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Development of Project Based Learning Science Teaching Modules Integrated Entrepreneurship For Increase Students' Mastery of Concepts

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Abstract: The development of the science teaching module project based learning integrated entrepreneurship aims to determine the characteristics of the science teaching module project based learning integrated entrepreneurship in improving students' concept mastery learning outcomes and knowing the effectiveness of science project based learning integrated entrepreneurship in improving students' concept mastery learning outcomes. This development research uses the research and development method (Research and Development) which uses the Four D model, which includes the definition stage, design stage, development stage and disseminate stage. The population in this study were class VII junior high school students. The research sample consisted of 62 students consisting of class VII D students as the experimental class and class VII E students as the control class. The experimental class uses the PjBL model teaching tools with integration of entrepreneurship while the control class uses a conventional model according to the school teacher's. The results of research and development show that the characteristics of the PjBL science teaching module are integrated with entrepreneurship by developing the syntax of the PjBL model with aspects of entrepreneurial attitudes empowered in each learning activity syntax. The PjBL integrated entrepreneurship science teaching module is effective in improving student learning outcomes as evidenced by the average N-Gain Score in the experimental class being 0.76 which is included in the high or effective category and the average N-Gain score in the control class is 0.52, which is included in the moderate or less effective category. It was concluded that students' mastery of concepts taught using Project Based Learning-based science teaching tools integrated with Entrepreneurship was better than students who did not use these teaching tools.

Keywords: Teaching Modules, Project Based Learning, Entrepreneurship, Concept Mastery

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1. Introduction

The development of the world of education is always experience change along the walk time especially in Indonesia. This is close the relation with existence development revolution the industry that occurs in the world, the existence of change order economy become share for change the educational system of a country as well (Prianto et al., 2019). Through a quality education a nation can determined or in other words education can prosper a nation (Nurhuda et al., n.d.). However, the fact is that at the time This education in Indonesia is still show low quality. Based on survey conducted by PISA (Programme for International Student Assessment) in 2019, which evaluated system education middle class in various countries in 2018, Indonesia is in a very good position low, namely ranked 74th out of 79 countries surveyed (Hewi & Shaleh, 2020). This is show that Indonesia entered in a country that has ability low numeracy and literacy. See condition the quality of education can it is said that this country Still in words left behind compared to with other countries. In face challenge learning 21st century, then needed change paradigm in system education that can provide a set skills 21st century so that student capable For face every aspect global life (Hartati & Panggabean, 2023). Various studies about concepts and characteristics education 21st century, no the perpetrator become demands at a time challenge big for teachers in to organize learning (Pertiwi, 2016).

Quality of Education is not off from quality source Power human, it is can said that success education in a country is very influenced by source power the human being (Astutie, 2018). This is in accordance with recommendation the Indonesian government which requires public for follow the mandatory program study for at least 12 years. Based on results survey from the Central Statistics Agency (BPS) in 2021 the number unemployment in Indonesia is experiencing increase, which was originally in 2020 as much as 6.93 million soul to 8.75 million soul in 2021 , where unemployment highest occupied by graduates school intermediate vocational 11.45% and school intermediate above 8.55% (Mantasia et al., 2022). This is expected every student own ability and attitude entrepreneurship so that capable create field work Alone No Again as seeker work and not depend on something company If when time happen termination connection work (PHK) such as when covid-19 outbreak where many people don't produce Because No own skills entrepreneurship. Entrepreneurship is very important aspect important, not only for implementation a activity business will but also in face various activity life daily (Naila et al., 2019). Entrepreneurship is a discipline the science that studies about values, abilities, and behavior somebody in face challenge life and way to obtain opportunity with various possible risks faced with (Yuyus Suryana, 2014).

