

Entrepreneurship Learning Models To Increase Entrepreneurial Readiness Of Vocational High School (VHS) Students

S Muslim¹, N Kusumawati², E Ismayati³, E Rahmadyanti⁴, R N Achmad⁵, P W Rusimanto⁶, Soeparno⁷

{supari@unesa.ac.id¹, Nitakusumawati 99@gmail.com², Eusiheru@gmail.com³,
erinarahmadyanti@unesa.ac.id⁴, rita_timoho@gmail.com⁵, puputwanarti@unesa.com⁶,
soeparnotopura@gmail.com⁷}

Electrical Engineering Education, Universitas Negeri Surabaya, Indonesia^{1,3,6}
Chemistry of Department, Universitas Negeri Surabaya, Indonesia²
Civil Engineering, Universitas Negeri Surabaya, Indonesia^{4,7}
Economic of Management, Universiti Tun Hussien Onn Malaysia⁵

Abstract: Entrepreneurship subjects are adaptive group subjects, so all vocational students obtain this material, although it varies somewhat in the presentation. School average (VHS) provides this subject since the first semester of class 10. Based on the research it has been known about the tendency of student attitudes towards the five elements of entrepreneurial values, namely the level of self-confidence, creativity, achievement motivation, leadership and attitudes toward risk. In general, entrepreneurship education in vocational schools is given so far, the effect is still small on the entrepreneurial readiness of vocational students. Why did that happen? What are the causes? Has the media and learning model been utilized properly in entrepreneurial learning? In connection with that, this study aims to find out what learning models are effective for entrepreneurial learning for vocational students? The research was conducted through the literature method on a number of references and relevant research results. The study found that: (1) in general the entrepreneurial attitudes of vocational students still need to be improved; (2) the experience of entrepreneurship education in schools, entrepreneurial attitudes, self-efficacy, and entrepreneurial education in the family and community environment, have a positive and significant effect on the readiness of entrepreneurship of vocational students; (3) entrepreneurial learning through business centers, apprenticeships, and family backgrounds, simultaneously influencing positively and significantly on the entrepreneurial competencies of vocational students; (4) The "SMK Mart" unit plays a positive and meaningful role as an educational, economic and social media in the cultivation of entrepreneurial attitudes for vocational students; (5) teacher skills in teaching entrepreneurship need to be improved; (6) the entrepreneurial learning model in the form of an internet-based e-portfolio has proven effective; and (7) the "entrepreneurial extracurricular" model can function well in order to foster an entrepreneurial spirit for vocational students;

and (8) the NHT cooperative learning model can improve learning activities and learning achievements of VHS students.

Keywords: *TVET, TEVA, Social, Economy and Education, Country.*

1 Introduction

Entrepreneurship subjects are adaptive group subjects, so all Vocational High School (VHS) students get these subjects, although in their presentation there are certain variations between one VHS and other VHS. In general, vocational students obtain entrepreneurship subjects, starting from the first semester, namely in class 10. Based on measurements through instruments, there are developments and trends in students' entrepreneurial attitudes (values) towards five prerequisites for entrepreneurship, namely self-confidence, creativity, achievement motivation, ready and brave to accept risk and leadership. Through the learning process, vocational students not only obtain the knowledge and skills needed by the world of work but also obtain entrepreneurial subjects.

However, entrepreneurship education in VHS that has been given so far seems to have little effect on the entrepreneurial readiness of VHS students. The question, what factors actually influence the motivation of vocational students to try? Entrepreneurship education listed in the Vocational curriculum, both directly and indirectly, is expected to influence students' motivation in entrepreneurship, because they have been given the basics of entrepreneurial knowledge. Entrepreneurship education is the initial momentum in order to create graduates who are entrepreneurial. The experience of entrepreneurship education for vocational students can be obtained from various environments (family, school, and community environment). The family environment, especially parents will provide a home atmosphere, a view of life in terms of determining the attitudes, behaviors and educational processes for their children (Tony, 2007: 120). Thus, the family environment through the role of parents in it will be able to influence the formation of entrepreneurial spirit in children. The narrative of several entrepreneurs stated that family support received was the key to success in business [1]. Parents play an important role in motivating and encouraging their children to become prospective entrepreneurs. Moreover, parents who work as entrepreneurs have a tendency to support and encouraging the independence of his son to achieve and be responsible for his own future by establishing and owning a business, however, motivation for entrepreneurship is not enough just to have entrepreneurial knowledge, but must have skills in the field of entrepreneurship [2].

