ANALYSIS OF ACHIEVEMENT OF ISLAMIC-ENTREPRENEURIAL SCIENCE AND TECHNOLOGY (I-ENSCIT) MODULE TRAINING FOR PROSPECTIVE INDONESIAN-MALAYSIAN SCIENCE TEACHERS

Rian Vebrianto[1], Ridzwan Che Rus[2], Radeswandri[3], Misbahul Jannah[4], Irfan Andi Gafur[5]

[1,5]Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia
[2]Universiti Pendidikan Sultan Idris, Perak, Malaysia
[3]Universitas Terbuka, Indonesia
[4]Universitas Islam Negeri Ar-Raniry Aceh, Indonesia
rian.vebrianto@uin-suska.ac.id[1*]

Abstract

This study aims to determine the response to the Islamic-Entrepreneurial Science and Technology (I-EnSciT) module for prospective science teachers in Indonesia and Malaysia. This research is an applied research type of evaluation with a cross-sectional method in the form of a reflection questionnaire which includes material aspects, Delivery, and Response Strategy to find out the response of prospective science teachers to the I-EnSciT Module training program. Data is obtained by conducting training activities within a certain period, then an assessment of the training program is carried out through a Google form questionnaire that is packaged to make it easier for participants to fill out a reflection questionnaire. This research was conducted with a total of 250 respondents, including 175 prospective teachers in Indonesia and 75 prospective teachers in Malaysia. Data analysis was carried out descriptively and inference was carried out using SPSS V21. Based on the results of the study, it was shown that the average recapitulation of reflection on material aspects, strategies, and responses obtained a value of 3.3 with the aspect category "Very Good". It can be said that the I-EnSciT Module Training has been achieved/fulfilled so that it can be integrated and implemented in educational institutions covering material, media, and social interaction. Research that has novelty, especially by combining entrepreneurship issues with science and religion. This can be a reference in fostering effective learning tools.

Keywords: Module I- EnSciT; Evaluation, 21st Century Skills; Pre-service science teacher.

How To Cite: Vebrianto, R., Che Rus, R., Radeswandri, Jannah, M., Gafur. I.A., (2023). Analysis of Achievement of Islamic-Entrepreneurial Science and Technology (I-EnSciT) Module Training for Prospective Indonesian-Malaysian Science Teachers. *EDUSAINS*, 15 (1): 32-50.

INTRODUCTION

Strengthening 21st Century Skills is very much needed in supporting the knowledge and skills of an educator to improve human resources in the future. The skilled process is a benchmark for how an educator can provide insight and argumentation in creating a broad scope in the world of education. The challenges of mastering 21st Century Skills explained by Kahila et al., (2020), and Rizki & Priatna (2019), include low literacy skills and low utilization of digitalization.

Motivation and strategies need to be developed in an educator to strengthen 21st Century Skills such as curriculum development strategies, leadership traits, learning types, high-level thinking and a strong desire to participate in training. As stated by Karatas & Arpaci, (2021), Sa'pang &Purbojo (2020), and Sulaiman & Ismail, (2020) that teachers can act as facilitators because the nature of 21st century skills provides a stimulant for this type of learning.

Strategy is also needed in strengthening 21st century skills as revealed by Asyiah & Sati, (2020) that the 5S strategy (research-based methods, relevance, rational, relaxed and rapport) and that pedagogical skills, collaboration, creativity, and digitization can impact 21st-century skills (González et al, 2020; Kahila et al., 2020; Laar, 2020, Nouri, et al, 2020; Rios et al, 2020). Another way is through the implementation of approaches such as the Student-Centered Learning (SCL) approach. Studies by Ramadhon, (2020) and Zaus et al., (2019) show that learning with the SCL approach is effective in increasing learning achievement. In addition, teachers must be able to carry out curriculum development strategies with development steps as described by Ash'ari & Hamami (2020) namely identifying needs; looking for curriculum materials; and analysis of curriculum support, assessment, and needs of curriculum materials.

The problems/challenges faced in strengthening 21st Century Skills include teachers not being able to accommodate strengthening 21st Century Skills (Chairunnisak, 2020; Suganda, 2020), making assessments Karmana & Dharmawibawa, (2020), compiling lesson plans (Sarman, 2020) doing thinking high level (Munawwarah et al., 2020), mastering process skills (Zalsalina et al., 2020) and using information systems (Khumaidi & Renaldo, 2020), integrating the concept of Islamic education with the concept of entrepreneurship education which can offer Islamic education solutions to economic problems in society (Hartono et al., 2022). Thus, efforts that need attention include increasing science, technology and entrepreneurship that is integrated with Islam (Islamic entrepreneurship) so that these methods will be mutually sustainable in the world of education.

The role of technology in education is very important in helping to achieve learning goals (Maisessa et al., 2021) and Facing the 21st Century Learning System which has been influenced by the development of Industry 4.0 technology, teachers need to be able to improve technological competence (Maulina et al., 2022). according to Yulisman et al., (2019), and Nurmayanti, (2018), using effective technology in learning activities. However, there is still a lack of capability in implementing technology as revealed by Arifin & Widyastono (2020), that the results of a comparison of 6 countries show that Indonesia is still lacking in technology development. Muzdalipah et al., (2020) revealed that the facts on the ground show that teachers are still unable to take advantage of technology applications and have difficulties in operating information, communication, and technology. Although the role of the teacher cannot be replaced by technology permanent teachers must be able to

have the ability to operate technology (Lubis, 2019) .

In the future, Indonesia and Malaysia must be ready to face the Asian Economic Community (AEC). However, Indonesia is considered to be incapable and has failed to face the AEC (Permatasari, 2020; Rahadyan & Lubis, 2018) . In addition, Yaakub et al., (2020) revealed that online entrepreneurship is still in scarcity, while Lin et al., (2018), and Maliki et al., (2020) reveal weaknesses in traditional businesses. Fadilla, (2019) argues that students currently face problems in making decisions when leaving school life, choosing majors, setting goals and carrying out social interactions. Revealed that the low ability to use technology in the learning and entrepreneurship process will cause students difficulties in getting used to using technology. technology to improve quality and human resources (Ayob, (2021); Eckhardt et al., (2021); Harima et al., (2021); and Wang et al., (2021)).

Improving human quality in tertiary institutions can only train individual entrepreneurial cognition, so it is necessary to increase specific competencies as explained by Johannisson, (2016) that academics train one's abilities through contextual learning during education. In addition, entrepreneurial skills that already exist in universities (Arroyabe et al., 2022) , train social or social innovation in entrepreneurship (Kwong et al., 2022; Thomas & Pugh, 2020). Although counterfactual in entrepreneurship in tertiary institutions does not fully affect one's entrepreneurial abilities.

Based on these problems, it is necessary to develop a good concept for science teacher candidates, to be able to face problems in the future. The development of material concepts is necessary because several sources of teaching materials such as books also do not clarify concepts and their integration in life as explained by Hidayat et al., (2020) which student books do not have a material identity,

concept maps, and themes and all based solely on local content. Prospective teachers need to take part in competency development training using different methods. Because the training that teachers have participated in so far has only been based on problem analysis in studies. Where explained by Aripin et al, (2020) , only a small number of participants (teachers who took part in the training) were able to complete the training tasks, while others were still experiencing difficulties. This is experienced by almost all teachers, especially science teachers (IPA).

