



## **Experiential Learning in Entrepreneurship Teaching: An Evaluation Based on Importance Performance Analysis**

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The quality of entrepreneurship teaching in Vocational High School (VHS) is so low that the use of experiential learning (EL) could be an alternative. To actualize this, a thorough evaluation is imperative as a basis for proper designing of EL. This study aims to analyse the suitability of the implementation of EL in entrepreneurship teaching in VHS using importance performance analysis (IPA). This study was conducted using survey method on four EL components: concrete experience, reflective observation, abstract conceptualization, and active experimentation. The sample consists of 701 VHS students and graduates from seven districts/cities in West Nusa Tenggara, Indonesia. The research data were analysed comparatively and the suitability of the IPA quadrant. The study indicated that EL-based entrepreneurship teaching process did not meet respondents' expectations. All EL components were fully implemented in entrepreneurship teaching. The components in active experimentation aspect are the lowest in implementation. All components in active experimentation and some in other components were categorized as an important aspect of entrepreneurship teaching whose learning achievement are still low. The results of the study are crucial in determining the need to design an entrepreneurship teaching that integrates all four components so as to generate quality graduates.

**Keywords:** experiential learning, entrepreneurship, teaching, evaluation, importance performance analysis, vocational high school

## **INTRODUCTION**

Vocational High School (VHS) graduates are designed to have skills based on the needs of the industrial market with the challenges (Blenker et al., 2012). This means that Vocational High Schools are consistently driven towards real changes in mindset, an

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entrepreneurial mindset that focuses on self-potential by involving factors of experience, creative thinking, attitudes and beliefs to seize an opportunity (Pfeifer et al., 2016); and having ideas and inspiration within the wider environment (Naumann, 2017). However, the problem is that entrepreneurial teaching is comprehended in the narrow context of earning money (Cope, 2011). Several studies also mentioned that entrepreneurship teaching is still a textbook-based and not in accordance with the formation of entrepreneurial character; there is disconnection between school expectations and the reality on the field (Muhe & Tawe, 2016); the teaching content is still shallow, focusing on the theoretical contents without any application (not emphasizing the uniqueness of entrepreneurship) which in the end does not bring up entrepreneurial competencies (Pittaway & Cope, 2007). Therefore, entrepreneurial teaching needs to change its pattern by emphasizing the student's experiencing of working (Huang, 2019), in addition to optimizing the potential for regional advantages (Roudy, 2018). Thus, effective entrepreneurial teaching must be based on entrepreneurial experience, in order to enable students to learn through entrepreneurship itself (practice and action) (Gibb, 2002)

This study is emphasizing on the experience of students, so that the entrepreneurship teaching designs use the EL since owners of the learning journey is actually the students themselves (Manimala & Thomas, 2017). This also should involve the understanding of the problem solving needed by the students in their environment (Fromm et al., 2021). The emphasis is also in the facilitating of interactive and constructive learning to develop innovative learning (Ng et al., 2019). There are quite a number of studies examining EL reflecting the quality learning (Gorghiu & Ancuta, 2016). Based on these theories and facts, the EL model developed by Kolb (1984) becomes relevant to apply in improving the quality of entrepreneurial teaching. EL is a multidimensional process, starting from concrete experience, reflective observation, abstract conceptualization, and active experimentation (Efstratia, 2014). The study of Fromm et al (2021) says that four aspects of EL contribute to the understanding of the learning content. This finding emphasizes the concrete experience aspect (Fromm et al., 2021), because the concrete experience focuses on realistic environments and interactive scenarios as the main design elements (Radianti et al., 2020). In line with this study, Morris's (2020) study explained that EL in the concrete experience aspect is the starting point for learning that must be prioritized. This starting point in entrepreneurship teaching is related to the ability to describe entrepreneurship, opportunities, and to identify goods/services products to be processed into innovative products (Oo et al., 2019). Similarly, the study of Cervantes-Guzmán (2021) which emphasized the aspect of concrete experience that has impact on entrepreneurial intentions. The study by Honig and Hopp (2019) focuses on entrepreneurship teaching on aspects of concrete experience and abstract conceptualization which have a strong impact on the changes of business plans in creating new successful businesses. Furthermore, Harper's (2018) study found that in reflective observation, critical reflection is needed because it acts (conducting investigations and testing the suitability of abstract conceptualizations) as a mediator of meaning making. While the active experimentation aspect is implemented for students to

train themselves to make predictions and to examine the products created from ideas and business opportunities (Kennedy et al., 2001).

