



IMPROVING WETLANDS ENTREPRENEURIAL ORIENTATION WITH PROBLEM-BASED LEARNING (PBL) AT THE PURUN CRAFTS CENTER IN SOUTH KALIMANTAN, INDONESIA

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ABSTRACT

Objective: Purun Danau (*Lepironia articulata* Retz.) is a typical wetland plant that can be used as high-value craft materials. Efforts to increase wetland entrepreneurial competency in Micro, Small and Medium Enterprises (MSMEs) expressed in entrepreneurial orientation (EO) are a crucial step to achieve community welfare and play a role in environmental sustainability. This study aims to measure and analyze the effectiveness of training on EO using the Problem-Based Learning (PBL).

Theoretical Framework: EO is characterized by innovativeness, proactive attitude and risk-taking that supports the growth and development of MSMEs.

Method: This study uses a quantitative method with quasi-experimental pre-test-post-test. Statistical analysis was carried out using SPSS Statistics version 26.

Results and Discussion: Results of the study show there is significant difference in the level of EO before and after the implementation of PBL. There has been an increase in the level of EO from pre-test scores ranging between 1,630 and 2,982 and post-test scores between 2,364 and 3,498.

Research Implications: This study has strong implications in building wetland MSME entrepreneurs, creating added value to natural wetland resources, and encouraging the creation of eco-friendly products.

Originality/Value: This study has originality which focuses on increasing the entrepreneurial orientation of MSMEs with learning and training interventions using Problem-Based Learning (PBL).

Keywords: Entrepreneurial Orientation, Problem-Based Learning, SMEs, Wetlands, Sustainability.

MELHORANDO A ORIENTAÇÃO EMPRESARIAL DAS ZONAS ÚMIDAS COM A APRENDIZAGEM BASEADA EM PROBLEMAS (PBL) NO CENTRO DE ARTESANATO PURUN EM SOUTH KALIMANTAN, INDONÉSIA

RESUMO

Objetivo: Purun Danau (*Lepironia articulata* Retz.) é uma planta típica de zonas úmidas que pode ser usada como materiais artesanais de alto valor. Os esforços para aumentar a competência empresarial das zonas úmidas em micro, pequenas e médias empresas (PME), expressos em orientação empresarial (OE), são um passo crucial para alcançar o bem-estar da comunidade e desempenhar um papel na sustentabilidade ambiental. Este estudo tem como objetivo medir e analisar a eficácia do treinamento em EO usando a Aprendizagem Baseada em Problemas (PBL).

Quadro Teórico: A Ed é caracterizada pela inovação, atitude proativa e assunção de riscos que apoia o crescimento e o desenvolvimento das MPME.

Método: Este estudo utiliza um método quantitativo com pré-teste-pós-teste quase experimental. A análise estatística foi realizada utilizando as estatísticas SPSS versão 26.

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Resultados e Discussão: Os resultados do estudo mostram que há diferença significativa no nível de EO antes e depois da implementação da PBL. Houve um aumento no nível de EO de escores pré-teste variando entre 1.630 e 2.982 e escores pós-teste entre 2.364 e 3.498.

Implicações da pesquisa: Este estudo tem fortes implicações na construção de empreendedores de MSME de zonas úmidas, criando valor agregado aos recursos naturais de zonas úmidas e incentivando a criação de produtos ecológicos.

Originalidade/valor: Este estudo tem originalidade, que se concentra em aumentar a orientação empresarial das MPME com intervenções de aprendizagem e formação utilizando a aprendizagem baseada em problemas (PBL).

Palavras-chave: Orientação Empresarial, Aprendizagem por Problemas, PME; Zonas Úmidas, Sustentabilidade..

MEJORA DE LA ORIENTACIÓN EMPRESARIAL DE LOS HUMEDALES CON APRENDIZAJE BASADO EN PROBLEMAS (ABP) EN EL CENTRO DE ARTESANÍA PURUN EN KALIMANTAN DEL SUR, INDONESIA

RESUMEN

Objetivo: Purun Danau (*Lepironia articulata* Retz.) es una planta típica de humedal que puede ser utilizada como material artesanal de alto valor. Los esfuerzos para aumentar la competencia empresarial de los humedales en las micro, pequeñas y medianas empresas (MIPYME) expresados en orientación empresarial (EO) son un paso crucial para lograr el bienestar de la comunidad y desempeñar un papel en la sostenibilidad ambiental. Este estudio tiene como objetivo medir y analizar la efectividad de la formación en EO utilizando el Aprendizaje Basado en Problemas (ABP).