As stated above, that entrepreneurship education in VHS given so far seems to have little effect on the entrepreneurial readiness of Vocational students, so that many VHS graduates are unemployed. Question: (1) what factors actually influence the motivation of vocational students to try ?; (2) whether the learning model that has been used by the teacher, is not interesting, or does not fit the themes of entrepreneurial subjects ?; (3) are the learning methods used by teachers using the lecture method more, and not equipped with appropriate learning media ?; (4) have so far been too few VHS students the opportunity to witness firsthand the examples of the field of entrepreneurship in the field ?; (5) whether all this time the Vocational School students have participated in entrepreneurial learning just by listening and seeing, but never doing so that their learning experience has not been convincing for them to dare to take the entrepreneurial profession?

There are many questions related to the small influence of entrepreneurial learning on the entrepreneurial readiness of vocational students. From a number of these questions, which will be revealed through this research are entrepreneurial learning models that can improve the

entrepreneurial readiness of vocational students. There are many learning models, including direct learning models, problem-based learning, project-based learning, cooperative learning, discovery learning, and others. Each learning model has its advantages and disadvantages to convey learning themes including the theme of entrepreneurship, knowledge of entrepreneurship, entrepreneurial attitudes and others. In theory, that attitude can be changed including entrepreneurial attitudes. Attitudes can be learned through the learning process so that they can change and be formed according to the purpose of the intended learning. Likewise, the process of forming entrepreneurial attitudes towards vocational students can be done through planned and systematic entrepreneurial learning activities to change the mindset of students, so that they are ready to become prospective entrepreneurs. According to Dewey [3] there are four principles in learning, namely: learning to know (students learn about entrepreneurial knowledge), learning to do (students learn to do entrepreneurial activities), learning to life together (students learn to cooperate in entrepreneurship) and learning to be (students learn to become prospective entrepreneurs). If entrepreneurship learning in Vocational Schools uses the Dewey principles [3], it is expected that many VHS graduates will become prospective entrepreneurs.

Recent research has found that more than 50 percent of students taking entrepreneurship classes at Harvard University already have and do business independently [4]. Inviting students and vocational graduates to become prospective entrepreneurs is important, considering the number of entrepreneurs in Indonesia is only around 1.25 percent of the population, and still lags behind compared to Malaysia which reached 4 percent, Thailand 4.1 percent, and Singapore 7.2 percent (Windows, September 19, 2013). A country will achieve prosperity, if the number of entrepreneurs is at least 2% of the population (Pikiran Rakyat, September 1, 2013). Even Yohanes Surya stated that it would be ideal if a nation had 10% of people who were entrepreneurial because they were able to become a motor of economic growth of a nation (www.langkahwirusaha.com). Thus it is important and urgent in nature, how educational institutions, especially Vocational Schools, are able to prepare students and graduates who are successful in the field of entrepreneurship. Successful entrepreneurs, in general, are those who have scientific competencies, and skills that are equipped with individual qualities which include attitudes, motivations, values and behaviors needed to carry out entrepreneurial activities. An entrepreneur will not succeed, if he does not have the will, knowledge, and ability (Suryana, 2008: 4). Entrepreneurship competence is the basic provision of an entrepreneur to create opportunities creatively and innovatively. Creative and innovative abilities, in order to turn opportunities into benefits under conditions of risk and uncertainty, are the main requirements for an entrepreneur who wants success [5].

There are many ways to prepare students and vocational graduates to become prospective entrepreneurs. One of them is by optimally utilizing the existence of business centers and or production units in the vocational environment, which can function as (1) production-based training media (teaching factory); (2) the media grows the entrepreneurial spirit for vocational students; (3) means of practice, both technical and management; (4) as a laboratory and media for entrepreneurial learning; and (5) as a means of income-generating for schools. The use of business centers and or production units as learning media is important and strategic. Learning media in the form of films or learning videos that are packaged in CDs contain a "success story" about entrepreneurship, slide teaching materials, power points, entrepreneurial textbooks, and e-learning is the right media to be used in entrepreneurial learning. All competency-based industry training will be more effective if supported by the media. The media will be very useful in the learning process (including entrepreneurial learning) because it can facilitate interaction between teachers and students so that learning activities will be

more effective and efficient (Muslim, Karno, Aribowo, and Achmad, 2018). Moreover, the use of e-learning, which has properties can be utilized anytime and anywhere when students are located. E-learning as a learning media in building techniques has advantages because it can be accessed anytime and anywhere, materials and tasks can be accessed easily efficiently, and can support communication and discussion activities between students and teachers/instructors [6].