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From that it is necessary contribution all party for create source Power quality and sustainable human resources through an Education. The effort started from Government through the Ministry of Education, Culture, Research and Technology (Kemdikbudristek) has introduce initiative new in field the curriculum is called curriculum merdeka. In Independent curriculum, the role of teachers is very important important in compilation teaching module. However, the reality is Still many teachers have not fully understand technique compilation and development teaching module. The teaching module is teaching tools or design learning based on the applied curriculum with objective reach standard competencies that have been set (Maulida, 2022). Supported with studies that have been done theory Study is runway for study this , one of them is theory cognitivism which is theory learn more prioritize the learning process than learning itself , because Study based on theory Study cognitivism in fact involves a very deep thinking process complex (Nurhadi, 2020). The fact is Now Still Lots learning that tends to be teacher centered where the learning model the make student passive, only as listeners, and less involving skills social as well as collaboration (Parker, 2020). Then from that the learning process is not planned with Good through this teaching module will result in delivery content to student become no systematic , so that learning that occurs become no balanced between teachers and students (Salsabilla et al., 2023).

One of effort for prepare source power humans to be able to competing in the industrial era 4.0 and welcoming the era of society 5.0 is with develop appropriate teaching module with curriculum independent integrate it with entrepreneurship through models and methods learning that can grow attitude entrepreneurship. Integrating attitude entrepreneurship in the learning process can to form attitudes and behavior students, so that they can become independent individual Good in entrepreneurship and also in the world of work (Silmi Kurnia Sa'adah, Sudarmin, 2021). This is aiming for increase results Study mastery draft student (Tria Lestari et al., 2023). One of method effective learning Because student - centered and emphasizes learning contextual through activities complex is Project Based Learning (PjBL). Learning based on Project Based Learning (Project Based Learning) uses project as the core of learning (Trianto, 2012). Implementation learning based on project strengthen creativity student with push method creative thinking, solutions innovative problems, and skills cooperation, so that in the end increase results Study (Fazillah & Nisa, 2024).

This model is method innovative involving work project, where students Work in a way independent in construct learning them and make it happen in form product real. Focus learning This are on concepts that involve student in investigation breakdown problems and tasks meaningful (Harlianti, 2021). Inside class, children must be given the opportunity for talk and discuss with his friends (Rahmah,

2022).The goal is for develop creativity, giving chance to student for work in a way independent in build knowledge they alone, and in the end produce product real (Abdullah, 2014). Learning model based on integrated project with entrepreneurship enrich creativity and skills student in development product business, so that produce results more optimal learning (Usman et al., 2024). In context learning this, students pushed for look for road go out on challenges faced in finish the product (K. Sari et al., 2021). Using learning models PjBL, students given chance for collaborate in research. They can interact with environment around for to design a challenging and searching project solution on real world problems (Rohaendi & Laelasari, 2020). PjBL Model has proven very effective in teach student about complex processes like planning, communication, problem solving problems and taking decision (Ishak et al., 2021; Lestari & Ilhami, 2022; Natty et al., 2019; Nurhuda et al., n.d.).

Implementation of the PjBL model integrated entrepreneurship in Science teaching module is expected can to smoothen activity learning so that capable increase amount educated society, quality source Power humans will too the more good. Add element entrepreneurship can more enrich creativity and results Study student through experience in finish problem real (Budiono et al., 2024). System education moment This must capable give birth to ready generation face various challenges, both at the level national and also international. Integrated teaching tools with entrepreneurship focus on implementation comprehensive, assessment multidimensional, diverse methods, and assessment holistic for in a way effective increase skills innovative and entrepreneurial student (Wei & Xiaoxing, 2023). Efforts made with that is increase results Study mastery draft student with use PjBL teaching module integrated entrepreneurship. The intended learning outcomes is collection fact in a way systematic for set whether in the reality happen change in self students and determine to what extent change in personal student (Muhibbin, 2004; Taradisa, Nidia., Jarmita, Nida., 2020).

Learning model based on project in a way significant increase results study of science in students, giving an interactive and immersive experience that improves achievement academics among student class VII (Adnan et al., 2024). Integration entrepreneurship in education expected can create source Power quality with appropriate soft skills and hard skills with needs of the times (Abraham & Supriyati, 2022). Basically source Power quality human being can build a country towards a more Good (Tyas & Ikhsani, 2015; Wahl & Munch, 2021). Study This aiming for know characteristics and effectiveness project based learning science teaching module integrated entrepreneurship in increase students' mastery concept.

