll & Jacobsen, 2012). Rae (2011) also proposes that entrepreneurship education requires a holistic and activity-based approach. This model is useful for understanding learning material, practice, and personal development of social and group interactions. Active learning activities make academic results and higher motivation, and more in-depth understanding of content, and have been proven in several studies (Michael, 2006).

The next finding is that the level of entrepreneurial learning achievement has been proven to influence entrepreneurial intentions.

This means that student entrepreneurship intentions will be higher if entrepreneurship learning achievement is high, and vice versa, entrepreneurial intentions will be lower in students with lower entrepreneurial learning achievements. High levels of student achievement, illustrating their mastery of entrepreneurial knowledge is higher. In general, entrepreneurial knowledge includes business planning, business development strategies, attitudes, and records and finance. Suryana & Bayu (2010), explained that an entrepreneur must know the business to be initiated and knowledge of the business environment that will affect entrepreneurial activities; knowledge of roles and responsibilities; knowledge of personality and responsibilities; and the latest knowledge is knowledge about management and business organizations.

Mastery of entrepreneurial knowledge (learning achievement) is essential. Knowledge about entrepreneurship influences entrepreneurial intentions positively and significantly (Anggraeni & Harmanik, 2015; Hutasuhut, 2018; Doğan, 2015, 2015; Roxas, Cayoka, & Jesus, 2008). Mastery of entrepreneurial knowledge will increase the ability of students to run businesses. When he feels he has the ability, there will be an intention to run a business. Previous researchers such as (Roxas, 2014; Küttim, Kallaste, Venesaar, & Kiis, 2014) stated that entrepreneurship education significantly increased entrepreneurial knowledge. Entrepreneurial knowledge is the basis of entrepreneurial resources found in individuals (Hisrich, Peters, & Shepherd, 2008). The results of this research strengthen the theoretical foundation of the importance of providing education in higher education to build entrepreneurs. Entrepreneurship education can help and increase entrepreneurial awareness and acceptance as a valuable career choice (Mikic et al., 2018). Entrepreneurship education is also able to provide knowledge to recognize opportunities, take advantage of opportunities, create and operate new devices, and the ability to think critically and creatively (Robles & Zárraga, 2015). Raposo & Paço (2011) added that entrepreneurship education could be competencies and attitudes that can determine future carrier choices.

Further findings, this research did not succeed in proving an interaction between the application of the BMC model and the

level of knowledge (entrepreneurial learning achievement) in shaping student entrepreneurial intentions. This is because partially, the BMC learning model does not have an impact on increasing entrepreneurial intentions even though the level of achievement has a partial impact. Although the application of BMC learning directly has not been proven to be able to increase the entrepreneurial intentions of students. However, this research succeeded in proving that the application of BMC can improve entrepreneurial learning outcomes and through moderation of the level of knowledge (learning achievement of entrepreneurship), is proven to increase entrepreneurial intentions. The results of this research strengthen the theoretical foundation of the importance of entrepreneurship education to increase knowledge about entrepreneurship in order to create a generation that is interested in entrepreneurship.

CONCLUSION

Application of Business Model Canvas (BMC) on entrepreneurial learning can be a positive response from students and can increase entrepreneurship learning outcomes, experimental class learning outcomes (BMC) 12.52% higher than the control class learning outcomes. However, the entrepreneurship intentions of BMC class students were not proven to be higher than the control class. However, together, the application of BMC and the level of entrepreneurial learning achievement can increase student entrepreneurial intentions. The class learning process that applies BMC can create a pleasant learning atmosphere for all students (100%) who feel understood 93% and feel drawn 89.5%. This research provides a theoretical foundation that the development of entrepreneurial intentions can be done through entrepreneurship education. Entrepreneurship education can increase knowledge (entrepreneurial learning achievement), and achievement levels can strengthen (moderate) BMC learning to increase entrepreneurial intentions. For this reason, universities are expected to be able to design practical and coherent entrepreneurial learning that combines conceptual learning and practical learning. This study has limitations in duration and class of treatment, so it is possible to be reviewed again by adding a broader duration and class.

ACKNOWLEDGEMENT

The researcher thanked the Rector of Medan State University for financial assistance through the Lecturer Study Group Research Grant program and grateful also to the Dean of the Faculty of Economics for the research permission given and thanks to the students for their participation in this research.