Marco Teórico: La EO se caracteriza por la innovación, la actitud proactiva y la toma de riesgos que apoya el crecimiento y desarrollo de las MIPYMES.

Método: Este estudio utiliza un método cuantitativo con cuasi-experimental pre-test-post-test. El análisis estadístico se llevó a cabo utilizando SPSS Statistics versión 26.

Resultados y discusión: Los resultados del estudio muestran que hay una diferencia significativa en el nivel de EO antes y después de la implementación de PBL. Ha habido un aumento en el nivel de EO de los puntajes previos a la prueba que oscilan entre 1.630 y 2.982 y los puntajes posteriores a la prueba entre 2.364 y 3.498.

Implicaciones de la investigación: Este estudio tiene fuertes implicaciones en la construcción de emprendedores de las MIPYMES de humedales, la creación de valor agregado a los recursos naturales de los humedales y el fomento de la creación de productos ecológicos.

Originalidad/Valor: Este estudio tiene originalidad que se centra en aumentar la orientación empresarial de las MIPYMES con intervenciones de aprendizaje y capacitación utilizando el Aprendizaje Basado en Problemas (ABP).

Palabras clave: Orientación Emprendedora, Aprendizaje Basado en Problemas, Pymes; Humedales, Sostenibilidad.

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1 INTRODUCTION

The wetland environment plays an important role in supporting living creatures and is part of the solution to the triple planetary crisis (climate change, pollution, biodiversity loss).

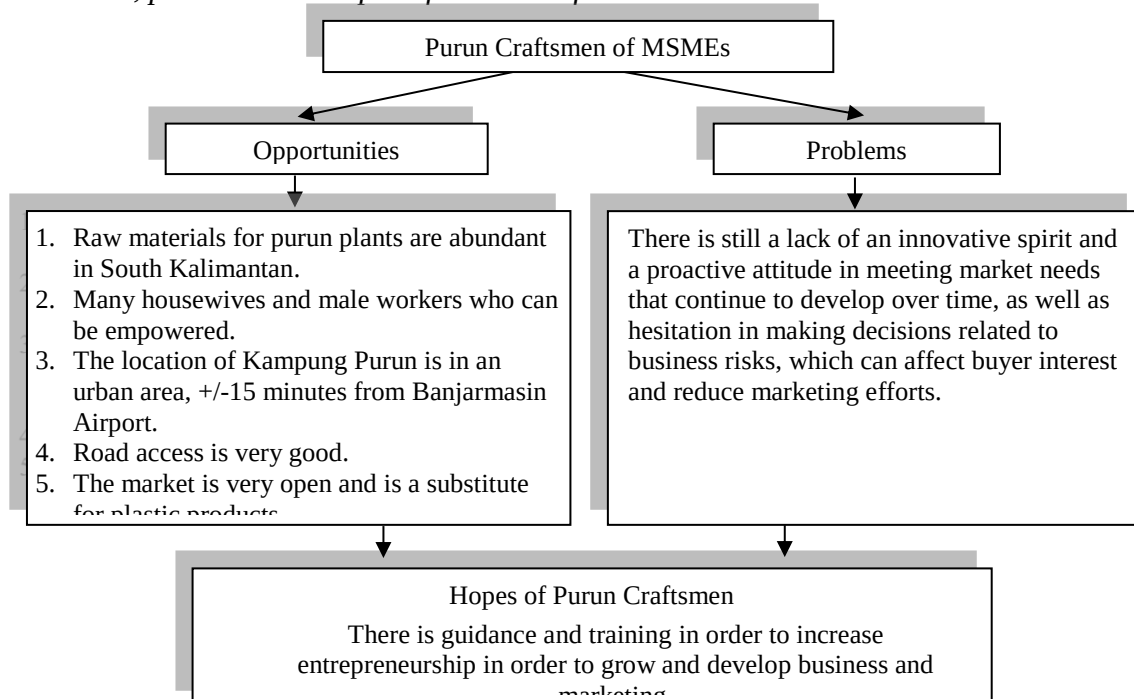


Wetlands contribute 15% of total terrestrial carbon storage and play an important role in water purification and erosion prevention, moreover around 75% of the world's population lives near wetlands (Geng, et al., 2021). In South Kalimantan, Indonesia, some of the vegetation in wetland areas, especially in flooded swamps and peatlands is covered with long fibrous plants in the Cyperaceae family including purun tikus (*Eleocharis dulcis*) and purun danau (*Lepironia articulata Retz.*). High quality purun handicrafts such as bags, hats, shopping baskets, fans, mats and others are processed by communities around the wetland area as environmentally friendly local wisdom that can be developed in order to improve the community's economy, socio-cultural development and at the same time environmental sustainability.