The next question is the learning model which is suitable to be used to print students and vocational graduates as prospective entrepreneurs. How to study and work in the field of entrepreneurship requires enormous attention. Learning is something that is very important for the effectiveness of entrepreneurship. A narrative approach to life history (entrepreneurship) is seen as a valid and productive method of research to facilitate entrepreneurial learning. As explained above, there are many learning models, including direct learning models, problem-based learning, project-based learning, cooperative learning, discovery learning, and others. It should be noted, that the chosen learning model needs to be integrated with the demands of the 21st century about 4C skills (critical thinking, creative and innovation, collaborative and communicative). Because 21st century vocational learning, according to Sudira [7], must be designed and implemented to provide an impressive learning experience, so that students: (1) know what to do; (2) willing and able to do, about what must be done; and (3) aware and aware of why it must be done. Such learning experiences will support the acquisition of life skills in a practical manner, making students more aware of the context of entrepreneurial work and better able to capture opportunities, as well as a foundation for entrepreneurs in establishing social or commercial activities [8]. Such learning experiences are important for students who will live in the 21st century. Because workers in the 21st century are not enough only with productive competencies, they must be able to build services that are fast, meticulous, intelligent and satisfying to customers [7].

2 Method

The research was conducted through literature review of references and relevant research results and continued through focus group discussions (FGD). Relevant references include learning media, learning models and books on vocational and vocational secondary education. Whereas the study of the results of relevant research is a study of studies related to learning models, learning media, and factors that influence entrepreneurial readiness.

3 Result and Discussion

Based on theories and research results, there are many factors or variables that influence the interests, motivations, attitudes, knowledge of entrepreneurship, and entrepreneurial readiness for vocational students. In accordance with this theme, Dewi & Mulyatiningsih [2] reported the results of the study through a journal entitled "The effect of entrepreneurial educational experience and vocational skills on student entrepreneurship motivation", which concluded that: (1) the experience of entrepreneurship education in schools had a positive effect on students' entrepreneurial motivation Dressmaking Vocational School; (2) the experience of entrepreneurship education in the family has a positive effect on entrepreneurial motivation in Vocational School students; (3) the experience of entrepreneurship education in the community has a positive effect on the entrepreneurial motivation of VHS students; (4) vocational skills have a positive effect on entrepreneurial motivation in dressmaking vocational students; and (5) the experience of entrepreneurship education in schools, families,

and communities as well as vocational skills together have a positive effect on the motivation of dressmaking student entrepreneurship. Thus the motivation for entrepreneurship can be increased through entrepreneurship education in schools (government), in the family and community environment. This is in line with the opinion that education is the responsibility of the family, the community and the government.

Almost similar research was conducted by Melyana, Rusdarti, & Pujiati [9] with the title "The influence of entrepreneurial attitudes and knowledge on entrepreneurial readiness through self-efficacy" which found that: (1) entrepreneurial attitudes directly influence entrepreneurial readiness positively and significantly amounting to 0.77%, which means that the higher the entrepreneurial attitude, the higher the readiness for entrepreneurship; (2) Entrepreneurship attitude influences entrepreneurial readiness indirectly through positive and significant self-efficacy of 10.84%, which means that the higher entrepreneurial attitudes and self-efficacy, the higher the readiness for entrepreneurship; (3) entrepreneurial knowledge directly influences entrepreneurial readiness (positively and significantly) at 7.56%, which means that the higher entrepreneurial knowledge will be the higher the readiness for entrepreneurship; (4) entrepreneurial knowledge influences entrepreneurial readiness indirectly through self-efficacy (positively and significantly) by 55.53%, which means that the higher entrepreneurial knowledge and self-efficacy, the higher the readiness for entrepreneurship; (5) self-efficacy proved to be a mediating variable in influencing entrepreneurial attitudes and knowledge for students towards entrepreneurial readiness; and (6) self-efficacy directly influences entrepreneurial readiness (positively and significantly) by 48.3%, which means that the higher the self-efficacy, the higher the readiness for entrepreneurship will be. This study provides clues, how entrepreneurial attitudes, self-efficacy, and entrepreneurial knowledge variables can be improved so that the level of entrepreneurial readiness also increases. Entrepreneurship knowledge can be improved through entrepreneurial learning with various learning models that are equipped with appropriate learning media, while entrepreneurial attitudes and flexibility can be improved through various programs, both extracurricular, and extracurricular programs.