Thus, the advantage of implementing EL is that in this four-stage process it is designed to enable the occurrence of optimal entrepreneurial teaching (Cope, 2011); to be as close to reality as possible, by imitating contexts similar to those in which the entrepreneurs take the action (Haase & Lautenschlager, 2011). The study of Mason and Arshed (2013) explained that EL in entrepreneurship teaching effectively exposed students to the real world of entrepreneurship. In addition, several studies also said that EL in the context of entrepreneurship teaching can help establishing and managing businesses, planning career, and being potential entrepreneurs (Karia et al., 2015); managing risk and self-efficacy that are expected to influence decisions (Ferreira, 2020); developing the business and the action strategies (Mansoori, 2017); developing business ethics (Awaysheh & Bonfiglio, 2017); meeting the demands of organizational change in a highly volatile world (Morris & König, 2021). Long before, EL in various fields of science was able to improve learning outcomes (Su & Cheng, 2019; Li et al., 2019); problem-solving skills (Hulaikah et al., 2020); acquisition of new skills and personality development up to the increase of social awareness (Fowler, 2008). On this basis, it is necessary to use EL for entrepreneurship teaching at VHS level, because one of the goals of VHS in Indonesia is to produce graduates who are ready to work and are independent. Thus, in regards to entrepreneurship teaching in Indonesia, the use of EL is relevant because EL places an importance on the process of acquiring competence through the transformation of experience (Kolb, 1984). Using EL, VHS students can directly interact with real-life reality that they are currently studying about. This includes things such as planning a business, determining competitive strategies and product marketing, determining business management models, etc.

On those reasons, it is necessary to use the EL model in entrepreneurship teaching in VHS. However, to develop the right EL model, it is necessary to evaluate the problems of entrepreneurship teaching practice, because entrepreneurship is always related to creativity, innovation, risk taking, decisions making, and self-confidence (Macko & Tsyzka, 2009). Thus, one of the models is to know the gap between reality and the students' expectations, including that of graduates. For that purpose, one of the alternatives is the use of Importance Performance Analysis (IPA) (Martilla & James, 1977). IPA is an evaluation tool to understand the needs of customers (students) in order that they can develop appropriate strategies or approaches (Hua & Chen, 2019). IPA may influence decisions, policies, and strategies for the progress of learning (Nazari-Shirkouhi et al., 2020). So far, IPA is widely used in the world of tourism (Boley et al., 2017; Simpson et al., 2020; Mimbs et al., 2020); service industry (Esmailpour et al., 2020; Roy et al., 2020); health (Izadi et al., 2017). Meanwhile, IPA has not been widely used for the evaluation of education and teaching (Daud et al., 2011). In education, several studies focus on service quality and educational performance (Nazari-Shirkouhi et al., 2020); teaching quality and research quality in higher education (Padlee et al., 2020). The IPA evaluation model is used to measure which attributes are not optimal in entrepreneurship teaching that use EL. For this reason, IPA can hence be used as an evaluation tool for this study. Therefore, this study was finally conducted to aim for the

analysis of the suitability of EL implementation in vocational high school entrepreneurship teaching—using importance performance analysis (IPA).

### **Literature Review**

#### **EL in Entrepreneurship Teaching**

EL is intended as a holistic adaptive process in learning that combines between the experience, perception, cognition, and behaviour to build self-efficacy (Manolis et al., 2013). EL has four aspects of concrete experience, reflective observation, abstract conceptualization, and active experimentation. The process of constructing knowledge involves the resolution of creative tensions between the four aspects starting from concrete experience or experiencing the opposite, abstract conceptualization (McCarthy, 2010). Individual strengths in the aspects of concrete experience and reflective observation lie in their imaginative, creative, and social abilities (divergent learning styles) (Kolb & Kolb, 2005). While the individual strength in the aspects of concrete experience and reflective observation lies in the ability to arrange logical and valid information (assimilation learning style) (Kolb & Kolb, 2005). Individual strength in the aspects of concrete experience and active experimentation lies in the ability to implement plans that involve new experiences where together they learn and work in teams (Kolb & Kolb, 2005).