From the description above, the researchers developed and provided training for science teacher candidates so that they have 21st Century Skills and are proficient in developing science and technology and entrepreneurship that is integrated with Islam (Islamic entrepreneurship) so they can compete. facing the Asian Economic Community and the industrial revolution 4.0. The development of training modules is by creating an I-EnSciT (Islamic-Entrepreneurial Science and Technology) Module which includes teaching methods, integration of material with science and technology and Islamic entrepreneurship. After the I-EnSciT Module has been trained for prospective science teachers, it is necessary to respond and evaluate the prospective science teacher respondents to the I-EnSciT Module development training from 3 different Islamic-based universities.

I-EnSciT is the development of teaching materials that have been designed to facilitate educators, especially prospective science teachers, in applying 21st Century Skills including critical thinking in solving a problem, educator creativity in innovation, good communication skills and the ability to work together by integrating knowledge, technology and Islam. In addition, in producing their training products, a prospective teacher must also be able to think as an entrepreneur. The implementation of the I-EnSciT Module

Training activities for science teacher candidates was carried out in 3 different tertiary institutions including Sultan Syarif Kasim State Islamic University (Riau), Sultan Idris Education University (Malaysia) and Ar-Raniry Islamic University (Banda Aceh).

The basic problem is how to improve the quality of knowledge in science and technology education and Islamic entrepreneurship among science teacher candidates so that 21st Century Skills can be properly implemented in schools. (Junedi et al., 2020)

Therefore, researchers develop and provide training for prospective science teachers so that they have 21st Century Skills and are proficient in developing science and technology and entrepreneurship. Integrated with Islam (Islamic entrepreneurship) to be able to compete with the Asian Economic Community and the industrial revolution 4.0 (Maritz et al., 2022; Muliadi, 2020a, 2020b). The development of the training module is by creating an I-EnSciT (Islamic-Entrepreneurial Science and Technology) Module which includes teaching methods, integration of material with science and technology, and Islamic entrepreneurship. In addition, it can strengthen 21st Century Skills for educators. The improvements needed are not only in knowledge but also in religious attitudes and values (Hadiyanto et al., 2021; Wahidin, 2020).

After the I-EnSciT Module has been trained for prospective science teachers, there is a need for responses and assessments from respondents to the I-EnSciT Module development training from 3 different Islamic-based universities. Thus, this research was conducted to measure the satisfaction and effectiveness of the I- EnSiT module training for science teacher candidates at three Islamic universities in Indonesia and Malaysia.

METHOD

This research is an applied research type of evaluation with a cross-sectional method (Setia, 2016). The cross-sectional method was carried out by giving a reflection questionnaire to find out the response of prospective science teachers to the I-EnSciT Module training program. Basic knowledge of the I-EnSciT Module and Islamic Entrepreneurship is also provided so that it can be used as an assessment in its implementation in schools.

Population and Research Sample

The population in the study were science teacher candidates at Sultan Syarif Kasim State Islamic University (Riau), Sultan Idris Education University (Malaysia) and Ar-Raniry Islamic University (Banda Aceh).

Respondents who were involved used a purposive sampling technique with the criteria of students in the final semester of science (Semester 4 and above) used to select the sample for this study. Then for those who are willing and able to take part in the I-EnScit training module that is being held.

The research sample included 100 science teacher candidates from Sultan Syarif Kasim State Islamic University (Riau), 75 science teacher candidates from Sultan Idris University of Education (Malaysia), and 75 science teacher candidates from Ar-Raniry Islamic University (Banda Aceh). Specifically, based on gender, 46 people were male science teacher candidates and 204 were female science teacher candidates. The average age of prospective science teachers is 22 years. Of the 250 respondents to science teacher candidates, 175 were Indonesian and 75 were Malaysian.

The Validity and Reliability of the Reflection Questionnaire Instrument

The instrument used in this study was a reflection questionnaire which included material aspects, delivery strategies and responses to find out the responses of

prospective science teachers to the I-EnSciT Module training program.

Testing the validity of the reflection questionnaire sheet was carried out using product moment analysis to determine which items or questions in the reflection questionnaire sheet were valid or invalid, the results are presented in Table 1. Table 1 shows that each statement item is valid with r_{xy} or r_{count} > r_{table}. The highest Rxy is in statement item M5 or Material 5 in material relevance to activity assignments, with a value of 0.815 > table 0.124, while the lowest rxy is in statement item S13 or Opportunity Conveying Strategies in conveying ideas (ideas submission).

The results of the validity test can be used as a reference in making a reflection questionnaire sheet for the I-EnSciT Module workshop activities with a statement accuracy of 0.815 while for the reliability of the 22 items of the reflection questionnaire that will be used has a Cronbach alpha of 0.764. Ghozali, (2009) and Widiyanto, (2010) states that the instrument is valid and the related statement items have been declared reliable or can be trusted. If the Cronbach Alpha value is > 0.60, the questionnaire is declared reliable or consistent (Sujarweni, 2014). Ritter, (2010) states that the reliability coefficient can interpret the results of the study. Next Tavakol & Dennick, (2011) states that the Alpha value is an important concept in the evaluation of the questionnaire assessment. It is known that the Alpha value of the reflection instrument includes aspects of material, delivery strategy, and response for validity of 0.815 and reliability of 0.764. This means that the reflection questionnaire instrument in this study is effective and good for evaluating the process of implementing the I-EnSciT module training.

Research procedure

The 21st Century Skills training is carried out by guiding the I-EnSciT module, then science teacher candidates take part in the module integration training process in the teaching and learning process. The training provided is in the form of an active learning system and teaching practice using the I-EnSciT Module, as well as follow-up activities in using the module.

Training finished. Then observations using survey sheets were carried out during the training and respondents were asked to respond to the training after the training. Science teacher candidate respondents were given a reflection questionnaire to find out their responses after attending the training. Reflection questionnaire sheets were tested for validity and reliability using IBM SPSS V21. The reflection questionnaire includes aspects of material, delivery strategy and responses to find out the responses of prospective science teachers to the I-EnSciT Module training program.

Stages of Implementation of Training and Evaluation

I-EnSciT is a module that examines the integration of science, technology, and Islamic entrepreneurship in the world of education. After the training was carried out, reflection questionnaire sheets were distributed to prospective science teachers.

Data analysis

After that, data was obtained within a certain period, then an assessment of the training program was carried out through a google form questionnaire that was packaged to make it easier for participants to fill out a reflection questionnaire. Then the data were analyzed using IBM SPPS V21 to find out the correlation of prospective science teachers from different universities. The data was displayed in descriptive and inference form with the correlation tests used were partial and linear regression. The correlation test was used to determine whether or not there was a relationship between item values per aspect of the questionnaire from 3 different tertiary institutions.

RESULTS AND DISCUSSION

The I-EnSciT module given to prospective science teachers from three different universities is a basic effort to integrate science and technology and Islamic entrepreneurship in the educational dimension. Efforts to evaluate responses were carried out in the form of a reflection questionnaire consisting of 22 statement items.