Somewhat different from the two studies mentioned above, Prabandari & Rasyid [10] conducted a study entitled "The effect of entrepreneurial learning through business centers, apprenticeships, and family backgrounds on entrepreneurial competencies" which proves that: (1) entrepreneurial learning through influential business centers positive and significant to the entrepreneurial competence of Vocational students ($0,000 < 0,05$); (2) internship influences positively and significantly on the entrepreneurial competence of Vocational students ($0,000 < 0,05$); (3) family background has a positive and significant influence on the entrepreneurial competence of vocational students ($0,000 < 0,05$); (4) entrepreneurial learning through business centers, apprenticeships, and family backgrounds, simultaneously influencing positively and significantly on the entrepreneurial competencies of vocational students ($0,000 < 0,05$). The findings of this study provide clues that the entrepreneurial competence of vocational students can be improved through learning in the business center, apprenticeship, and family background. Learning in the business center and apprenticeship is learning by doing where students not only listen, but they see and even do it. If students only hear (they can forget), but if students see (they will become remembered), and even more so if the students do, they will understand. Learning like this is the principles of learning "contextual teaching & learning" (CTL) which will help students find meaning by connecting academic material with the context of everyday life [11]. They conduct self-regulated learning, work together, think critically and creatively, respect others and are determined to achieve high standards in their learning tasks [11].

If examined further, there are still many factors that influence entrepreneurial readiness. How can these factors be improved, so that the entrepreneurial readiness of vocational students also increases? What learning models can be used to improve entrepreneurial readiness for vocational students? Next, there are several studies on entrepreneurship learning models in order to improve entrepreneurial readiness of Vocational students. The research entitled "Development of learning models to internalize entrepreneurial values in Vocational Schools in Malang City" conducted by Winarno [12] concluded that: (1) scores of trends in students' entrepreneurial attitudes are still below the standards required for entrepreneurs, (2) the minimum score to be recommended is equal to (125–150), but the test results from the study sample, obtain an entrepreneurial attitude score of only 91,743; and (3) it can be concluded that entrepreneurship learning in VHS in Malang, has not touched many areas of affection to form attitudes or values needed for an entrepreneur. This study suggests that entrepreneurial attitudes of VHS students in Malang City have not been well established, which means that an analysis of the curriculum, media and learning models needed by schools and teachers is needed.

Through analysis of the curriculum, Winarno [12] found that: (1) the competencies to be achieved with the presentation of entrepreneurial subject matter, showed very little material related to the formation of attitudes / values; (2) teaching materials used as teacher references for entrepreneurship subjects are very limited; (3) the learning model used by the teacher is less varied and does not touch much on the use of models that lead to the formation of entrepreneurial values; (4) limited teacher experienced in teaching entrepreneurship material; (5) limited forums that provide teacher opportunities to improve teaching skills in entrepreneurship subjects; and (6) the teacher also claims to be bound by the target of fulfilling the competency standard in the syllabus which is used as a reference in teaching. The findings of this study indicate that an increase in commitment for stakeholders is related to entrepreneurial learning in order to improve the entrepreneurial readiness of Vocational students to reduce the number of unemployed people in this country, especially vocational graduates. The need for activities is carried out: (1) research on models and media for appropriate entrepreneurial learning; (2) focus group discussion (FGD) related to entrepreneurial learning, especially in terms of improving teacher skills in teaching entrepreneurship.