REFERENCES

- Alias, C., Goudz, A., Jawale, M., & Noche, B. (2015, May). Generating a business model canvas for future-internet-based logistics control towers. *Proceeding of the 2015 4th International Conference on Advanced Logistics and Transport (ICALT)*, 257-262.
- Anggraeni, B., & Harnanik, H. (2015). Pengaruh pengetahuan kewirausahaan dan lingkungan keluarga terhadap minat berwirausaha siswa kelas XI SMK Islam Nusantara Comal Kabupaten Pematang. [The influence of entrepreneurial knowledge and family environment on the entrepreneurial interest of XI grade students of SMK Islam Nusantara Comal, Pematang Regency]. *Dinamika Pendidikan*, 10(1), 42-52. doi:10.15294/dp.v10i1.5093.
- Åsvoll, H., & Jacobsen, P. J. (2012). A case study: Action based entrepreneurship education how experience problems can be overcome and collaboration problems mitigated. *Journal of Entrepreneurship Education*, 15(SI), 75-97. <https://ntnuopen.ntnu.no/>.
- Barba-Sánchez, V., & Atienza-Sahuquillo, C. (2017). Entrepreneurial intention among engineering students: The role of entrepreneurship education. *European Research on Management and Business Economics*, 24(1), 53-61. doi:10.1016/j.iedeen.2017.04.001.
- BPS. (2019). Pengangguran Terbuka Menurut Pendidikan tertinggi yang ditamatkan 1986-2018. *Tersedia: Http://Www. Bps. Go. Id/*.
- Čapienė, A., & Ragauskaitė, A. (2018). Entrepreneurship education at university: Innovative models and current trends, 2, 284-291. doi:10.22616/rrd.23.2017.080.
- Coes, D. H. (2014). *Critically assessing the strengths and limitations of the Business Model Canvas* (Master's thesis, University of Twente). <https://essay.utwente.nl/>.
- Crotty, Y., Kinney, T., & Farren, M. (2017). Using the Business Model Canvas (BMC) strategy tool to support the Play4Guidance online entrepreneurial game, 4(1), 34-41. doi:10.1515/ijtr-2017-0005.
- Dehghanpour, A. (2013). The process of impact of entrepreneurship education and training on entrepreneurship perception and intention: Study of educational system of Iran. *Education and Training*, 55(8-9), 868-884. doi:10.1108/ET-04-2013-0053.
- Dewobroto, W. S. (2013). Penggunaan Business Model Canvas Sebagai Dasar Untuk Menciptakan Alternatif Strategi Bisnis dan Kelayakan Usaha. *Jurnal Teknik Industri*, 1(2), 215-230.
- Doğan, E. (2015). The effect of entrepreneurship education on entrepreneurial intentions of university students in Turkey. *The Journal of Entrepreneurship*, 23(1), 1-18. doi:10.1177/0971355713513346.
- Doppelt, Y. (2003). Implementation and assessment of project-based learning in a flexible environment. *International journal of technology and design education*, 13(3), 255-272. doi:10.1023/A:1026125427344.
- Dudin, M. N., Kutsuri, G. N., Jur, I., & Sozrykoevna, S. (2015). The innovative Business Model Canvas in the system of effective budgeting, 11(7), 290-296. doi:10.5539/ass.v11n7p290.
- Dudin, M. N., Lyasnikov, N. V. E., Leont'eva, L. S., Reshetov, K. J. E., & Sidorenko, V. N. (2015). Business model canvas as a basis for the competitive advantage of enterprise structures in the industrial agriculture.