This research produced 3 workshop module units which contain Unit 1 Introduction to the I-EnSciT Module for Active Learning, then Unit 2 modules Developing Questions and Worksheets and Unit 3 Teaching Practice Modules and Follow-Up Plans. The module display is as follows:

Figure 1. Introduction and Purpose of the Module

Figure 1 contains an introduction to why the I-EnSciT module was created and the purpose of this I-EnSciT module.

Figure 2. Outline of Workshop Activities

As seen in Figure 2, an outline of the workshop activities will be carried out, the activities presented follow the Science Technology and Society (STS) model. Photos of training activities can be seen as follows:

Figure 3. Training activities at UPSI Malaysia

In Figure 3 the presenter gives directions to the participants regarding the activities carried out in the I-EnSciT module.

Figure 4. Submission of Materials at UIN Sultan Syarif Kasim Riau in Indonesia

The presenter conveyed the activities of the I-EnSciT module at UIN Sultan Syarif Kasim Riau, and it can be seen in Figure 4 that the participants listened carefully.

Figure 5. Explanation of UIN Arraniry Aceh activities in Indonesia

The activities of the I-EnSciT Module were explained to three different universities so that the data obtained could be used as a reference in making the I-EnSciT modul.

Reflection Data Recapitulation

The results of this data recapitulation are displayed in the form of descriptive data. Data obtained from 3 different universities, including Sultan Syarif Kasim State Islamic University (Riau), Sultan Idris University of Education (Malaysia), and Ar-Raniry Islamic University (Banda Aceh) were analyzed as awhole. by recapitulating the value of the questionnaire, the results are presented in Table 1.

Table 1 . Descriptive Analysis of Reflection Instrument Value Recapitulation

Aspect	Total	Average	Total Aspect	Aspect Average	Aspect Category
Number of Questionnaire Data					
Material Aspect					
Material Coverage	820	3.3	5784	3.3	Very good
Serving Systematics	830	3.3			
Material suitability	842	3.4			
Material Excellence	860	3.4			
Material Relevance to Assignments	821	3.3			
Material Relevance	811	3.2			
Understand	800	3.2			
Aspects of Delivery Strategy					
Target Compatibility	829	3.3	11521	3.3	Very good
Strategy Fit	805	3.2			
Material suitability	838	3.4			
Example Giving	853	3.4			
Media Equipment	842	3.4			
Media Use	841	3.4			
Interaction	838	3.4			
Implementation Completeness	852	3.4			
Source openness	832	3.3			
Discussion Time Allocation	791	3.2			
Allocation of Training Time	785	3.1			
Time Compatibility With Strategy	780	3.1			
Idea Submission	787	3.1			
Interaction	848	3.4			

Based on Table 1, it can be seen that the average aspect score is 3.3 with the "Very Good/Very Satisfying" aspect category. In the aspect of "Material Excellence," it has the highest total score of 860 with an average of 3.4, this can support the teacher's task. While the aspect of Compatibility with Strategy has the lowest total score of 780 with an average of 3.1. Part of participant satisfaction can be seen as follows along with the three research locations that were conducted, namely in Table 2.

Table 2 . Respondents' Responses at Three Universities (UIN Riau, UPSI Malaysia, UIN Arraniry Aceh)

Satisfaction Evaluation							
UIN Riau		**UPSI Malaysia**		**UIN Aceh**		**Total Satisfaction Program**	
Criteria	N	Criteria	N	Criteria	N	Criteria	N
Very satisfactory	39	Very satisfactory	26	Very satisfactory	21	Very satisfactory	86
Satisfying	56	Satisfying	48	Satisfying	50	Satisfying	154
Less satisfactory	5	Less satisfactory	1	Less satisfactory	4	Less satisfactory	10
Total	100		75		75		250

Table 2 shows that in the responses of respondents for each different location in the Riau location 5 people were unsatisfactory and 95 people were satisfied and very satisfied, while in UPSI Malaysia only 1 person out of a total of 75 people, while in UIN Aceh 4 people felt unsatisfied satisfied from 75 respondents in Aceh. From this number it can be seen from a total of 250 respondents who took part in this study, as many as 10 people (0.04%) felt unsatisfied with this research activity, while more (0.96%) felt satisfied and very satisfied with this research activity program.

The results of this training can provide useful material in supporting the duties of an educator. Hilyana, (2020); Ghafar, (2020) states that the implementation of community service has succeeded in increasing understanding and knowledge in the use of information and communication technology. In addition, Johannes (2018) revealed that workshops can improve the professional competence of teachers in preparing Learning Implementation Plans (RPP), as well as helping those with different backgrounds (Muslihat, 2020; Nurash et al., 2020) .

The follow-up obtained from the reflection questionnaire revealed that educators liked workshops or training held to support personality competencies as teachers. This is necessary because a teacher must reflect the soul of leadership as stated by Valencia-Medina & Orantes, (2021), Uyuni & Adnan, (2020), Hewett et al., (2020) that 21st-century leaders must like challenges, be curious , able to build a professional work culture and organization, have good communication and are committed to progress, prosperity and excellence (Arifin & Setiawan, 2020) ; likes to collaborate and is familiar with digital thinking (Liesa-Orús et al., 2020; Pujiastuti et al., 2020) .

Technology development material in the I-EnSciT Module training can assist teachers in using technology. Slamet et al., (2020) explain that progress has been made in digital training, distance learning training (Amiruddin, 2019; Gardanova et al., 2020; Michieli et al., 2020; Zavitz et al., 2021) and an understanding of methods, techniques and

approaches that must be elaborated in strengthening 21st Century Skills. Several good teaching methods, techniques and approaches, as stated in several studies, include the sequential exploratory combination model (Setiawan, 2020) , inquiry-level models (Herlina, 2019), scientific approach (Syamsu et al., 2020) , integrative Islam (Ibrahim et al., 2020; Masjedi-Arani et al., 2020; Rabbaniyah et al., 2020), scientific literacy (Juhji & Mansur, 2020; Suhirman, 2020) and basic learning problem models (Amelia et al., 2020). I-EnSciT has a study of Islamic entrepreneurship, which aims to create and integrate Islamic entrepreneurship. Kambi, (2020) explains that educational institutions must be able to produce creative, innovative and modern young Islamic entrepreneurs (Mallongi, 2020), then be able to face problems (Priyatno, 2020), be committed to scientific work (Fridiyanto & Khairani, 2020) and be enthusiastic to enhance entrepreneurial learning, self-efficacy and creativity (Barbini et al., 2021; Hu & Hu, 2022; Keling & Sentosa, 2020; Siivonen et al., 2020) .

Creating Islamic entrepreneurs must be based on deepening religious knowledge Nurwadjah et al., (2020), self-efficacy to build the concept of relationships or transactions (Sarassina, 2020), comprehensive Islamic and ethical values (Arif et al., 2020; Uyuni & Adnan, 2020; Taufikurrahman & Kholifah, 2020; Amiruddin, 2019) and maintaining the existence of Islam by disruptive, self-driving and reshaping or creating a mindset (Widyasari, (2020), also having a synergistic attitude and knowledge (Sonita & Helmi, 2020) .

Correlation Reflection Questionnaire and Follow Up

Inference analysis is carried out by testing the correlation needed to find out whether there is a relationship between the results of item scores per aspect with 3 different tertiary institutions, which can be seen in Table 3 as follows.