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2. Method

Study This is a research and development (Research and Development) in effort produce a product in the form of Project Based Learning science teaching tools integrated Entrepreneurship. Research and development conducted using the Four D model, namely covering stage definition (define), stage design, stage development (develop), and stages dissemination for prove effectiveness product (Yuliyanti et al., 2024). As for steps study Four D as following.

Stage definition done For analyze beginning related something that will researched , in study This analysis beginning done with observation and also purposeful interview for know problems at school For identify issues that become base in development teaching tools and For find gap between ideal conditions and conditions real in the field (F. R. K. Sari & Utomo, 2024). Activities this is also implemented in a way direct with teachers and students. The results of observations and interviews at the stage This disclose that method frequent learning used is an integrated one with approach scientific and contextual, as well integrated learning entrepreneurship Still seldom done because the teacher is still experience difficulty in apply it to the learning process.

Stage furthermore in the form of compilation design product (design) activity This aiming for make design beginning after stage previously finished, which will be produce form beginning teaching tools in the form of appropriate teaching module with guidelines curriculum merdeka. Then to be continued with development products that have been designed (develop), at stage This done testing eligibility products produced with help validation a number of expert covering expert learning, expert material, media experts, language experts, and practitioners. Followed by testing the feasibility of research instruments through a number of stage that is validation Aiken questions, trials, reliability tests, level tests difficulties grain questions and analysis Power differentiator.

Stage final in the form of distribution product (disseminate) which is stage end in development products in the form of science teaching tools . Objectives from dissemination product results development science teaching tools are for helping teachers and schools in increase results Study student through science learning.

Study implemented at SMP Negeri 2 Boyolali in the year 2023 teachings with population in study This covers all over student class VII at SMP Negeri 2 Boyolali. The sample used consists of from student class VII D as class experiments and students class VII E as class control. Total number of samples is 62 students, with each class consists of from 31 students.

3. Result and Discussion

At the stage define get results from various source including observation, interviews, analysis concepts and objectives learning. Results of observations and interviews show that frequent learning used integrated into scientific and contextual learning. Integration of entrepreneurship only is still seldom done Because teacher still feel difficulty apply it into learning. Difficulty in integrating entrepreneurship in learning Because student not enough understand in understand condition environment around as well as relate it in learning. Teachers still carry out learning with teacher centered method or lecture, so that student tend passive in activity learn. Through literature study, teacher and student interviews suitable learning for applied learning project based learning integrated entrepreneurship in even semester class VII is Solar System material. This is in accordance with draft curriculum independent Where student own runway solid thinking and action based on experience and understanding learning integrated entrepreneurship. And carried out analysis draft related with Achievements Purposeful learning (CP). For Composing Goal Flow Learning (ATP) which will used as components in the teaching module. Analysis objective learning done for determine indicator achievement based learning on analysis materials and analysis curriculum. Objectives learning in matter This is results from indicators contained in Integrated Project Based Learning Science teaching tools for Entrepreneurship increase students' mastery concept.

Stage compilation design product (design). After the stage definition finished furthermore make design beginning from teaching tools that you want developed between that is in the form of a Teaching Module which includes component like Plan Implementation Learning (RPP), Sheet Work Students (LKPD), learning media in the form of PowerPoint presentations, and instruments assessment. Components teaching tools are arranged in accordance with Curriculum merdeka and following steps of integrated project based learning model entrepreneurship. At the stage early, will made the first draft or also known as draft 1, which was later will evaluated and validated at the stage development.