Further analysis of the learning model used by teachers in terms of entrepreneurship teaching, Winarno [12] states that: (1) the results of interviews and observations in the class show that the average teacher does not differentiate learning models based on the competencies to be achieved in the curriculum; (2) all material in the curriculum is delivered with a uniform model (lecture model, discussion and assignment), there are no special models designed for certain competencies; and (3) lecture models are more widely used models; (4) the other models used are the product selling assignment model, as well as the observation model, although the two models are only occasionally carried out due to time constraints. Based on some of these findings, Winarno [12] stated several suggestions: (1) need a thorough study of curriculum and entrepreneurial teaching materials; (2) repeated testing of the internalization model is needed as an alternative learning to test the level of effectiveness; and (3) in the development of learning models internalizing entrepreneurial values, guidance for teachers is needed.

A similar study was conducted by Maskan [13] with the title "Development of portfolio-based entrepreneurship learning models to improve the attitudes and competencies of entrepreneurship of Vocational students in Malang City" concluded that: (1) the product of the development of portfolio-based entrepreneurship learning models is good; and (2) the results

of developing portfolio-based entrepreneurship learning models suitable for use in the learning process of entrepreneurship subjects in Vocational Schools. This finding was obtained from the results of the trial development of learning models with 6 indicators, namely: (1) portfolio-based entrepreneurship learning activities are interesting (trial score of 84.15%); (2) portfolio-based entrepreneurship learning model allows students to gain more knowledge (score of 78.36%); (3) the relationship between learning objectives and the material taught in portfolio-based entrepreneurship learning models is relevant (score of 78.6%); (4) test items can measure the performance stated in achieving student entrepreneurial attitude scores of 3.6202 and student entrepreneurship competency scores of 3.5238; (5) portfolio-based entrepreneurship learning models can provide feedback, both to the teacher and to students on the process and results of student learning (scores of 79.28%); (6) portfolio-based entrepreneurship learning model enables satisfactory material and teaching improvement (score of 79.10%); (7) in the formation of entrepreneurial attitudes, the portfolio-based entrepreneurship learning model is higher (3,6197) than the classical learning model (3,503); (8) in the formation of student entrepreneurial competencies, the portfolio-based entrepreneurship learning model is higher (3,619) than the classical learning model (3,005); and (9) portfolio-based entrepreneurship learning model, the results will be optimal if applied to middle to upper academic students.

Referring to the research findings, and so that the implementation of a portfolio-based learning model can achieve optimal results, Maskan [13] presents the following recommendations: (1) the teaching teacher of entrepreneurship subjects needs to obtain debriefing on portfolio-based entrepreneurship learning models; (2) internally there needs to be coordination with fellow teacher of entrepreneurship subjects, (3) teachers need to make student worksheets (LKS); (4) students have portfolio results (every Saturday taken home as proof of work) and signed by parents; (5) the company chosen for the place of observation is made close to the student's residence; and (6) entrepreneurial learning models in the form of internet-based e-portfolios can be further developed.

The research on the development of entrepreneurship learning models was also conducted by Hakim [14] with the title "The model of entrepreneurship development in VHS in creating school independence". The results showed that: (1) the average quality of entrepreneurship learning in Vocational High Schools was perceived well by students, but in practice, some entrepreneurship material taught was not complete and did not reach the desired goals for printing entrepreneurs; (2) policies implemented in entrepreneurship learning in vocational schools, on average perceived well by teachers, but in reality many Vocational Schools do not have a clear road map on developing entrepreneurship in vocational schools; (3) networking with an industrial world that is still low causes learning of entrepreneurship in schools to be ineffective; and (4) in this study an integrated model is proposed, so that Vocational Schools are able to produce graduates who have high entrepreneurial motivation and skills.

Still in the theme "how should entrepreneurship education be developed"? Martin [15], develops "entrepreneurship education with entrepreneurial modeling" through: (1) entrepreneurial success stories in handling their business chosen as a model for entrepreneurial learning; (2) entrepreneurship syllabus based on selected successful entrepreneurs; (3) validating the design of entrepreneurship programs that are being developed; (4) do a number of try-outs, on the outline of the learning program / curriculum, syllabus and learning instruments; and (5) revisions to the outline of the learning program / curriculum, syllabus and learning instruments. Conclusions obtained, it turns out: (1) this learning model proved to be effective, can increase the willingness to learn entrepreneurship significantly; and (2) there is a

higher tendency of entrepreneurial will, compared to before students take entrepreneurial learning.