Table 3 . Results of Inference Analysis of Questionnaire Data Correlation Values

Items	rhythm	table	2t	Notes
M1	-0.155	0.124	0.014	Related
M2	-0.093		0.144	Not related
M3	-0.106		0.096	Not related
M4	-0.186		0.003	Related
M5	-0.103		0.105	Not related
M6	-0.126		0.047	Related
M7	-0.112		0.077	Not related
S1	-0.053		0.404	Not related
S2	-0.081		0.201	Not related
S3	-0.114		0.073	Not related
S4	-0.131		0.039	Related
S5	-0.192		0.002	Related
S6	-0.121		0.056	Not related
S7	-0.032		0.615	Not related
S8	-0.097		0.127	Not related
S9	-0.120		0.058	Not related
S10	-0.008		0.906	Not related
S11	-0.004		0.949	Not related
S12	-0.054		0.394	Not related
S13	-0.088		0.167	Not related
S14	-0.171		0.007	Related

Table 3 shows that there is a relationship between item aspects, namely item statements M1, M4, M6, S4, S5 and S14 with rcount > table with a significant probability of 2t > 0.05. While the statement items M2, M3, M5, M7, S1, S2, S3, S6, S7, S8, S9, S10, S11, S12 and S13 show no relationship between 3 tertiary institutions with rcount < rtable with significant 2t > probability 0 ,05. The data displayed is generally the answers from each respondent from different tertiary institutions which are not related to each other because different places or locations and training systems are influenced by the topography of the environment and the humans themselves.

Table 3 shows that not all ownership items have a significant relationship between the three universities. This could indicate that other factors influencing responses from respondents, such as location or training system, were mentioned in the discussion.

Correlation testing or analysis is needed to find out whether there is a relationship between variables, as expressed by Kusman Sadik (2015), that correlation measures the closeness or linear relationship of two variables. In addition, regression analysis is also needed to determine the relationship between two or more variables. After conducting a correlation test, then a Linear Regression test is carried out to find out whether there is an overall relationship between item values per aspect and 3 different tertiary institutions, the results are presented in Table 4.

Table 4 . Inference Analysis Through Linear Regression Testing Correlation Between Variables

				Models Summary	
del	Mo	R	R square	N Influence	Change Statistics Sig. Changed
	1	0.401	0.161	0.839	0.005

Table 4 shows that the R-value of 0.401 has a moderate effect with an R-square of 0.161 so it is necessary to calculate the percentage to find out the number of percent that is not related, with 0.161 - 100 (1.61% - 100%), this means 83.9% Aspect items have varied answers while 16.1% of Aspect items are related between 3 different universities. Based on a change of 0.005 <0.05, this means that there is a significant relationship in each aspect between 3 different tertiary institutions. Linear Regression is a variable test with 1 independent variable. Harlan, (2018) states that linear regression has a response that is always a continuous variable.

Related aspect items include Material Coverage, Material Excellence, Material Relevance, Sampling, Media Completeness, and Resource Person Interaction (Disclosure) with Participants. Telussa et al., (2013) stated that the higher the job training, the higher the work effectiveness. Mastery in understanding social or interaction in training is very important as explained by Alaways (2020), and Aldi (2020) that the higher the confidence in social interactions, the better the self-presentation.

Presentation techniques are needed to improve the ability of teachers or educators (Rahayu, 2020), through direct reading techniques and sharing experiences, increasing the use of presentation media to form active learning (Byusa et al., 2020) . The training is also able to increase knowledge about web-based applications as expressed by T. Hidayat et al., (2020), Mavlutova et al., (2020) , as well as entrepreneurial motivation (Huang & Liu, 2021; Kurniawan, 2019; Li et al., 2022; Miao et al., 2021) .

Lack of time during training often occurs due to different environmental conditions and human topography. Dong & Tu, (2021), Ivone et al., (2020) also stated that the follow-up program that participants hoped for was blended learning training which was held longer. In addition, Hanafi et al., (2020) explained that the Unity 3D application can help speakers in carrying out simulations. Thus, it is hoped that it can be used as a reference in conducting I-EnSciT Module training activities.

This research is a research that has novelty, especially by combining entrepreneurship problems with science and religion. Which in previous studies were considered separately and presented separately. Thus it is hoped that it can be an alternative in implementing integrative and integrated (thematic) learning. Such skills are needed in this century to face global and international challenges.

To increase the impact, a lecturer/teacher can organize learning that is scientifically integrated so that students' understanding becomes comprehensive and maximal in seeing a problem/phenomenon from various scientific aspects, both science and technology aspects, as well as from economic aspects (entrepreneurship and religion).

Learning and media like this are highly recommended to be applied in learning at universities and high schools in general. So it is clear that learning media strategies that integrate various scientific aspects produce students who will master these various sciences as material for consideration in dealing with phenomena/problems in everyday life.

CONCLUSION

Based on data analysis from the responses of prospective science teacher respondents, the average reflection aspect results obtained a value of 3.3 with the aspect category "Very Good/Very Satisfying" so that it can be said that the use of the I-EnSciT Module can improve the competency of Indonesian science teacher candidates or educators and Malaysia, and is expected to be integrated in the learning process. at school. This is a more solutive form of application to improve literacy skills and 21st Century Skills of teachers or educators, especially prospective science teachers. How can a problem be seen from various scientific aspects, be it science, technology, as well as from the side of economic aspects and religious values.

For this reason, it is hoped that stakeholders can work together to improve

various training activities to improve human resources, especially teachers or education staff. The higher the insight of the teacher or educator, the more knowledge that can be transferred to students. Based on these results, it is suggested that the I-EnSciT Module can be used in educational institutions and used as a guideline to increase understanding of science and technology and increase the motivation of Islamic entrepreneurs.

The novelty of the I-EnScit Module product is to increase active learning in integrated science, including science, entrepreneurship and Islam so that respondents, especially teachers or educators, have a variety of skills. Indirectly, this will improve the quality of education in schools and Indonesia in general.

REFERENCE

Alaways, S. (2020). Professional Performance Experience Versus Pedagogical Knowledge in Teaching Technique Class as a Creative Process. *Journal of Dance Education*, *20*(4), 214–223. https://doi.org/10.1080/15290824.2019.1607352

Aldi, A. H. (2020). Contribution Between Self Confidence With Social Interaction To Self Presentation In Education Ambassadors Of Fkip Ulm In 2018. *Jurnal Pelayanan Bimbingan Dan Konseling Program Studi Bimbingan Dan Konseling Fkip Universitas Lambung Mangkurat*, *3*(2), 132–138.

Amelia, T., Maritim, U., Ali, R., Nevrita, N., Maritim, U., & Ali, R. (2020). Capaian Aspek Kompetensi Sains Siswa SMA dengan Pembelajaran Model Problem-Based Learning dan Cooperative Learning Tipe STAD. *Jurnal Pendidikan Biologi*, *9*(2). https://doi.org/10.24114/jpb.v9i2.14902

Amiruddin. (2019). Pendidikan Ekonomi Dalam Islam. *Ittihad*, *3*(1), 1–8.