Concrete experiences are to fully involve themselves in the basis for reflective observation (reflecting), then become abstract conceptualizations that allow students to draw conclusions (Morris, 2020). These conclusions are then integrated into active experiments (decision making, predictions, and trials) (Kolb & Kolb, 2012). These four aspects could change and internalize students' learning experiences so as to achieve various learning outcomes (Chan, 2012).

EL in entrepreneurship teaching, of course, requires these four aspects. Because entrepreneurship leads to strengthening creativity, innovation in creating new products/businesses and identifying opportunities (Corbett, 2005). During EL, learners are able to base their new understanding and discoveries through concrete experiences to construct ideas in their own minds (Barab et al., 2002). Concrete experience is an important part of entrepreneurial learning that encourages mindset, business orientation, that drives successful entrepreneurship, and that abstracts conceptualization to test their ideas against the real world (Lindberg et al., 2017). Thus, the active experimental stage involves the testing of the suitability of the abstract conceptualization formulated against new concrete experiences (Morris & König, 2020).

#### **Importance Performance Analysis (IPA)**

IPA is an evaluation technique that leads to improvement of priority (McLeay et al., 2017). This priority is closely related to the improvement of service recommendations (Sheng et al., 2014), allocating resources to suit the ones as needed (Chen, 2018). Olfat & Barati (2013) believe that IPA can identify focus, critical situations and consequently concentrate resources to achieve improved performance of a service. IPA is very influential on decisions, policies, and strategies so that it leads to the formation of

responsibilities (Nazari-Shirkouhi et al., 2020). IPA implementation is also used to identify and to find the strengths, and weaknesses of the model or strategy used to find the future improvement priorities (Nazari-Shirkouhi et al., 2020), including entrepreneurship teaching. In the world of education, IPA provides good recommendations to improve the quality of the curriculum and its relevance to market/industry needs (Daud et al., 2011). IPA is also used to evaluate teaching quality, thereby demonstrating teaching strengths, identifying areas of improvement, and understanding factors that contribute to student satisfaction (Cladera, 2020).

## **METHOD**

### **Types of Research**

This study is one part of the research and development of the EL model based on the resource-based view (RBV) in VHS. As an initial stage, an evaluation of the suitability of the EL practice or process in entrepreneurship subjects is carried out (in the VHS curriculum, the terms craftsmanship and entrepreneurship are used). The evaluation of suitability was carried out through a survey (Ary et al., 2018) to find out practical problems and experiences in EL learning on entrepreneurship subjects in VHS. The results of the evaluation became the basis for intervention in the form of entrepreneurship teaching using the EL model.

### **Population and Sample**

The population of this study is all State Vocational Schools in the Province of West Nusa Tenggara, Indonesia. The sample was taken by cluster sampling, on the basis of each region's regional economic advantage. All the seven districts/cities as well as their respective regional economic advantages are: (1) Mataram city (trade, business activities); (2) West Lombok Regency (food and horticulture, tourism); (3) Central Lombok Regency (centre of agriculture and tourism development); (4) East Lombok Regency (agricultural and fishery commodities); (5) North Lombok Regency (tourism); (6) West Sumbawa Regency (energy and mining industry); and (7) Sumbawa Regency (centre of livestock and agriculture industry development) (Bappeda NTB, 2016). From each district/municipality, 3 (three) State Vocational High Schools are selected. This selection was made by considering the location (urban, suburban, and remote areas). Originally, 620 respondents were selected for the study. These respondents consisted of both active students and graduates. From each school, 30 respondents were taken (this consists of a minimum of 15 students and at least 15 graduates from the class of 2018, 2019, and 2020). However, as the research progressed, a total of 701 responds from 701 respondents was actually gathered from the questionnaire. Here, due to the number of respondents who filled out the questionnaire exceeding the minimum number of samples, all of the respondents were taken entirely as the unit of analysis in this study. Hence, the number of respondents selected as the sample was expanded to a total of 701 people.