- Biosciences Biotechnology Research Asia*, 12(1), 887-894. doi:10.13005/bbra/1736.
- Fayolle, A., & Gailly, B. (2015). Fayolle, A., & Gailly, B. (2013). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75-93. doi:10.1111/jsbm.12065.
- Fiet, J. O. (2001). The theoretical side of teaching entrepreneurship. *Journal of business venturing*, 16(1), 1-24. doi:10.1016/S0883-9026(99)00041-5.
- Fritscher, B., & Pigneur, Y. (2014). Visualizing business model evolution with the Business Model Canvas: Concept and tool. *Proceedings of the 2014 IEEE 16th Conference on Business Informatics*, 151-158. doi:10.1109/CBI.2014.9.
- Fruchter, R. (2001). Dimensions of teamwork education. *International Journal of Engineering Education*, 17(4/5), 426-430. <https://dialnet.unirioja.es/servlet/revista?codigo=14394>.
- Gerba, D. T. (2012). Impact of entrepreneurship education on entrepreneurial intentions of business and engineering students in Ethiopia. *African Journal of Economic and Management Studies*, 3(2), 258-277. doi:10.1108/20400701211265036.
- Heinonen, J., & Poikkijoki, S. (2006). An entrepreneurial-directed approach to entrepreneurship education: Mission impossible? *Journal of Management Development*, 25(1), 80-94. doi:10.1108/02621710610637981.
- Hermawan, A., & Pravitasari, R. J. (2010). *Business Model Canvas*. <http://akselerasi.id/>.
- Hisrich, R. D., Peters, M. P., & Shepherd, D. A. (2008). *Entrepreneurship*. Boston, MA: McGraw-Hill Irwin.
- Hutasuhut, S. (2018). The roles of entrepreneurship knowledge, self-efficacy, family, education, and gender on entrepreneurial intention. *Dinamika Pendidikan*, 13(1), 90-105. doi:10.15294/dp.v13i1.13785.
- Indarti, N., & Rostiani, R. (2008). Undergraduate student's entrepreneurial intention: A comparative study among Indonesia, Japan and Norway. *Journal of Economics and Business Indonesia (Jurnal Ekonomika Dan Bisnis Indonesia)*, 23(4).
- Ismail, M., Khalid, S. A., Othman, M., Jusoff, H. K., Rahman, N. A., Kassim, K. M., & Zain, R. S. (2009). Entrepreneurial intention among Malaysian undergraduates. *International Journal of Business and Management*, 4(10), 54-60. doi:10.5539/ijbm.v4n10p54.
- Jakubczak, J., & Rakowska, A. (2013, 19-21 June). *The role of education and culture in the development of youth entrepreneurship in European Union*. Paper presented at Management, Knowledge and Learning International Conference, Zadar, Croatia. <http://www.toknowpress.net/I>.
- Krueger, N. F., & Carsrud, A. L. (1993). Entrepreneurial intentions: Applying the theory of planned behaviour. *Entrepreneurship & Regional Development*, 5(4), 315-330.
- Kyro, P. (2003). *Entrepreneurship pedagogy-the current public and some future expectations*. Paper presented at the 3rd European Summer University, Paris, France.
- Kusmintarti, A., Thoyib, A., Maskie, G., & Ashar, K. (2016). Entrepreneurial characteristics as a mediation of entrepreneurial education influence on entrepreneurial intention. *Journal of Entrepreneurship Education*, 19(1), 24-37.
- Küttim, M., Kallaste, M., Venesaar, U., & Kiis, A. (2014). Entrepreneurship education at university level and students' entrepreneurial intentions. *Procedia-Social and Behavioral Sciences*,

- 110(2014), 658-668. doi:10.1016/j.sbspro.2013.12.910.
- Lima, M., & Baudier, P. (2017). Business model canvas acceptance among French entrepreneurship students: Principles for enhancing innovation artefacts in business education. *Journal of Innovation Economics Management*, (2), 159-183. doi:10.3917/jie.pr1.0008.
- Liñán, F., & Chen, Y. W. (2009). Development and cross-cultural application of a specific instrument to measure entrepreneurial intentions. *Entrepreneurship: Theory and Practice*, 33(3), 593-617. doi:10.1111/j.1540-6520.2009.00318.x.
- Liñán, F., Rodríguez-Cohard, J. C., & Rueda-Cantucho, J. M. (2011). Factors affecting entrepreneurial intention levels: A role for education. *International Entrepreneurship and Management Journal*, 7(2), 195-218. doi:10.1007/s11365-010-0154-z.
- Martin, B. C., McNally, J. J., & Kay, M. J. (2013). Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28(2), 211-224. doi:10.1016/j.jbusvent.2012.03.002.
- Michael, J. (2006). Where's the evidence that active learning works? *30(4)*, 159-167. doi:10.1152/advan.00053.2006.
- Mikic, M., Sopta, M., & Horvatinovic, T. (2018). The role of entrepreneurial education in the development of entrepreneurship. *Casopis Za Ekonomiju I Trzisne Komunikacije*, 8(2), 385-395. doi:10.7251/EMC1802385M.
- Murtini, W. (2008). Success story sebagai pendekatan pembelajaran kewirausahaan. [Success story as an entrepreneurial learning approach]. *Varia Pendidikan*, 20(2), 173-183.
- Nowiński, W., Haddoud, M. Y., Lančarič, D., Egerová, D., & Czeglédi, C. (2017). The impact of entrepreneurship education, entrepreneurial self-efficacy and gender on entrepreneurial intentions of university students in the Visegrad countries. *Studies in Higher Education*, 5079(August), 1-19. doi:10.1080/03075079.2017.1365359.
- Nursito, S., Julianto, A., & Nugroho, S. (2013). Analisis pengaruh interaksi pengetahuan kewirausahaan dan efikasi diri terhadap intensi kewirausahaan. [Analysis of the effect of the interaction of entrepreneurial knowledge and self-efficacy on entrepreneurial intentions]. *Kiat Bisnis*, 5(3), 201-211. <http://journal.unwidha.ac.id/index.php/KIATBISNIS/article/view/1042>.
- Osterwalder, A. (2004). *The business model ontology a proposition in a design science approach* (Doctoral dissertation, Université de Lausanne, Faculté des hautes études commerciales).
- Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: a handbook for visionaries, game changers, and challengers*. John Wiley & Sons.
- Patricia, P., & Silangen, C. (2016). The effect of entrepreneurship education on entrepreneurial intention in Indonesia. *DeReMa Jurnal Manajemen*, 11(1), 67-86. doi:10.19166/derema.v11i1.184.
- Premand, P., Brodmann, S., Almeida, R., Grun, R., & Barouni, M. (2016). Entrepreneurship education and entry into self-employment among university graduates. *World Development*, 77(C), 311-327. doi:10.1016/j.worlddev.2015.08.028.
- Purwana, D., Suhud, U., & Wibowo, S. F. (2018). Determinant factors of students' entrepreneurial intention: A comparative study. *Dinamika Pendidikan*, 13(1), 1-13. doi:10.15294/dp.v13i1.12971.
- Rae, D. (2011). Entrepreneurial learning: A practical model from the creative industries. *Education and Training*, 46(8/9), 492-500. doi:10.1108/00400910410569614.