Arif, Z., Bahri, E. S., Zulfitria, Z., & Shibgotullah, M. (2020). Peran Pesantren Entrepreneur Dalam Pengembangan Masyarakat. *Al Maal: Journal of Islamic Economics and Banking*, *1*(2), 207. https://doi.org/10.31000/almaal.v1i2.2233

Arifin, M., & Widyastono, H. (2020). Studi Komparasi Negara Indonesia Dengan Negara Lain Tentang Pemanfaatan Teknologi Dalam Pendidikan Khusus Menggunakan Studi Komparasi Teknologi Asistif Negara Maju dan Berbasis Literasi 1 . Latar Belakang Anak Berkebutuhan Khusus merupakan terjemahan dari. *Best Journal*, *3*(1), 92–100.

Arifin, M. Z., & Setiawan, A. (2020). Strategi Belajar Dan Mengajar Guru Pada Abad 21 M. *Indonesian Journal of Instructional Technology*, *1*(2), 37–46.

Aripin, I., Sugandi, M. K., Mu'minah, I. H., & Mulyani, A. (2020). Pembekalan Kompetensi Guru Biologi Melalui Kegiatan Pelatihan Pembelajaran Biologi Abad-21. *BERNAS: Jurnal Pengabdian Kepada Masyarakat*, *1*(3), 150–158. https://doi.org/10.31949/jb.v1i3.311

Arroyabe, M. F., Schumann, M., & Arranz, C. F. A. (2022). Mapping the entrepreneurial university literature: a text mining approach. *Studies in Higher Education*, *47*(5), 1–9. https://doi.org/10.1080/03075079.2022.2055318

Asy'ari, A., & Hamami, T. (2020). Strategi Pengembangan Kurikulum Menghadapi Tuntutan Kompetensi Abad 21. *IQ (Ilmu Al-qur'an): Jurnal Pendidikan Islam*, *3*(01), 19–34. https://doi.org/10.37542/iq.v3i01.52

Asyiah, N., & Sati. (2020). Implementasi Strategi 5r Untuk Mengoptimalkan Keterampilan Abad 21 Mahasiswa PGSD. *JurnalCakrawala Pendas*, *6*(1), 56–62.

Ayob, A. H. (2021). Entrepreneurship education, institutions and student entrepreneurship: a cross-country analysis. *Compare*, *51*(5), 745–763. https://doi.org/10.1080/03057925.2019.1673701

Barbini, F. M., Corsino, M., & Giuri, P. (2021). How do universities shape founding

teams? Social proximity and informal mechanisms of knowledge transfer in student entrepreneurship. *Journal of Technology Transfer*, *46*(4), 1046–1082. https://doi.org/10.1007/s10961-020-09799-1

Byusa, E., Kampire, E., & Mwesigye, A. R. (2020). Analysis of Teaching Techniques and Scheme of Work in Teaching Chemistry in Rwandan Secondary Schools. *Eurasia Journal of Mathematics, Science and Technology Education*, *16*(6). https://doi.org/10.29333/EJMSTE/7833

Chairunnisak. (2020). Implementasi Pembelajaran Abad 21 Di Indonesia. *Prosiding Seminar Nasional Teknologi Pendidikan Pascasarjana UNIMED*, 351–359.

Dong, P., & Tu, C. C. (2021). Research on the Impact of University Innovation and Entrepreneurship Education on University Students' Entrepreneurship Willingness Based on Virtual Reality Technology. *Mathematical Problems in Engineering*, *2021*. https://doi.org/10.1155/2021/9730705

Eckhardt, J. T., Harris, C., Chen, C., Khoshimov, B., & Goldfarb, B. (2021). Student regional origins and student entrepreneurship. *Regional Studies*. https://doi.org/10.1080/00343404.2021.1987408

Eid, N. A. Al. (2020). Crisis and disaster management in the light of the Islamic approach: COVID-19 pandemic crisis as a model (a qualitative study using the grounded theory). *Journal of Public Affairs*, *20*(4). https://doi.org/10.1002/pa.2217

Hilyana, F. S. (2020). Workshop Pembuatan Aplikasi Information and Communication Technology (Ict) Dalam Pembelajaran Bagi Guru Ipa Lembaga Pendidikan Ma'Arif Kudus. *Abdimas Unwahas*, *5*(1), 55–59.

Fadilla, P. F. (2019). Peran Pendidikan Karakter Terhadap Faktor-Faktor Pengambilan Keputusan Karier Di Era Revolusi Industri 4.0. *Prosiding Konferensi Pendidikan Nasional* *"Strategi dan Implementasi Pendidikan Karakter pada Era Revolusi Industri 4.0" ISSN:*, 212–218.

Fridiyanto, & Khairani, M. (2020). Peran Universitas Islam Negeri Sulthan Thaha Saifuddin Jambi Sebagai Lokomotif Perubahan Sosial (Studi Visi Lembaga dan Paradigma Transintegrasi). *Edu Riligia*, *44*(1), 14–28.

Gardanova, Z., Ponkratov, V., Kuznetsov, N., Nikitina, N., Dudnik, O., Latypova, E., & Shcherbatykh, S. (2020). A model for optimizing the structure of teaching techniques for distance learning in the russian higher education system. *Journal of Open Innovation: Technology, Market, and Complexity*, *6*(4), 1–21. https://doi.org/10.3390/joitmc6040147

Ghafar, A. (2020). Convergence between 21st century skills and entrepreneurship education in higher education institutes. *International Journal of Higher Education*, *9*(1), 218–229. https://doi.org/10.5430/ijhe.v9n1p218

González-salamanca, J. C., Agudelo, O. L., & Salinas, J. (2020). Key competences, education for sustainable development and strategies for the development of 21st century skills. A systematic literature review. *Sustainability (Switzerland)*, *12*(24), 1–17. https://doi.org/10.3390/su122410366

Hadiyanto, H., Failasofah, F., Armiwati, A., Abrar, M., & Thabran, Y. (2021). Students' practices of 21st century skills between conventional learning and blended learning. *Journal of University Teaching and Learning Practice*, *18*(3). https://doi.org/10.53761/1.18.3.7

Hanafi, A., Husniah, L., & Kholimi, A. S. (2020). Aplikasi Simulasi Public Speaking Berbasis Android Dengan Unity 3D. *Jurnal Repositor*, *2*(2), 215–224. https://doi.org/10.22219/repositor.v2i2.177

Handi Suganda. (2020). TPACK (Technological Pedagogical And Content Knowledge) Guru Dalam Pembelajaran Yang Dapat Mengakomodasi Keterampilan Abad 21.

In *Thesis* (repository). Universitas Pendidikan Indonesia.

Harima, A., Gießelmann, J., Göttsch, V., & Schlichting, L. (2021). Entrepreneurship? Let us do it later: procrastination in the intention–behavior gap of student entrepreneurship. *International Journal of Entrepreneurial Behaviour and Research*, *27*(5), 1189–1213. https://doi.org/10.1108/IJEBR-09-2020-0665

Harlan, J. (2018). Analisis Regresi Linear. In *Journal of Chemical Information and Modeling* (Vol. 53, Nomor 9).

Hartono, B., Siregar, M., & Sriharini, S. (2022). Konsep Integrasi Pendidikan Islam dan Kewirausahaan dalam Meningkatkan Kesejahteraan Masyarakat. *Edukasi Islami: Jurnal Pendidikan Islam*, *11*(02).