### Research Instrument

Data on the entrepreneurial teaching process was collected using questionnaire adapted from the EL stage indicators (Ferguson et al., 2016), which included: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Concrete experience has 4 (four) statement items (eg "students learn to describe observations related to entrepreneurial opportunities"), reflective observation 3 (three) items (eg "students conduct field studies on entrepreneurship best practices"), abstract conceptualization 4 (four) statement items (example "students study business models or entrepreneurial practices based on regional economic advantages"), and active experimentation with 2 statement items (example "students try out business/entrepreneurial model designs based on regional economic advantages"). The questionnaire was formulated in the form of a Likert scale with 5 options (1 = very bad to 5 = very good). Each item is presented in two models, namely for the "reality" aspect and the respondent's "expectation" aspect, then both are compared.

### Technical Analysis

The collected data were analysed with comparative analysis preceded by a requirements analysis test. The second analysis was a conformity analysis using the Importance Performance Analysis quadrant of Martilla and James (1977), including: quadrant I (concentrate these); quadrant II (keep up with the good work); quadrant III (low priority); and quadrant IV (possibly overkill). A gap analysis between expectations and reality is carried out to determine suitability. The highest suitability is if reality exceeds expectations, namely when learning is given a maximum of (5) while expectations are minimal (1), so that a value of  $5-1 = 4$ . On the contrary, the lowest occurs when learning is given at least (1) while maximum expectations (5), so that a value of  $1-5 = -4$  is obtained. With a suitability range of -4 to 4, the interval calculated by the following formulation is obtained (Djunaidi et al., 2006).

Interval: (highest score-lowest score)/number of groups

$$= (4 - (-4))/5$$

$$= 1.6$$

Based on this calculation, classification is made as follows:

Table 1  
Classification of conformity

Interval	Classification/Category
-4 to -2.4	Very poor
-2.4 to -0.8	Less confirmed
- 8 to 0.8	Sufficient
0.8 to 2.4	Confirmed
2.4 to 4	Very much confirmed

Source: adapted from Djunaidi et.al (2006)

## FINDINGS

### Validity and Reliability of Instrument

The experiment of the EL implementation instrument involved 40 respondents, the student and alumni applied outside the research sample. The analysis of the validity of the instrument used a person correlation analysis, while the reliability test used Cronbach's alpha test. The test results show that the correlation coefficient for the thirteen items is above  $r$  table at a significance of 5%, so it can be concluded that all of them meet the validity requirement. Furthermore, the results of Cronbach's alpha test showed that Cronbach's alpha value exceeded 0.700 (Table 2) as the criteria of Nunnally (1978). Thus, the instrument has met the reliability.

Table 2  
Reliability test of instrument (n = 40)

EL components	Number of Item	Cronbach $\alpha$	
		Reality	Expectation
Concrete Experience	4	.773	.905
Reflective Observation	3	.772	.875
Abstract Conceptualization	4	.781	.913
Active Experimentation	2	.762	.893

Source: Primary data processing

### Analysis Requirement Test

The normality test of the data in this study uses the Kolmogorov-Smirnov formulation, in both aspects of "reality" and "expectations". The results of the Kolmogorov-Smirnov test on all EL components showed a probability value less than 0.05. It was concluded that the data on all EL components were not normally distributed, so it could not be analysed using parametric statistics.

### Conformity Test

Because it did not meet the analysis requirements, the data analysis used the Mann Whitney U Test formulation (Table 3).

Table 3  
Summary of EL implementation test of comparison between reality and expectation

EL Components	Reality Score or Expectation Score	n	Mean Rank	Z value	Sig.
Concrete Experience	Reality	701	609.67	-8.572	.000
	Expectation	701	793.33		
Reflective Observation	Reality	701	598.82	-9.598	.000
	Expectation	701	804.18		
Abstract Conceptualization	Reality	701	599.49	-9.521	.000
	Expectation	701	803.51		
Active Experimentation	Reality	701	599.09	-9.618	.000
	Expectation	701	803.91		

Source: Primary data processing

Based on Table 3, it can be interpreted that there are differences in each component of EL implementation between reality and the expectations of students and alumni of VHS in entrepreneurship subjects. This finding indicates that learning using the EL model has not been carried out optimally in entrepreneurship teaching. Learning is still patterned on theoretical presentation, without direct practice in developing entrepreneurial products, marketing practices, and business management practices. This study showed that not many entrepreneurial skills have been put in place in the teaching process. The comparative test was confirmed based on quadrants of IPA (Table 4 and Figure 1).