Compilation Prototype Product or Stage Development (develop). Stage This done for test try draft II so that produce product end in the form of science teaching tools project based learning integrated entrepreneurship for increase mastery draft students. At the stage This do testing eligibility products produced with method validation expert, in study this, there is One expert in each field science learning, materials, media, language, and a person practitioner. Science learning and materials expert is a professors and lecturers at UNS who have skill in learning, especially in science learning, and also has skill in the field of Physics, especially material Earth and Solar System. Media experts are a lecturer at UNS who has skill in use of media in

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learning. Linguists are a teacher who has finish Master of Indonesian Language studies, and practitioners is a teacher who has experience teach science learning in schools. Teaching tools are very important in support the success of the teaching and learning process, because with guidelines this teacher can carry out learning with more structured. Assessment results eligibility teaching module by experts learning that is value 3.17; expert material 2.33; media expert 3.57; language expert 3.9; and practitioner 3.91. Average rating from fifth expert which is 3.37 converted into scale 100 to 84.4 with conclusion that mark the enter in category very worthy, with thus based on the above feasibility test that results product proper teaching module used in learning.

Testing mastery concept in students done with test for know whether there is improvement understanding the concept or no. This is also intended for evaluate effectiveness from product developed teaching tools. Research carried out in two different classes, namely class control and class experiment both of them is regular class at SMP Negeri 2 Boyolali. Good class control and also class experiments, both get pretest and posttest. For distinguish it, class experiment get treatment especially at the time learning in progress that is in the form of method Science Project Based Learning Integrated Entrepreneurship. Meanwhile, for class control, learning process done use device learning the usual conventional used by teachers at school. On the second class learning in progress during 4 meetings, with allocation time each 3 lesson hours (JP) and 2 JP. Total time learning during 4 meetings the is 10 JP, including exam end (post test).

Test For evaluate mastery draft student is pre test and post test , but so that both get valid results capability beginning student we need to test it first formerly. First thing to do is a test of the difference in means between second the class you want investigated for get information about knowledge draft beginning students. This test aiming for ensure that sample taken own level ability equal beginning. Here is prerequisite test results initial data normality student.

Table 1. Prerequisite Test Results Initial Data Normality

Class	Sig	Note	Decision	Conclusion
Experimental Class	0.184	0.184>0.05	H_0 is accepted	Data is normally distributed
Control Class	0.095	0.095>0.05	H_0 is accepted	Data is normally distributed

Applications used for test normality is device soft IBM SPSS Statistics for Windows. Normality test in study This done with method Kolmogorov-Smirnov, while the homogeneity test use method Levene Statistics. If The test results show that the data is normally distributed and has the same variant, then can Independent Sample T-Test was conducted For determine existence difference in ability beginning students. Students' pretest scores used for the test. The results of the analysis show that the initial data from class experiments and classes control own mark significance bigger from 0.05, so that concluded that H0 is accepted and H 1 rejected. With thus, the data tested distributed normally.

Stage furthermore after normality test done is a homogeneity test for determine is the data homogeneous or not. Prerequisite test results homogeneity can be seen in table 2.

Table 2. Prerequisite Test Results Initial Data Homogeneity

School	Significance	Information	Decision	Conclusion
Junior High School 2 Boyolali	0.310	0.310>0.05	H0 is accepted	Homogeneous

The table above show that mark beginning students in class experiments and classes control own mark bigger from 0.05 (0.310 > 0.05), so can concluded that H 0 accepted and H1 rejected. This means the data taken nature homogeneous. After ensuring that the data is normally distributed and homogeneous, the next step is next is proceed to hypothesis testing using parametric tests, namely independent sample t-test.

Table 3. Results of Independent Sample T Test Initial Data

School	Significance	Information	Decision	Conclusion
Junior High School 2 Boyolali	0.900	0.900>0.05	H0 is accepted	No There is significant difference

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Based on Table 3. Results of the Independent Sample T - Test get mark significance (2-tailed) bigger of 0.05 (0.900 > 0.05). Therefore, it can be concluded that H0 accepted and H1 rejected. The conclusion is No there is difference significant between class experiments and classes control, which shows that second class own ability equal start.