Herlina, L. (2019). Upaya Meningkatkan Keterampilan Abad 21 Dengan Model Inquiry Levels Dalam Pembelajaran IPA. *Jurnal Bioed*, *7*, 10–18.

Hewett, K. J. E., Zeng, G., & Pletcher, B. C. (2020). The Acquisition of 21st-Century Skills Through Video Games: Minecraft Design Process Models and Their Web of Class Roles. *Simulation and Gaming*, *51*(3), 336–364. https://doi.org/10.1177/1046878120904976

Hidayat, T., Ramdhani, I., & Sutrisna, E. (2020). WORKSHOP Web Development Menggunakan Php Data Object Di Smk Cyber Media Jakarta. *Jamaika: Jurnal Abdi Masyarakat*, *1*, 53–549.

Hidayat, Z., Sarmi, R. S., Fisika, M. P., & Padang, U. N. (2020). Efektivitas Buku Siswa IPA Terpadu dengan Tema Energi dalam Kehidupan berbasis Materi Lokal Menggunakan Model Integrated untuk Meningkatkan Kecakapan Abad 21. *Jurnal Eksakta Pendidikan*, *4*(1), 49–56.

Hu, R., & Hu, J. (2022). Construction and Analysis of College Students' Entrepreneurship Guidance Model from the Perspective of Ideological and Political Education under Big Data. *Mobile Information Systems*, *2022*. https://doi.org/10.1155/2022/8954317

Huang, Z., & Liu, G. (2021). Prediction model of college students entrepreneurship ability based on artificial intelligence and fuzzy logic model. *Journal of Intelligent and Fuzzy Systems*, *40*(2), 2541–2552. https://doi.org/10.3233/JIFS-189247

I Wayan Karmana, Iwan Doddy Dharmawibawa, T. L. H. (2020). Pelatihan Pembuatan Instrumen Tes Terpadu Keterampilan Berpikir Dan Penguasaan Konsep Bagi Guru IPA. *Jurnal Pendidikan dan Pengabdian Masyarakat*, *3*(2), 133–139.

Ibrahim, Almukarramah, Gunawan, Awang, M. I., & Marwan. (2020). Pelaksanaan Pendekatan Integratif Dalam Meningkatkan Pembelajaran Ipa-Biologi Pada Sekolah Menengah Pertama Aceh Indonesia. *Jurnal Visipena*, *11*(1), 116–131.

Imam Ghozali. (2009). *Aplikasi Analisis Multivariate dengan Program SPSS*. UNDIP.

Ivone, F. M., Mukminatien, N., & Tresnadewi, S. (2020). Blended Learning Untuk Penguatan Kompetensi Guru Sma Dalam Menyongsong Abad 21. *Jurnal Graha Pengabdian*, *2*, 18–26.

Johannes, J. (2018). Meningkatkan Kompetensi Profesional Guru Dalam Menyusun RPP Melalui Workshop. *Jurnal Pena Edukasi*, *5*(2), 95–98.

Johannisson, B. (2016). Limits to and prospects of entrepreneurship education in the academic context. *Entrepreneurship and Regional Development*, *28*(5–6), 403–423. https://doi.org/10.1080/08985626.2016.1177982

Juhji, & Mansur. (2020). Pengaruh Literasi Sains Dan Keterampilan Berpikir Kritis Terhadap Penguasaan Konsep Dasar Biologi. *Edusains*, *12*(1), 113–122.

Junedi, B., Mahuda, I., & Kusuma, J. W. (2020). Optimalisasi keterampilan pembelajaran abad 21 dalam proses pembelajaran pada Guru MTs Massaratul Mut'allimin Banten. *Transformasi: Jurnal Pengabdian Masyarakat*, *16*(1), 63–72.

Kahila, J., Valtonen, T., Tedre, M., Mäkitalo, K., & Saarikoski, O. (2020). Children's Experiences on Learning the 21st-Century Skills With Digital Games. *Games and Culture*, *15*(6), 685–706. https://doi.org/10.1177/15554120198455 92

Kambi, A. R. (2020). Peran Lembaga Pendidikan Dalam Menciptakan Entrepreneur Muda Islam Kreatif Dan Inovatif. *Jurnal Pemikiran Pendidikan, Keagamaan dan Transformasi sosial*, *6*(1), 1–17.

Karatas, K., & Arpaci, I. (2021). The role of self-directed learning, metacognition, and 21st century skills predicting the readiness for online learning. *Contemporary Educational Technology*, *13*(3). https://doi.org/10.30935/cedtech/10786

Keling, M., & Sentosa, S. U. (2020). The Influence of Entrepreneur Learning, Self-Efficacy and Creativity Toward Students Entrepreneurial Interests of Tarbiyah and Teachers Training Faculty, Universitas Islam Negeri Sumatera Utara. *Advances in Economics, Business and Management Research*, *124*, 575–581. https://doi.org/10.2991/aebmr.k.200305. 121

Khumaidi, A., & Renaldo, R. (2020). Peranan Teknologi Informasi Sebagai Media Informasi Pemerintah Di Dinas Pendidikan Kabuapten Tanggamus. *Jurnal PkM Pemberdayaan Masyarakat*, *1*(1), 6–10.

Kurniawan, R. H. (2019). Dampak Pendidikan Formal Dan Workshop Terhadap Kompetensi Wirausahawan Melalui Motivasi Pada Wirausahawan Mahasiswa. *Global*, *04*(01), 1–14.

Kusman Sadik. (2015). Analisis Korelasi dan Regresi. In *Metode Statistika*.

Kwong, C., Cheung, C., Bhattarai, C., & Fieldhouse, S. (2022). How entrepreneurial are social entrepreneurship education providers? The role of universities' entrepreneurial ecosystems in the provision of elective social entrepreneurship courses to business students. *Studies in Higher Education*, 1–11. https://doi.org/10.1080/03075079.2022.2 055319

Laar, E. van. (2020). Determinants of 21st-Century Skills and 21st-Century Digital Skills for Workers: A Systematic Literature Review. In *SAGE Open* (Vol. 10, Nomor 1). https://doi.org/10.1177/21582440199001 76

Li, Y., Sha, Y., Lv, Y., Wu, Y. J., & Liu, H. (2022). Moderated Mediating Mechanism Effects of Chinese University Entrepreneurship Education on Independent Student Entrepreneurship. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.7823 86

Liesa-Orús, M., Latorre-Cosculluela, C., Vázquez-Toledo, S., & Sierra-Sánchez, V. (2020). The technological challenge facing higher education professors: Perceptions of ICT tools for developing 21st Century skills. *Sustainability (Switzerland)*, *12*(13). https://doi.org/10.3390/su12135339

Lin, Y. C., Yotimart, D., Wongchai, A., & Jatuporn, C. (2018). An analysis of smart farmers' perceptions towards the ASEAN economic community. *WIT Transactions on Ecology and the Environment*, *217*, 293–303. https://doi.org/10.2495/SDP180271

Lubis, M. (2019). Peran Guru Pada Era Pendidikan 4.0. *EDUKA : Jurnal Pendidikan, Hukum, Dan Bisnis*, *4*(2), 68–73. https://doi.org/10.32493/eduka.v4i2.426 4

Maisessa, R. A. F., Erviyenni, E., & Susilawati, S. (2021). Development Of Interactive E-Module On Colligative Properties Of Solutions Using Sigil. *Edusains*, *13*(2), 195–204.