Table 4  
Summary of EL Implementation Test (n = 701)

No Components	Reality average	Expectation average	$\Sigma$ Gap	Category
<b>A Concrete Experience</b>				
A1 Students learn to describe observation result related to entrepreneurship opportunity	3,23	4,00	- 0,77	Sufficient
A2 Students learn to identify products and/or service through innovation	3,25	3,97	- 0,72	Sufficient
A3 Students learn to identify new product for new market/current market	3,02	3,95	- 0,93	Less
A4 Students learn to identify cheap raw material for innovative products	3,06	3,95	- 0,89	Less
<b>B Reflective Observation</b>				
B1 Students do field study on entrepreneurship best practice	3,06	3,98	- 0,92	Less
B2 Students describe experiences of study of entrepreneurship best practice	3,10	3,75	- 0,65	Sufficient
B3 Students describe the commitment on doing what has been learned in entrepreneurship best practice	3,04	3,99	- 0,95	Less
<b>C Abstract Conceptualization</b>				
C1 Students in group learn the business model or entrepreneurship best practice in terms of regional excellence	3,10	3,98	- 0,87	Less
C2 Students in group discuss on will, need, and treats in entrepreneurship based on regional excellence	3,26	3,81	- 0,55	Sufficient
C3 Students in group discuss on the opportunity of entrepreneurship based on regional excellence.	3,25	3,79	- 0,53	Sufficient
C4 Students in group make plans of entrepreneurship model based on regional excellence	3,05	3,99	- 0,94	Less
<b>D Active Experimentation</b>				
D1 Students do experiment the business made based on regional excellence	3,10	4,08	- 0,98	Less
D2 Students do experiment the plan of product prototype based on regional excellence	3,08	4,06	- 0,97	Less
Total	3,12	3,94	- 0,82	Less

Source: Primary data processing

The data in Table 4 shows that overall, EL has not been implemented in entrepreneurship teaching in VHS. In these schools, theoretical learning is still the one commonly practiced method for entrepreneurship teaching. Teachers focus more on inculcating the concept of entrepreneurship through lecture as well as question and answer methods, and not on actually practicing entrepreneurship activities using EL. In addition, the teachers do not come from relevant field of study background, that is, entrepreneurship education. Hence naturally, the VHS graduates produced rarely possess an entrepreneurial spirit. From the data in Table 4 above, the division of quadrants based on the IPA can be visualized in Figure 1 below.

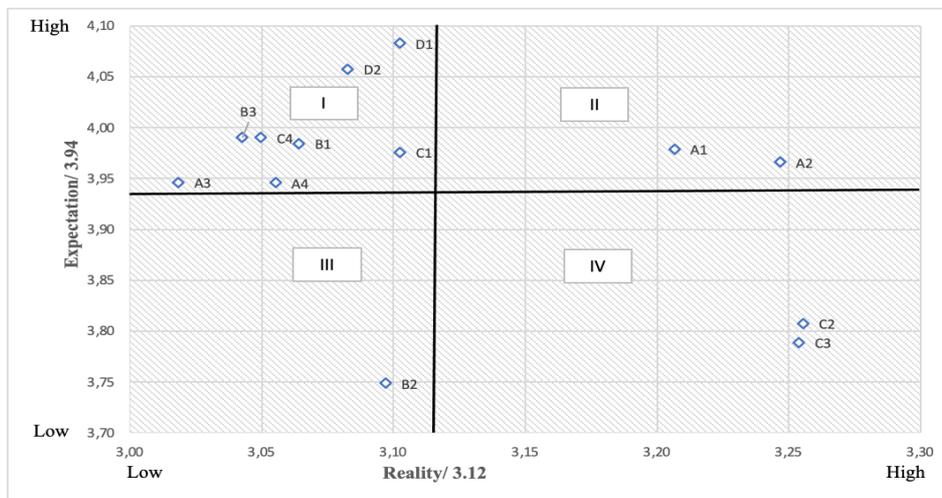


Figure 1

Quadrant of achievement of EL implementation in entrepreneurship teaching (Source: Primary data processing)