After doing analysis beginning of class experiments and classes control, learning in every class to be continued with using an integrated Project Based Learning science learning model with entrepreneurship (entrepreneurship). Final result from learning This used as reference for evaluate mastery concept. Before proceed to hypothesis testing, steps First is carry out prerequisite tests, namely normality and homogeneity tests, to ensure whether the data is normally distributed and homogeneous in the posttest data.

Same steps as previously for conduct hypothesis testing on posttest data students. Before conduct hypothesis testing, value data posttest mastery draft student tested its normality and homogeneity as condition beginning for hypothesis testing parametric. Testing This use device soft IBM SPSS Statistics for Windows. Normality test in study This use method Kolmogorov-Smirnov, while the homogeneity test use method Levene Statistics. If the data is normally distributed and has the same variant, then Independent Sample T-Test will to be continued for evaluate whether there is difference in mastery draft students. However, if one of or second condition No fulfilled, then will non- parametric hypothesis testing was performed.

Table 4. Prerequisite Test Results Posttest Data Normality

Class	Sig	Information	Decision	Conclusion
Experimental Class	0.096	0.096>0.05	H0 is accepted	Data is normally distributed
Control Class	0.125	0.125>0.05	H0 is accepted	Data is normally distributed

Table 4. Shows prerequisite test results normality for student posttest data, where seen that posttest score of class experiment and also class control normally distributed. Shown through mark significance obtained taller from 0.05 which states that H0 is accepted and H1 is rejected. Therefore, the data is can it is said normally distributed. Next can homogeneity test was carried out. The following homogeneity test results can be seen in Table 5.

Table 5. Prerequisite Test Results Posttest Data Homogeneity

School	Significance	Information	Decision	Conclusion
Junior High School 2 Boyolali	0.693	0.693>0.05	Ho is accepted	Homogeneous

In Table 5. Posttest data show homogeneous, which is proven with mark its greater significance big from 0.05 (0.693 > 0.05). Then can concluded that Ho accepted and H1 rejected, so the data is tested fulfil condition homogeneous.

Table 6. Results of Posttest Data Hypothesis Testing

School	Significance	Information	Decision	Conclusion
Junior High School 2 Boyolali	0.001	0.001<0.05	Ho rejected	Experimental class better than control class

In Table 6. shows that there is difference mastery draft between class experiments that use Integrated Project Based Learning based science teaching tools with Entrepreneurship compared with class that is not use device, this is can be seen from mark significance (0.001 < 0.05), which indicates rejection against Ho and conclude that class experiment more superior compared to class control. With Thus, it can be concluded that students' mastery concept who are taught use Integrated Project Based Learning based science teaching tools with Entrepreneurship better than with students who do not use the teaching device.

Table 7. Calculation of N-Gain Score Test

Experimental Class			Control Class		
No.	*N-Gain Score*	Information	No.	*N-Gain Score*	Information
1	0.50	Currently	1	0.12	Low
2	0.86	Tall	2	0.33	Currently
3	0.93	Tall	3	0.56	Currently
4	1.00	Tall	4	0.50	Currently
5	0.45	Currently	5	1.00	Tall
6	0.88	Tall	6	0.50	Currently
7	0.83	Tall	7	0.00	Low

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8	0.62	Currently	8	0.60	Currently
9	0.86	Tall	9	0.82	Tall
10	1.00	Tall	10	0.50	Currently
11	0.62	Currently	11	0.75	Tall
12	0.50	Currently	12	0.57	Currently
13	0.62	Currently	13	0.67	Currently
14	0.56	Currently	14	0.64	Currently
15	0.45	Currently	15	0.80	Tall
16	0.56	Currently	16	0.12	Low
17	0.56	Currently	17	0.20	Low
18	0.86	Tall	18	0.38	Currently
19	0.50	Currently	19	0.30	Currently
20	0.86	Tall	20	0.75	Tall
21	1.00	Tall	21	0.50	Currently
22	0.83	Tall	22	0.50	Currently
23	0.50	Currently	23	0.78	Tall
24	1.00	Tall	24	0.60	Currently
25	0.56	Currently	25	0.50	Currently
26	1.00	Tall	26	0.45	Currently
27	1.00	Tall	27	0.50	Currently
28	0.56	Currently	28	0.60	Currently
29	0.50	Currently	29	0.70	Currently
30	0.78	Tall	30	0.44	Currently
31	0.45	Currently	31	0.57	Currently
Average		**0.76**	**Average**		**0.52**
minimum		**0.45**	**minimum**		**0.00**
maximum		**1.00**	**maximum**		**1.00**