- Raposo, M., & Paço, A. (2011). Entrepreneurship education: Relationship between education. *Psicothema*, 23(3), 453-457. <http://www.psicothema.com/>.
- Robles, L., & Zárraga, M. (2015). Key competencies for entrepreneurship. *Procedia Economics and Finance*, 23(October 2014), 828-832. doi:10.1016/S2212-5671(15)00389-5.
- Roxas, B. G., Cayoka-, R. P., & Jesus, R. M. de. (2008). Entrepreneurial knowledge and its effects on entrepreneurial intentions: Development of a conceptual framework. *Asia-Pacifik Social Science Review*, 8(2), 61-77. doi:10.3860/apssr.v8i2.784.
- Roxas, B. (2014). Effects of entrepreneurial knowledge on entrepreneurial intentions: A longitudinal study of selected South-east Asian business students. *Journal of Education and Work*, 27(4), 432-453. doi: 10.1080/13639080.2012.760191.
- Sánchez, J. (2011). The influence of entrepreneurial competencies on small firm performance. *Revista Latinoamericana de Psicología*, 44(2), 165-177. <http://www.scielo.org.co/>.
- Sirelkhatim, F., & Gangi, Y. (2015). Entrepreneurship education: A systematic literature review of curricula contents and teaching methods. *Cogent Business & Management*, 2(1), 1-11. doi:10.1080/23311975.2015.1052034.
- Solesvik, M. Z. (2019). Entrepreneurial competencies and intentions: The role of higher education. *Forum Scientiae Oeconomia*, 7(1), 9-23. doi:10.23762/FSO_VOL7_NO1_1.
- Solihah, E., Hubeis, A. V. S., & Maulana, A. (2014). Analisis model bisnis pada KNM fish farm dengan pendekatan Business Model Canvas (BMC). [Analysis of business models on KNM fish farm with the Business Model Canvas (BMC) approach]. *Jurnal Sosial Ekonomi Kelautan dan Perikanan*, 9(2), 185-194. doi:10.15578/jsekp.v9i2.1220.
- Suryana, Y., & Bayu, K. (2010). *Kewirausahaan: Pendekatan karakteristik wirausahawan sukses*. [Entrepreneurship: A characteristic approach to successful entrepreneurs]. Jakarta: Kencana Predana Media Group.
- Toro-Jarrín, M. A., Ponce-Jaramillo, I. E., & Güemes-Castorena, D. (2016). Methodology for the of building process integration of Business Model Canvas and technological roadmap. *Technological Forecasting and Social Change*, 110(2016), 213-225. doi:10.1016/j.techfore.2016.01.009.
- Türko, E. S. (2016). Business plan Vs Business Model Canvas in entrepreneurship trainings: A comparison of students' perceptions. *Asian Social Science*, 12(10), 55-62. doi:10.5539/ass.v12n10p55.
- Westhead, P., Storey, D. J., & Martin, F. (2001). Outcomes reported by students who participated in the 1994 Shell Technology Enterprise Programme. *Entrepreneurship & Regional Development*, 13(2), 163-185. doi:10.1080/08985620010018273.