Based on the summary as shown in Figure 1, the components are important and require top priority (Quadrant I), namely: statement numbers A3, A4, B1, B3, C1, C4, D1, and D2. Students have not been trained to think creatively and act innovatively in finding ideas and opportunities for developing new products or services, even though these competencies are the main characteristics of entrepreneurship subjects. Strengthening competence in finding and developing the potential for regional economic advantages as a basis for entrepreneurship has not been widely touched. The crucial condition is learning the practice of designing entrepreneurial models and business/entrepreneur product prototypes that have not been implemented.

Furthermore, the dimensions that must be continuously improved and maintained (Quadrant II) are aspects of item A1 and A2. The introduction of products with a wide market share needs to be a concern. But overall, this practice had been well responded fairly so that this needs to be maintained and improved. The quadrant that is not too expected and the status of the achievement is still low (Quadrant III) is aspect item B2.

Therefore, the energy spent for the improvement of this aspect should be diverted to aspects that are included in quadrant I. Lastly, aspects that are included in quadrant IV are items C2 and C3. The components in quadrant IV are considered less important by students and alumni so that all potentials and resources used in this component should also be diverted to support the achievement of components in quadrant I.

## **DISCUSSION**

The results of the study presented above confirms that EL has not been implemented in entrepreneurship teaching in VHS. In addition, learners have not been introduced to the actual experience of practicing entrepreneurship through the implementation of EL components, such as: concrete experience, reflective observation, abstract conceptualization, and active experimentation. This causes graduates to be less interested in becoming entrepreneurs. This is despite empirical evidence showing how EL has a positive effect on the achievement of entrepreneurial outcomes in entrepreneurial teaching. The research of Politis et al (2019) showed that EL and the acceleration of business programs triggered good entrepreneurial teaching, thus offering a deeper understanding. With EL, students can have higher-order thinking and social skills (Coker et al., 2017), because the teaching and learning involve such risk as combining and challenging new things (Morris, 2020), especially when applied along with the building of self-confidence with future orientation, innovative thinking, and proactive action (Izadi et al., 2017). The application of EL in entrepreneurship teaching has been acknowledged to in strengthening entrepreneurial intentions, motivation, and competence (Mason & Arshed, 2013; Castaldi et al., 2020); in encouraging critical thinking skills (Scogin et al., 2017); improving social engagement and empowerment (Krakauer et al., 2017); managing learning outcomes, student attitudes towards risk taking and starting a business (Bandera et al., 2018); and improving entrepreneurial competence of vocational students (Prastawa et al., 2020). Thus, EL serves as an important instrument in entrepreneurship teaching to ensure the production of graduates with entrepreneurial career.

The results of the surveys, however, show that the EL model has not been widely practiced in vocational entrepreneurship teaching in Indonesia. Entrepreneurship teaching practices are still dominantly presented in theory without going through direct practice in entrepreneurship. Students have not learned much about market opportunities, opportunities for developing products/services that have a broad market, learning about opportunities for developing products/services based on regional economic advantages. The practice of vocational entrepreneurship teaching is still not optimum in training the students to make products with business potential, marketing, promotion, digitalization of marketing, and including business management. The advantages of teaching and learning with the EL model have not yet become an integral part of entrepreneurship teaching, thus it is normal that students do not have entrepreneurial competencies and intentions. Another inseparable factor is the ability of teachers who have not been able to implement the EL model in entrepreneurship teaching. This finding reinforces the findings of Pherson-Geyser et al. (2020) that teachers do not fully understand the context of experiential learning.