Another study was conducted by Hasanah [16] with the title "Development of entrepreneurial learning models for the formation of entrepreneurial spirit of students in Vocational High Schools", which concluded that: (1) entrepreneurship learning models developed to foster the entrepreneurial spirit of students in Vocational School are "extracurricular entrepreneurship" learning models "Carried out through two stages, namely the pre-development stage and the development stage so that the model has a valid status, both theoretically and empirically; (2) the resulting model device is a model guidebook and learning device (RPP, learning module and evaluation tool); (3) the resulting model meets valid and practical criteria for use in vocational schools; (4) the results of the analysis of model effectiveness show that the "extracurricular entrepreneurship" model meets the criteria very effectively, (5) the response of students and teachers is very positive; (6) students and teachers say that this "entrepreneurial extracurricular" model is effective in fostering the entrepreneurial spirit of Vocational students, and (7) "entrepreneurial extracurricular" models can function well in order to foster an entrepreneurial spirit for vocational students.

Entrepreneurial learning can also be done through a collaborative learning model. The research entitled "The completeness of entrepreneurial readiness of Vocational students through collaborative learning" conducted by Hariyanto [17] by reviewing from 3 (three) aspects, namely: (1) completeness aspects of business readiness; (2) aspects of the level of teacher activity in teaching; and (3) aspects of student activity in learning. The study found that the level of completeness of entrepreneurial readiness of VHS students in terms of (1) aspects of practical knowledge was complete (mean = 78.33); (2) aspects of entrepreneurial knowledge are complete (mean = 79.49); (3) attitude aspect is complete (mean = 77.57); (4), the skill aspect (mean = 83.62) is complete; and (5) the aspect of making a business proposal is complete (mean = 83.54). Whereas in terms of the level of teacher activity in teaching in: (1) the preliminary aspects of teaching include the active category, (2) the core aspects of teaching activities including the active category, (3) the closing aspects of teaching in the very active category; and (4) the use of language falls into the active category. Further review of the level of activity of students in learning in: (1) aspects of student concentration during learning including active categories, (2) students record key words including active categories, (3) students ask teachers including active categories, (4) students answer teacher questions including active categories, (5) students express opinions including active categories and (6) students in using good language are active.

The research on entrepreneurship learning model with a cooperative approach was also conducted by Kumarawati [18] with the title "increasing the activeness and learning achievement of students in entrepreneurship learning with the NHT type cooperative learning model" through classroom action research. The study concluded that: (1) the NHT type of cooperative learning model can be applied well to entrepreneurial learning, where student learning activeness is included in the high category and student achievement is included in the complete category according to the minimum completeness criteria; (2) the increase in the average activity of students in the pre-action NHT type of cooperative learning included in the low category (27.20%), increased to 29.8%, and increased again to 62.5% which was included in the medium category (at cycle I), and increased again by 23.7% to 77.3% which was included in the high category (cycle II); (3) an increase in the average student achievement in pre-action NHT cooperative learning by 70.8 increased by 13.2% to 81.9 (in the first cycle) and increased again by 10.1% to 90.1 (in cycle II). Kumarawati [18] concluded that the NHT type of cooperative learning model could improve student activity and learning achievement

in entrepreneurship learning in class XI "boutique fashion" expertise programs at SMK Negeri 8 Purworejo.

Related to the research on entrepreneurship learning models, the role of "SMK Mart" includes those revealed through several studies. Maulida, Widodo, & Sunarto. [19] conducted a study entitled "The Role of SMK Mart in Planting Entrepreneurship Attitudes in Students (Case Study in SMK Negeri 1 Kendal)", indicating that: (1) The entrepreneurial attitude of Vocational students is a value manifested in behavior (which is formed through activities entrepreneurship practice in "SMK Mart"; (2) entrepreneurial learning process which is manifested in the willingness to react to entrepreneurial activities in "SMK Mart"; (3) in the cultivation of entrepreneurial attitudes entrepreneurial education and training is needed by involving students to carry out practical activities entrepreneurship through "SMK Mart" (4) attitude of students to be more confident, action-oriented, risk-taking and honest, (5) "SMK Mart" acts as an educational, economic, and social media in cultivating entrepreneurial attitudes for vocational students and (6) "SMK Mart" has carried out good management starting from planning, organizing, implementing and supervision.