Maliki, B. I., Fatoni, M., & Kusuma, J. W. (2020). Peran Pendidikan Dalam Menyiapkan Bisnis Tradisional Memasuki Era Digital. *Edusaintek : Jurnal Pendidikan, Sains Dan Teknologi*,

7(1), 39–53. https://doi.org/10.47668/edusaintek.v7i1.57

Mallongi, M. (2020). Transformasi Entrepreneur Syariah Di Era Industri 4.0. *Al-Tafaqquh: Journal of Islamic Law*, *1*(1), 161–172.

Maritz, A., Nguyen, Q., & Ivanov, S. (2022). Student entrepreneurship ecosystems at Australian higher education institutions. *Journal of Small Business and Enterprise Development*. https://doi.org/10.1108/JSBED-11-2021-0466

Masjedi-Arani, A., Yoosefee, S., Hejazi, S., Jahangirzade, M., Jamshidi, M. A., Heidari, M., & Farhoush, M. (2020). Effectiveness of an islamic approach to hope therapy on hope, depression, and anxiety in comparison with conventional hope therapy in patients with coronary heart disease. *Journal of Advances in Medical and Biomedical Research*, *28*(127), 82–89. https://doi.org/10.30699/jambs.28.127.82

Maulina, D., Distrik, I. W., & Herpratiwi, H. (2022). Analysis of Primary School Science Teachers' Persception In North Lampung On Science Literacy Based On Eight Science Literacy Indocators. *EDUSAINS*, *14*(2).

Mavlutova, I., Lesinskis, K., Liogys, M., & Hermanis, J. (2020). Innovative teaching techniques for entrepreneurship education in the era of digitalisation. *WSEAS Transactions on Environment and Development*, *16*, 725–733. https://doi.org/10.37394/232015.2020.16.75.

Miao, Y., Fan, H., & Yuan, B. (2021). Optimization of supporting college students entrepreneurship environment. *Computer Applications in Engineering Education*, *29*(2), 445–452. https://doi.org/10.1002/cae.22228

Michieli, U., Biasetton, M., Agresti, G., & Zanuttigh, P. (2020). Adversarial Learning and Self-Teaching Techniques for Domain Adaptation in Semantic Segmentation. *IEEE Transactions on Intelligent Vehicles*. https://doi.org/10.1109/TIV.2020.2980671

Muliadi, A. (2020a). Perbedaan Gender Dalam Sikap Entrepreneur Mahasiswa Pendidikan Biologi. *Jurnal Ilmiah Mandala Education*, *6*(2), 329–334.

Muliadi, A. (2020b). Sikap Entrepreneur Mahasiswa Pendidikan Biologi. *Jurnal Ilmu Sosial dan Pendidikan*, *4*(3), 286–291.

Munawwarah, M., Laili, N., & Tohir, M. (2020). Keterampilan Berpikir Kritis Mahasiswa Dalam Memecahkan Masalah Matematika Berdasarkan Keterampilan Abad 21. *Alifmatika: Jurnal Pendidikan dan Pembelajaran Matematika*, *2*(1), 37–58. https://doi.org/10.35316/alifmatika.2020.v2i1.37-58

Muslihat. (2020). Upaya Meningkatkan Kompetensi Pedagogik Non Akademik Dalam Penyusunan Rencana Pembelajaran Melalui Workshop Di Madrasah Binaan (Penelitian Tindakan Madrasah Pada Semester Genap Di Madrasah/Sekolah Binaan Kabupaten Ciamis Jawa Barat Tahun Pelajaran 2017/2. *Jurnal Revolusi Pendidikan*, *3*(3), 71–476.

Muzdalipah, I., Rustina, R., & El Akbar, R. R. (2020). Workshop Pengembangan Media Pembelajaran Berbasis Information and Communication Technology (Ict). *BERNAS: Jurnal Pengabdian Kepada Masyarakat*, *1*(3), 202–208. https://doi.org/10.31949/jb.v1i3.348

Nouri, J., Zhang, L., Mannila, L., & Norén, E. (2020). Development of computational thinking, digital competence and 21st century skills when learning programming in K-9. *Education Inquiry*, *11*(1), 1–17. https://doi.org/10.1080/20004508.2019.1627844

Nurash, P., Kasevayuth, K., & Intarakamhang, U. (2020). Learning programmes and teaching techniques to enhance oral health literacy or patient-centred communication for healthcare providers: A systematic review. *European Journal*

of Dental Education, 24(1), 134–144. https://doi.org/10.1111/eje.12477

Nurmayanti, N. (2018). Learning Material Integrated Alternative Technology In Wasted Environment Of Gold Mine To Enhance Cognition Of Environmental Literacy. Edusains, 10(2), 282–286.

Nurwadjah A, Suhartini, A., & Sutarjo, J. (2020). Pemberdayaan Santri Melalui Pendidikan Entrepreneurship. Ri'ayah, 53(9), 1689–1699.

Permatasari, Y. (2020). Building indonesia through asean economic community. Journal of ASEAN Studies, 8(1), 81–93. https://doi.org/10.21512/jas.v8i1.6040

Priyatno, A. (2020). Pendidikan Islam dalam Turbulensi Era 4.0. AL-FIKR: Jurnal Pendidikan Islam, 6(1), 1–9. https://doi.org/10.32489/alfikr.v6i1.63

Pujiastuti, H., Utami, R. R., & Haryadi, R. (2020). The development of interactive mathematics learning media based on local wisdom and 21st century skills: Social arithmetic concept. In Journal of Physics: Conference Series (Vol. 1521, Nomor 3). https://doi.org/10.1088/1742-6596/1521/3/032019

Rabbaniyah, J., Handrianto, B., & Sastra, A. (2020). Penerapan Islamisasi Sains Al-Faruqi Dalam Silabus Biologi. Tawazun: Jurnal Pendidikan Islam, 13(1), 66. https://doi.org/10.32832/tawazun.v13i1.3054

Rahadyan, H., & Lubis, A. (2018). Monetary integration in the ASEAN Economic Community challenge: The role of the exchange rate on inflation in Indonesia. International Journal of Services, Technology and Management, 24(5–6), 463–479. https://doi.org/10.1504/IJSTM.2018.094438

Ramadhon, S. (2020). Efektivitas Pendekatan Student-Centered Learning Dalam Pelatihan Survey Topografi Di Bandung. Jurnal Kewidyaiswaraan, 5(1), 27–35.

Rios, J. A., Ling, G., Pugh, R., Becker, D., & Bacall, A. (2020). Identifying Critical 21st-Century Skills for Workplace Success: A Content Analysis of Job Advertisements. Educational Researcher, 49(2), 80–89. https://doi.org/10.3102/0013189X19890600

Ritter, N. (2010). Understanding a Widely Misunderstood Statistic: Cronbach's. Online Submission.