This finding confirmed results of the IPA analysis showing that most aspects of concrete experience, abstract conceptualization, and especially active experimentation fall into quadrant I (an important aspect of entrepreneurship teaching whose learning achievement are still low). Attention needs to be paid more and improvement should be concerned, because the initial interest in business will be available when students are able to identify products or services that can be generated through a certain innovation and alignment of mastery of the concept of entrepreneurship. The results of this study indirectly confirm the research of Honig and Hopp (2019) that students who focus on the concrete experience stage can guide new ideas of students which later enable them to produce results and abstract conceptualization with business challenges, financial plans, and formal business models. Furthermore, the results of Matsuo's (2015) study showed that for the improvement of concrete experience and active experimentation, students need to look for challenging tasks. In entrepreneurship teaching, several challenging tasks are identified, including: identifying products and or services that can be produced through certain innovations, entrepreneurship opportunities based on regional economic advantages, and to piloting business model designs based on regional economic advantages. Hence, in details: components that are in quadrant I need to be a top priority for improvement due to their low performance. As for the components that are included in quadrant II (i.e., the aspects are considered important and the results are in line with the respondent's expectations) ought to be optimized and maintained, such as components A1 and A2 in Table 4. Next, the aspects that are included in quadrant III (a less important aspects whose learning achievement are also still low) should be minimized, as in component B2. This shows that a learning that only describes a phenomenon is considered less important and in fact also gets a low response. Likewise, aspects in quadrant IV (aspects that are less important and felt redundant), are also minimized; as in components C2 and C3 in Table 4. This means that respondents do not really think it is important to study in groups to discuss challenges in entrepreneurship and discuss entrepreneurial opportunities. Although not considered important, the components of the last two quadrants are still implemented in EL. However, in EL an interaction must present so that group learning is needed. Group learning allows interaction to bring about participation in entrepreneurial practice (Sukardi, 2016; 2017).

In addition to becoming a basis on determining the nature of the implementation of EL in entrepreneurial learning in VHS, the results of the study can also be used to generate an additional inference, namely that IPA serves as an appropriate method to be used to evaluate and identify problems with the entrepreneurship teaching model in vocational schools, because vocational schools in Indonesia are the producers of students who are prepared to compete with the industrial market. These results confirm Līce's (2018) study that IPA provides recommendations for vocational schools in Latvia to measure priority areas in developing an educational curriculum that meets the needs so as to facilitate graduate competence and employability such as responsibility, communication, collaboration, planning, creative problem solving, and decision making. Furthermore, the study of Liao et al. (2016) suggests that the use of IPA as an evaluation tool for educational service can help identify stages in the learning model that did not work

optimally, so that teachers could improve teaching techniques. In this study, the four EL models the well identified aspects that need more attention is the action to improve the quality of entrepreneurship teaching in VHS. Thus, the use of IPA can provide an earlier alarm to find out and identify the strengths, weaknesses of the model or strategy used in order to make a priority in entrepreneurship teaching as suggested by Nazari-Shirkouhi et al. (2020).

### **CONCLUSION AND IMPLICATION**

This study indicated that the quality of entrepreneurship teaching is not strong enough to support of graduates to become entrepreneurs in terms of achievement. The teaching still tends to be textual, theoretical, and not providing much experience for students as a prospective entrepreneur. The results of the analysis using IPA also show that the teaching carried out did not fully lead to the practice of EL. Of the 13 items of EL implementation aspects, only 8 (eight) items of the teaching process that are categorized in Quadrant I (components that are considered important but whose results are not as expected). Those aspects are the priority for the improvement because achievement is still low, such as: finding cheap raw materials into innovative products, conducting field studies of entrepreneurial practices, conducting trials of business/entrepreneurial model designs based on regional economic advantages, conducting trials of business/entrepreneurial product prototype designs on the market in a limited scope.

Based on these findings, the practical implication is the improvements to EL items that are considered low (especially those in quadrant I) should become the focus of improvement of the entrepreneurial teaching to support the graduates' achievement and competitiveness (entrepreneurial graduates). In addition, the findings also confirms that IPA analysis consistently shows the relevance as an evaluation method, including for EL-based entrepreneurial learning practices. In the future, further research is needed to explore other dimensions that are adapted to the EL component in entrepreneurship teaching at VHS, using IPA as its evaluation tool.

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