In relation to the strategy of developing entrepreneurial interest through learning, Alimudin [20] conducted a study entitled "Strategies for developing entrepreneurial interests through the learning process" giving some suggestions, that in order to increase entrepreneurial interest for vocational students needed: (1) appropriate learning methods and project-based; (2) appropriate learning evaluation method (portfolio); (3) examples of interesting entrepreneurial profiles; (4) business partners who are committed as a place of business incubator for students participating in entrepreneurship subjects; (5) the atmosphere of the learning room that is in accordance with the topic of learning and equipped with multi-media devices and teaching aids; (6) learning design with structured assignments; and (7) the competence of teaching teachers who are able to create an interesting learning atmosphere for students. Complementing several research findings as described above, Hendro et al. [21] conducted a study entitled "Implementation of character learning and reinforcement of economic learning and its effect on students' affective competencies in minimizing hoaxes", found that: (1) simultaneously positive and significant influence on the implementation of character-based economic learning and teacher reinforcement on students' affective competencies to reduce hoax news on online social media; (2) teacher reinforcement has a positive but not significant effect on students' affective competencies; (3) as a whole (the implementation of character-based learning and reinforcement of teachers) has an effect of 43.50% on students' affective competencies, including in readiness for entrepreneurship; and (4) there are still many other factors (amounting to 56.50%) that contribute to affective competencies that have not been revealed in this study, hence further research is needed. Another factor that also needs to be taken into account is how much the demand for life skills in the 21st century (which includes critical thinking, creative and innovation, collaborative, and communicative), has a significant effect on entrepreneurial readiness? In the fourth case the skill is an important prerequisite for anyone who wants to succeed in the field of entrepreneurship.

4 Conclusion

Referring to the theories, the results of the research and discussion as described above, some conclusions can be conveyed as follows: (1) in general entrepreneurial attitudes for vocational students, still need to be improved; (2) an analysis of the curriculum, entrepreneurial learning model, and evaluation of entrepreneurship learning programs in

vocational schools is needed; (3) the experience of entrepreneurship education in schools, entrepreneurial attitudes, self-efficacy, entrepreneurial education in the family and community, positively and significantly influences the readiness of entrepreneurship of vocational students; (4) entrepreneurial learning through business centers, apprenticeships, and family backgrounds, simultaneously influencing positively and significantly on the entrepreneurial competencies of vocational students; (5) The "SMK Mart" unit plays a positive and meaningful role as an educational, economic and social media in the cultivation of entrepreneurial attitudes for vocational students; (6) the intensity of the research activities on the model and the appropriate media for entrepreneurial learning and focus group discussion (FGD), especially on improving teacher skills in teaching entrepreneurship needs to be improved; (7) the entrepreneurial learning model in the form of an internet-based e-portfolio has proven to be effective as an entrepreneurial learning model; (8) the "entrepreneurial extracurricular" model can function well in order to foster an entrepreneurial spirit for vocational students; and (9) the NHT cooperative learning model can improve learning activeness and student learning achievement in entrepreneurial learning.

5 ACKNOWLEDGMENT

The smoothness and completion of this study, because of the assistance of various parties involved. For this reason, many thanks and appreciation were given to the Chancellor of Surabaya State University, Director of Postgraduate, friends, Chair of the study program in the Postgraduate environment, lecturers of the Surabaya State University of Technology and Vocational Education who have provided much support and references assistance needed, so that this research can be completed well and smoothly.