Rizki, L. M., & Priatna, N. (2019). Mathematical literacy as the 21st century skill. In Journal of Physics: Conference Series (Vol. 1157, Nomor 4). https://doi.org/10.1088/1742-6596/1157/4/042088

Sa'pang, Aditya Wiranata, R. P. (2020). Efikasi Diri Guru, Pemahaman Tentang Karakter Siswa, Dan Pemahaman Tentang Keterampilan Abad Ke-21 Sebagai Prediktor Gaya Mengajar Tipe Fasilitator. Jurnal Psikologi Ulayat (2020), 10 (10). https://doi.org/10.24854/jpu02020-300

Sarassina, R. F. (2020). Self-Efficacy as Mediator: The Impact of Entrepreneur Education on Entrepreneur Intention. JURNAL AKUNTANSI, EKONOMI dan MANAJEMEN BISNIS, 8(1), 24–28. https://doi.org/10.30871/jaemb.v8i1.1870

Sarman, I. W. (2020). Pengembangan Instrumen Telaah RPP Dan Supervisi Akademik Berbasis Keterampilan Abad 21 Guru Sekolah Binaan SPMI Kota Palangka Raya. Jurnal Ilmiah Kanderang Tingang, 11(1), 216–227.

Setiawan, A. R. (2020). Desain Pembelajaran untuk Membimbing Siswa Sekolah Dasar dalam Memperoleh Literasi Saintifik. https://doi.org/10.35542/osf.io/u59f8

Siivonen, P. T., Peura, K., Hytti, U., Kasanen, K., & Komulainen, K. (2020). The construction and regulation of collective entrepreneurial identity in student entrepreneurship societies. International Journal of Entrepreneurial Behaviour and Research, 26(3), 521–538. https://doi.org/10.1108/IJEBR-09-2018-0615

Slamet, T. I., Alfiansyah, A., Al Maki, W. F., Musyafa, F. A., Satyaputra, A., Fathoni, P., Andayani, S. S., Melinda, S., Oktavianus, D., & Yusuf, N. P. (2020).

Peningkatan Keterampilan ICT untuk Guru melalui Pelatihan Konten Digital Pembelajaran Berbasis Sumber Terbuka (Open Sources). *Aksiologiya: Jurnal Pengabdian Kepada Masyarakat*, *4*(1), 118–130. https://doi.org/10.30651/aks.v4i1.2316

Sonita, E., & Helmi. (2020). Integritas Pendidikan Kewirausahaan dalam Mewujudkan Muslim Entrepreneurship (Studi Kasus Mahasiswa FEBI IAIN Bukittinggi). *JUSIE (Jurnal Sosial dan Ilmu Ekonomi)*, *5*(1), 64–77.

Suhirman. (2020). Pengaruh model pembelajaran berbasis masalah bermuatan karakter dan kecerdasan naturalis terhadap literasi siswa. *Bioscientist: Jurnal Ilmiah Biologi*, *8*(1), 170–179.

Sujarweni, V. W. (2014). *SPSS untuk Penelitian*. Pustaka Baru press.

Sulaiman, J., & Ismail, S. N. (2020). Teacher competence and 21st century skills in transformation schools 2025 (TS25). *Universal Journal of Educational Research*, *8*(8), 3536–3544. https://doi.org/10.13189/ujer.2020.080829

Syamsu, F. D., Hadi, K., & Razab, A. (2020). Meningkatkan Kualitas Pembelajaran Dengan Pendekatan Berbasis Saintifik Pada Materi Keanekaragaman Hayati. *Bionatural*, *VII*(1), 14–23.

Taufikurrahman, & Kholifah, N. (2020). Mewujudkan Ekonomi Mandiri Melalui Pendidikan Entrepreneur Ala Nabi Muhammad. *Jurnal Ilmiah Al – Hadi*, *5*(2), 86–94.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, *2*, 53–55. https://doi.org/10.5116/ijme.4dfb.8dfd

Telussa, A. M., Persulessy, E. R., & Leleury, Z. A. (2013). Penerapan Analisis Korelasi Parsial Untuk Menentukan Hubungan Pelaksanaan Fungsi Manajemen Kepegawaian Dengan Efektivitas Kerja Pegawai. *BAREKENG: Jurnal Ilmu Matematika dan Terapan*, *7*(1), 15–18. https://doi.org/10.30598/barekengvol7iss1pp15-18

Thomas, E., & Pugh, R. (2020). From 'entrepreneurial' to 'engaged' universities: social innovation for regional development in the Global South. *Regional Studies*, *54*(12), 1631–1643. https://doi.org/10.1080/00343404.2020.1749586

Uyuni, B., & Adnan, M. (2020). The Challenge of Islamic Education in 21st Century. *SALAM: Jurnal Sosial dan Budaya Syar-i*, *7*(12), 1079–1098.

Valencia-Medina, M., & Orantes, G. C. (2021). Analysis of the impact of a course on personal self-knowledge as a means of teacher professional improvement. *Revista Electronica Interuniversitaria de Formacion del Profesorado*, *24*(3), 21–41. https://doi.org/10.6018/REIFOP.458251

Wahidin, D. (2020). Peranan Mata Kuliah Ilmu Alamiah Dasar dalam Meningkatkan Literasi Sains Bagi Para Mahasiswa Peserta Program Pengabdian Pada Masyarakat. *Jurnal Pengabdian Kepada Masyarakat*, *10*(1), 81. https://doi.org/10.30999/jpkm.v10i1.925

Wang, S. Y., Wu, X. L., Xu, M., Chen, Q. X., & Gu, Y. J. (2021). The Evaluation of Synergy between University Entrepreneurship Education Ecosystem and University Students' Entrepreneurship Performance. *Mathematical Problems in Engineering*, *2021*. https://doi.org/10.1155/2021/3878378

Widiyanto, J. (2010). *SPSS for Windows Untuk Analisis Data Statistik dan Penelitian* (BP-FKIP UM). https://doi.org/10.16194/j.cnki.31-1059/g4.2011.07.016

Widyasari, R. R. (2020). Reposisi Dan Reaktualisasi Pendidikan Madrasah Dalam Memperkuat Eksistensi Pendidikan Di Era 4.0. *Edukasia: Jurnal Pendidikan dan Pembelajaran*, *1*(1), 55–65.

Yaakub, N. A., Nor, K. M., & Jamal, N. M. (2020). Online versus offline

entrepreneur Personalities: A review on entrepreneur performance. *Journal of Critical Reviews*, *7*(16), 450–462. https://doi.org/10.31838/jcr.07.16.54.

Yulisman, H., Widodo, A., Riandi, R., & Nurina, C. I. E. (2019). The Contribution Of Content, Pedagogy, And Technology On The Formation Of Science Teachers'tpack Ability. *Edusains*, *11*(2), 173–185.

Zalsalina, R., Palupi, G., & Riyaningsih, D. (2020). Penilaian Keterampilan Abad Ke-21. *Prosiding Seminar Nasional V 2019*, 340–346.

Zaus, M. A., Krismadinata, Syah, N., Jalinus, N., Wulansari, R. E., & Islami, S. (2019). Development instructional media on static and dynamic electrical based on android as student center learning media. *International Journal of Scientific and Technology Research*, *8*(11), 3589–3591.

Zavitz, J., Sarwal, A., Schoeneck, J., Glass, C., Hays, B., Shen, E., Bryant, C., & Gupta, K. (2021). Virtual multispecialty point-of-care ultrasound rotation for fourth-year medical students during COVID-19: Innovative teaching techniques improve ultrasound knowledge and image interpretation. *AEM Education and Training*, *5*(4). https://doi.org/10.1002/aet2.10632