Based on Table 4.16, results the N-Gain Score test calculation shows that the average N-Gain score in the class experiment is 0.76, which is included in category tall or effective, with the N-Gain value is a minimum of 0.45 and a maximum of 1.00. On the other hand, the average N-Gain score in the class control is 0.52, which is included in category currently or not enough effective, with the N-Gain value is a minimum of 0.00 and a maximum of 1.00. From the results this, can concluded that use science teaching module based on integrated project-based learning with effective entrepreneurship in increase understanding draft students, meanwhile use method conventional not enough effective for increase students' mastery concept.

4. Conclusion

Characteristics developed teaching modules use method Four D with through the Define, Design, Develop, and Disseminate process. PjBL teaching module integrated with entrepreneurship with to float PjBL model syntax. Aspects entrepreneurial attitude is empowered at every level syntax activity purposeful learning increase results Study mastery concept. Science teaching module PjBL integrated entrepreneurship effective in increase results Study proven students with average N-Gain Score value in class experiment is 0.76 which is included in category tall or effective, with the N-Gain value is a minimum of 0.45 and a maximum of 1.00. On the other hand other, the average N-Gain score in the class control is 0.52, which is included in category currently or not enough effective, with The minimum N-Gain value is 0.00 and the maximum is 1.00.

With Thus, it can concluded that mastery draft students who are taught use science teaching tools based on Integrated Project Based Learning with Entrepreneurship better than compared to with students who do not use the teaching modules.

References

Abdullah, R. S. (2014). *Pembelajaran saintifik untuk implementasi kurikulum 2013*. Bumi Aksara.

Abraham, I., & Supriyati, Y. (2022). Desain Kuasi Eksperimen Dalam Pendidikan: Literatur Review. *Jurnal Ilmiah Mandala Education*, *8*(3), 2476–2482. https://doi.org/10.58258/jime.v8i3.3800

Adnan, A., Takndare, M. M. T., & Nurhayati, N. (2024). The Effect of the Project Based Learning Model on Student Science Learning Outcomes. *Journal La Sociale*, *5*(5), 1196–1203. https://doi.org/10.37899/journal-la-sociale.v5i5.1290

Astutie, C. S. A. (2018). *No 主観的健康感を中心とした在宅高齢者における 健康関連指標に関する共分散構造分析Title*. 1–26.

Budiono, S., Setyariza, N. A., Kusumawardani, I., Widayati, S. E., & Handayani, Y. (2024). Analisis Pembelajaran Berbasis Project Based Learning dalam Meningkatkan Kreativitas Peserta Didik. *Tsaqofah*, *4*(5), 3447–3455. https://doi.org/10.58578/tsaqofah.v4i5.3323

Fazillah, O., & Nisa, S. (2024). Implementasi Model Pembelajaran Berbasis Proyek dalam Meningkatkan Keterampilan Berfikir Siswa. *Masaliq*, *4*(4), 796–807. https://doi.org/10.58578/masaliq.v4i4.3180

Online ISSN 2655-2450 | Print ISSN 2655-2388

Harlianti, S. (2021). *Pengembangan Pembelajaran Matematika Model Project Based Learning (Pjbl) Untuk Melatih Keterampilan Abad 21 Berkarakter Entrepreneurship* (UIN SUNAN).