References

- [1] R. D. Hisrich, M. P. Peters, and D. A. Shepherd, *Entrepreneurship*. New York: McGraw-Hill, 2008.
- [2] A. V. Dewi and E. Mulyatiningsih, "Pengaruh pengalaman pendidikan kewirausahaan dan keterampilan kejuruan terhadap motivasi berwirausaha siswa," *J. Pendidik. Vokasi*, vol. 3, no. 2, pp. 163–177, 2013.
- [3] J. Dewey, *Democracy and Education: An Introduction to the Philosophy of Education*. New York: Macmillan, 1916.
- [4] A. Raichaudhuri, "Issues in Entrepreneurship Education," *Decision*, vol. 32, no. 2, pp. 73–84, 2005.
- [5] M. J. Dollinger, *Entrepreneurship: strategies and resources*. New Jersey: Prentice Hall, 2003.
- [6] Soeparno and S. Muslim, "Effectiveness of E-Learning for Students Vocational High School Building Engineering Program," *IOP Conf. Ser. Mater. Sci. Eng.*, vol. 336, p. 12039, Apr. 2018.
- [7] P. Sudira, *Metodologi pembelajaran vokasional abad XXI: Inovasi, teori dan praktis*. Yogyakarta: UNY Press, 2018.
- [8] A. S. Usman and R. Tasmin, "Entrepreneurial Skills Development Strategies through the Mandatory Students' Industrial Work Experience Scheme in Nigeria," *Procedia - Soc. Behav. Sci.*, vol. 204, no. 148, pp. 254–258, Aug. 2015.
- [9] I. P. Melyana and A. Pujiati, "Pengaruh sikap dan pengetahuan kewirausahaan terhadap kesiapan berwirausaha melalui self-efficacy," *J. Econ. Educ.*, vol. 4, no. 1,

- pp. 8–13, 2015.
- [10] E. T. Prabandari and A. A. Rasyid, “Pengaruh pembelajaran kewirausahaan melalui business center, prakerin, dan latar belakang keluarga terhadap kompetensi berwirausaha,” *J. Pendidik. Vokasi*, vol. 5, no. 1, p. 1, Feb. 2015.
 - [11] E. B. Johnson, *CTL-Contextual teaching & learning*. Bandung: Kaifa, 2014.
 - [12] A. Winarno, “Pengembangan model pembelajaran internalisasi nilai-nilai kewirausahaan pada Sekolah Menengah Kejuruan di Kota Malang,” *J. Ekon. Bisnis*, vol. 14, no. 2, 2009.
 - [13] M. Maskan, “Pengembangan model pembelajaran kewirausahaan berbasis portfolio untuk meningkatkan sikap dan kompetensi wirausaha siswa SMK (SMEA) di Kota Malang,” Universitas Negeri Malang, 2009.
 - [14] A. Hakim, “Model pengembangan kewirausahaan sekolah menengah kejuruan (SMK) dalam menciptakan kemandirian sekolah,” *Riptek*, vol. 4, no. 1, pp. 1–14, 2010.
 - [15] W. Murtini, “Pendidikan kewirausahaan dengan pemodelan wirausaha,” *J. Ilmu Pendidik.*, vol. 17, no. 5, pp. 401–410, 2011.
 - [16] H. Hasanah, “Pengembangan model pembelajaran kewirausahaan untuk pembentukan jiwa entrepreneur siswa di Sekolah Menengah Kejuruan (SMK),” Universitas Negeri Yogyakarta, 2011.
 - [17] L. Hariyanto, “Ketuntasan kesiapan berwirausaha siswa SMK melalui pembelajaran kolaborasi,” *Invotec*, vol. 10, no. 2, pp. 141–152, 2014.
 - [18] A. Kumarawati, “Peningkatan keaktifan dan prestasi belajar siswa pada pembelajaran kewirausahaan dengan model pembelajaran kooperatif tipe NHT (Numbered Heads Together) di SMK Negeri 8 purworejo,” Universitas Negeri Yogyakarta, 2016.
 - [19] R. Maulida, J. Widodo, and S. Sunarto, “Peran ‘SMK Mart’ dalam penanaman sikap kewirausahaan pada siswa (Studi Kasus di SMK Negeri 1 Kendal),” *J. Econ. Educ.*, vol. 6, no. 1, pp. 75–81, 2017.
 - [20] A. Alimudin, “Strategi pengembangan minat wirausaha melalui proses pembelajaran,” *E-Jurnal Manaj. Kinerja*, vol. 1, no. 1, pp. 1–13, 2015.
 - [21] H. Prasetyono, A. Abdillah, T. Widiarto, and H. Sriyono, “Improving Student’s Affective Competencies (Minimizing Hoax) Through the Implementation of Character-based Economic Learning and Teacher’s Reinforcement,” *J. Cakrawala Pendidik.*, vol. 37, no. 3, pp. 426–435, Nov. 2018.