The increasing importance of environmental issues and sustainable development has given rise to the concept of sustainable entrepreneurship which aims to protect nature, life support and communities in pursuit of perceived opportunities to realize future products and processes that provide economic and non-economic benefits (Urbaniec, 2018). In line with this, the local government has designated Kampung Purun as a Purun craft center with the OVOP (one village one product) concept. Currently there are around 120 purun craftsmen on the Micro, Small and Medium Enterprises (MSME) scale and most of them use it as their main source of livelihood.

Figure 1

Problems, potential and hopes of Purun craftsmen on the MSME scale



Source: Prepared by the author, 2024.



Kampung Purun is a village located in Banjarbaru, South Kalimantan, Indonesia. Since 2016, the people of Kampung Purun have become the attention of the local government, having a creative gallery that accommodates various purun crafts from the community. Apart from that, Kampung Purun also receives support from several companies and State-Owned Enterprises. However, there are several problems in developing their entrepreneurship, namely the lack of an innovative spirit and proactive attitude in meeting market needs that continue to develop from time to time, as well as hesitation in making decisions related to business risks, which can affect buyer interest and reducing marketing performance (Figure 1).

Based on the analysis of problems and potential, solutions can be designed that can be applied in the development of Purun craftsmen MSME entrepreneurship, namely providing learning and training on "entrepreneurial orientation" to increase creativity and innovation, increase proactive attitudes, as well as provide understanding and measure business risks, so that can meet market needs and improve marketing performance. In this context, learning and training of craftsmen is carried out using a Problem-Based Learning (PBL) approach.

Generally, studies on Problem-Based Learning (PBL) focus on the effectiveness of the PBL approach, whether by comparing it with other learning approaches or focusing on increasing students' cognitive abilities, learning satisfaction, motivation and scientific problem-solving abilities. For example, Ssemugenyi (2023) analyzed the effectiveness of PBL by measuring students' cognitive abilities in the Geography of World Development course and comparing it with lecture methods as a control variable. O'Brien, et al (2019) identified the learning needs required by Irish small medium enterprises (SMEs) in various industrial sectors (e.g. manufacturing, construction, business support and logistics, healthcare, retail, financial services, and transport), as well as measuring Irish SMEs' satisfaction with the PBL learning approach that integrates formal and informal learning. Chiang, et al (2023) evaluated the characteristics of students' attitudes towards the PBL approach by measuring self-motivated learning attitude and supported learning attitude at two tourism schools in Taiwan. Nasution, et al (2018) focused on problem solving abilities for mathematics cases using the PBL approach compared with conventional learning approaches at a high school in Lubik Alung, West Sumatra, Indonesia. Permatasari, et al (2020) focused on developing a PBL approach applied to problem solving mathematics cases in two junior high schools in Padang, Indonesia.

In contrast to previous studies as mentioned above, this study has originality which focuses on increasing the entrepreneurial orientation of MSMEs with learning and training interventions using Problem-Based Learning (PBL). This study answers whether learning and training using the PBL approach is effective in increasing the entrepreneurial orientation (EO)



of Purun craftsmen MSME entrepreneurs in Banjarbaru City, South Kalimantan, Indonesia.

2 THEORETICAL FRAMEWORK

This theoretical framework outlines the theoretical concepts of each construct forming the research model to be developed and also explaining hypothesis development.

2.1 ENTREPRENEURIAL ORIENTATION (EO)

Entrepreneurship is one of the intangible economic resources that is very important in building a business, related to controlling and mobilizing resources to create innovative economic organizations for the purpose of improvement or growth in conditions of risk and uncertainty (Dollinger, 2008). Based on this view, there are three main things in developing entrepreneurship, namely the need for strong innovation power to win competition, proactively seeking and identifying customer needs in the context of business growth, and the existence of decision-making risks due to conditions of uncertainty in the business environment. Meanwhile, the entrepreneur's individual ability influences business strategic decisions that vary based on demographics (e.g. sex, age, education, pay) which is called entrepreneurial heterogeneity (Wang, et al, 2023).