Hartati, T., & Panggabean, E. M. (2023). Karakteristik Teori-teori Pembelajaran. *Jurnal Penelitian, Pendidikan Dan Pengajaran: JPPP*, *4*(1), 5–10. https://doi.org/10.30596/jppp.v4i1.13431

Hewi, L., & Shaleh, M. (2020). Refleksi Hasil PISA (The Programme For International Student Assesment): Upaya Perbaikan Bertumpu Pada Pendidikan Anak Usia Dini). *Jurnal Golden Age*, *4*(01), 30–41. https://doi.org/10.29408/jga.v4i01.2018

Ishak, P. M., Harizon, & Muhaimin. (2021). Penggunaan Model Pembelajaran Project Based Learning Terintegrasi Chemo-Entrepreneurship dan Hubungannya dengan Life Skill Siswa Dalam Pembelajaran Kimia. *Jurnal Inovasi Pendidikan Kimia*, *15*(1), 2745–2753. https://journal.unnes.ac.id/nju/index.php/JIPK/article/view/26142

Lestari, I., & Ilhami, A. (2022). Penerapan Model Project Based Learning Untuk Meningkatkan Keterampilan Berpikir Kreatif Siswa Smp: Systematic Review. *LENSA (Lentera Sains): Jurnal Pendidikan IPA*, *12*(2), 135–144. https://doi.org/10.24929/lensa.v12i2.238

Mantasia, Putri, I. S. S., Dewi, A. C., & Idris, M. M. (2022). Penerapan Model Project Based Learning dalam Pengembangan Jiwa Entrepreneurship Mahasiswa di Perguruan Tinggi. *Seminar Nasional Hasil Penelitian*, 1914–1925.

Maulida, U. (2022). Pengembangan Modul Ajar Berbasis Kurikulum Merdeka. *Tarbawi : Jurnal Pemikiran Dan Pendidikan Islam*, *5*(2), 130–138. https://doi.org/10.51476/tarbawi.v5i2.392

Muhibbin, S. (2004). *Psikologi Guruan*. Rosda Karya.

Naila, I., Jatmiko, B., & Sudibyo, E. (2019). Developing Entrepreneurship-Oriented Project-Based Learning Devices to Improve Elementary School Students' Collaboration Skills. *International Journal of Innovative Science and Research Technology*, *4*(8), 412–416. www.ijisrt.com

Natty, R. A., Kristin, F., & Anugraheni, I. (2019). Peningkatkan Kreativitas Dan Hasil Belajar Siswa Melalui Model Pembelajaran Project Based Learning Di Sekolah Dasar. *Jurnal Basicedu*, *3*(4), 1082–1092. https://doi.org/10.31004/basicedu.v3i4.262

Nurhadi. (2020). *Teori kognitivisme serta aplikasinya dalam pembelajaran*. *2*, 77–95.

Nurhuda, H., Tinggi, S., & Islam, A. (n.d.). *Faktor Dan Solusi Yang Ditawarkan National*

Education Problems ; Factors and Solutions. 127–137.

Parker, J. L. (2020). *intermediate Spanish course*. *12*(1), 80–97.

Pertiwi, I. (2016). *Pengaruh Model Project Based LearningTerhadap Peningkatan Hasil Belajar Fisika Pada Materi Pesawat Sederhana Siswa Kelas VIII SMP Negeri 32 Makassar*. UIN ALAUDDIN.

Prianto, Y., Subaidah, Rohmah, Z., & Firdaus, F. (2019). Analisis Pendidikan Indonesia di Era Revolusi Industri 4.0 - Repository Universitas Muhammadiyah Sidoarjo. *Universitas Muhammadiyah Sidoarjo*, *January*, 0–16. http://eprints.umsida.ac.id/6400/

Rahmah, S. (2022). Teori Kognitivisme serta Aplikasi dalam Pembelajaran. *Jurnal Pendidikan Profesi Guru Madrasah*, *2*(3), 77–95. https://ejournal.stitpn.ac.id/index.php/edisi/article/view/786%0Ahttps://ejournal.stitpn.ac.id/index.php/edisi/article/download/786/541

Rohaendi, S., & Laelasari, N. I. (2020). Penerapan Teori Piaget dan Vygotsky Ruang Lingkup Bilangan dan Aljabar pada Siswa Mts Plus Karangwangi. *Prisma*, *9*(1), 65. https://doi.org/10.35194/jp.v9i1.886

Salsabilla, I. I., Jannah, E., & Juanda. (2023). Analisis Modul Ajar Berbasis Kurikulum Merdeka. *Jurnal Literasi Dan Pembelajaran Indonesia*, *3*(1), 33–41.