An entrepreneurial firm is a company that consistently innovates products and markets, undertakes somewhat risky businesses and is proactive in acting and innovating to beat its competitors (Long, 2013; Miller, 1983). In line with this, companies that have an entrepreneurial orientation have good proactiveness, innovativeness and risk-taking (Miller, 1983; Pulka, et al, 2021; Galbreath, et al, 2020). Entrepreneurial orientation (EO) is a series of processes, methods and organizational styles that companies use to act entrepreneurially. This is also a strategic orientation that provides the basis for entrepreneurial decisions, especially regarding market opportunities (Correa & Queiroz, 2021). Based on the view above, entrepreneurial orientation (EO) is defined as the competency to create competitive advantage with proactive actions, having innovativeness and having measurable risk-taking behavior to produce maximum performance. Thus, entrepreneurial orientation (EO) is an entrepreneurial competency that consists of three dimensions, namely proactiveness, innovativeness, and risk-taking behavior.

Proactiveness relates to efforts to proactively explore customer wants, needs and preferences to achieve competitive advantage and improve company performance (Shu, et al,



2019; Gjorevska, 2023). This is because a proactive attitude is a source of innovation, customer satisfaction and customer loyalty. Proactiveness is the actions of seeking opportunities, having a far-sighted perspective in the context of introducing new products to get ahead of competition, acting anticipatorily in facing future demand, creating change (Kreiser & Davis, 2010), and creating first-mover advantages (Correa & Queiroz, 2021). Several characteristics of companies that have strong proactiveness include having the initiative before competitors, having higher competitiveness than competitors, and usually introducing new products to the market earlier (Ok & Ahn, 2019).

Innovativeness is related to exploratory activities to discover something new or something unknown (Correa & Queiroz, 2021), defined as the company's tendency to create innovation in a sustainable manner (Ghosh & Srivastava, 2021). Meanwhile, innovation is defined as the tendency to involve oneself in or support new ideas, novelty, experimentation, and creative processes that can produce new products, services, or technological processes (Gjorevska, 2023). Innovation can be divided into technological innovation and product market innovation. Technological innovation refers to product and process development, engineering and research, while product market innovation refers to product design, market research, advertising and promotion (Gjorevska, 2023). Several characteristics of companies that have strong innovativeness include, among others, having a strong emphasis on research and development, having offered many new product lines to the market, and making many changes to products (Ok & Ahn, 2019), processes, methods, and organizational style.

Risk-taking behavior is a willingness to commit to providing large resources in an effort to increase profits even though there is a high possibility of failure, or even the potential benefits are not yet known (Galbreath, et al, 2020). The relationship between risk-taking behavior and performance is curvilinear. If risk taking is too low or too high, it will result in a disadvantage or can reduce company performance (Begley & Boyd, 1987; Kreiser & Davis, 2010). Therefore, it is necessary to take measured risks, in other words, an entrepreneur must be able to identify risks that are actually detrimental to the company and avoid them. Several characteristics of companies that have strong risk-taking include, among others, always pursuing risky projects with the hope of high profit rewards, believing that to achieve a goal requires bold action (Ok & Ahn, 2019).

2.2 PROBLEM-BASED LEARNING (PBL)

Problem-based learning (PBL) departs from the view that the emergence of knowledge



and ideas only arises from situations where learners utilize experiences that are meaningful and important to them. Therefore, learning will be meaningful when learners are empowered to construct knowledge from the experiences they experience personally (Ssemugenyi, 2023). PBL is a student-centred approach to learning, where teachers or tutors guide learners in the process of exploring experiences (O'Brien, et al, 2019). PBL provides opportunities for learners to learn from real problems and provides opportunities to use realistic problem-solving skills (Chiang, et al, 2023), has a positive influence on learning outcomes and develops important skills in the workplace with creative and critical thinking, problem solving, logical thinking, decision making, and deeper engagement (Şendağ & Ferhan Odabaşı, 2009; O'Brien, et al, 2019; Chiang, et al, 2023). PBL is a learning approach that is very contextual to the needs of SMEs. Learners are asked to identify relevant problems that they want to solve (Hase & Kenyon, 2007; O'Brien, et al, 2019).