Sari, F. R. K., & Utomo, A. C. (2024). Pengembangan Media Pembelajaran Puzzle Hak dan Kewajiban untuk Meningkatkan Kerja Sama Peserta Didik Kelas III Sekolah Dasar. *JP2SD (Jurnal Pemikiran Dan Pengembangan Sekolah Dasar)*, *12*(1), 109–121.

Sari, K., Yunita, Y., & Maknun, D. (2021). Meta-Analisis Pembelajaran Berbasis Proyek terhadap Kemampuan Berpikir Kreatif Biologi Siswa SLTP dan SLTA. *Quagga: Jurnal Pendidikan Dan Biologi*, *13*(2), 51–59. https://doi.org/10.25134/quagga.v13i2.3668

Silmi Kurnia Sa'adah, Sudarmin, dan S. D. (2021). 25898-73390-1-Pb. *Pengembangan Pembelajaran Dengan Pendekatan Stem Terintegrasi Science Entrepreneurship Untuk Meningkatkan Karakter Kewirausahaan*, *15*(1), 2778–2791.

Taradisa, Nidia., Jarmita, Nida., E. (2020). Kendala Yang Dihadapi Guru Mengajar Daring Pada Masa Pandemi COvid 19 MIN 5 Banda Aceh. *UIN Ar-Raniry Banda Aceh*, *1*(1), 23.

Tria Lestari, Andi Ali Kisai, & Nurkholis. (2023). Implementasi Model Project Based Learning Pada Hasil Belajar. *Jurnal Lensa Pendas*, *8*(2), 100–112. https://doi.org/10.33222/jlp.v8i2.2954

Online ISSN 2655-2450 | Print ISSN 2655-2388

Trianto. (2012). *Model Pembelajaran Terpadu: Konsep, Strategi, dan Implementasinya dalam Kurikulum Tingkat Satuan guruan (KPS)*. Bumi Aksara.

Tyas, A. A. W. P., & Ikhsani, K. T. W. (2015). Sumber Daya Alam & Sumber Daya Manusia Untuk Pembangunan Ekonomi Indonesia. *Forum Ilmiah*, *12*(1), 1–15.

Usman, H., A. Djaha, Z., & Farida Tuati, N. (2024). Application of the Project Based Learning Model in Improving Creativity and Entrepreneurial Skills for Independent Entrepreneur Students at the Kupang Negeri Polytechnic Campus. *International Journal of Current Science Research and Review*, *07*(02), 960–965. https://doi.org/10.47191/ijcsrr/v7-i2-09

Wahl, D., & Munch, J. (2021). Industry 4.0 entrepreneurship: Essential characteristics and necessary skills. *2021 IEEE International Conference on Engineering, Technology and Innovation, ICE/ITMC 2021 - Proceedings*, *June*. https://doi.org/10.1109/ICE/ITMC52061.2021.9570258

Wei, L., & Xiaoxing, Q. (2023). Curriculum System Design Based on Curriculum Modular Teaching - Take the Course "Innovation and Entrepreneurship" as an Example. *Education Journal*, *12*(3), 109–113. https://doi.org/10.11648/j.edu.20231203.15

Yuliyanti, M., Agustin, A., Utami, S. D., Purnomo, S., & Wijaya, S. (2024). *Jurnal Inovasi Pendidikan*. *6*(1), 634–649.

Yuyus Suryana. (2014). *Kewirausahaan*. Salemba Empat.