2.3 HYPOTHESES DEVELOPMENT

In order to determine the effectiveness of learning and training activities by answering whether there is a difference in the average results of measuring entrepreneurial orientation before and after activities using the Problem-Based Learning (PBL) approach. This study is supported by several previous studies such as Ssemugenyi (2023), O'Brien, et al (2019), Chiang, et al (2023), Nasution, et al (2018), Permatasari, et al (2020) which show that the PBL approach is proven to improve students' cognitive abilities, learning satisfaction, motivation and problem solving abilities. Thus, the following comparative hypothesis can be drawn::

- H0: There is no difference in the average results of measuring the entrepreneurial orientation of Purun craftsmen between before and after implementing learning and training using Problem-Based Learning (PBL).
- H1: There is a difference in the average results of measuring the entrepreneurial orientation of purun craftsmen between before and after implementing learning and training using Problem-Based Learning (PBL).

3 METHODOLOGY

This study uses a quantitative method with quasi-experimental pre-test-post-test with times series experiment. Statistical analysis was carried out using SPSS Statistics version 26 software with homogeneity test, normality test, independent t-test, and descriptive analysis.



3.1 DATA COLLECTION AND RESPONDENT CHARACTERISTICS

The first stage of data collection was carried out in July 2023, it was before carrying out outreach activities regarding the entrepreneurial orientation of purun craftsmen in Kampung Purun, Banjarbaru, South Kalimantan. At this stage, the questionnaire data collected came from 36 respondents. The second stage of data collection was carried out 8 weeks after the implementation of learning and training activities in September 2023. The questionnaire data collected came from the same 34 respondents as the first stage respondents. However, there were 2 respondents who could not be asked to fill out the questionnaire because they were unable to attend. Respondent characteristics are described in Table 1.

Table 1

Respondent characteristics

Category	Classification	Pre-Test		Post-Test	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	4	11.11%	3	8.82%
	Female	32	88.89%	31	91.18%
Age	< 16	0	0.00%	0	0.00%
	16 - 25	4	11.11%	4	11.76%
	26 - 36	12	33.33%	11	32.35%
	37 - 46	16	44.44%	16	47.06%
	> 46	4	11.11%	3	8.82%
Education	Junior High School	8	22.22%	8	23.53%
	High school	11	30.56%	11	32.35%
	Strata 1	17	47.22%	15	44.12%
	Strata 2 and 3	0	0.00%	0	0.00%

3.2 MEASURES OF VARIABLES

The measurement of the Entrepreneurial Orientation (EO) variable was carried out in two stages, namely the pre-test stage and the post-test stage.

Stage 1: Pre-Test, measuring indicators of entrepreneurial orientation in Purun craftsmen entrepreneurs before learning and training is carried out using the Problem-Based Learning (PBL) approach. Purun craft entrepreneurs were asked to fill out a questionnaire that had been provided using 6 EO indicators, developed based on Ok & Ahn (2019) which fulfill the aspects of proactiveness, innovativeness, and risk-taking behavior, namely as follows:

- Develop new products.
- Making changes to the product (design, type, quality).



- Take change initiatives before competitors.
- Often launches new products before competitors.
- Take high risks in high return opportunities.
- Dare to take action in conditions of uncertainty.

Stage 2: Post-Test, measuring the level of Entrepreneurial Orientation (EO) of Purun craftsmen after 8 weeks of Stage 1 learning and training, which aims to determine the effectiveness of the EO learning and training that has been implemented.

Meanwhile, the Problem-Based Learning (PBL) learning and training approach is implemented using the seven steps developed by O'Brien, et al (2019) as follows:

- Step 1. Clarify terms - identify and clarify the terms presented in the problem scenario. Make sure that the problem is completely understood.
- Step 2. Define - Determine problems through questions and investigation.
- Step 3. Brainstorming - learners identify possible solutions to problems or create hypotheses based on the knowledge and experience they have, they carry out knowledge sharing and identify things that are not yet known.
- Step 4. Classify solutions - Review steps 2 and 3, and classify possible solutions, then select an appropriate solution.
- Step 5. Formulate learning objectives - the learner group reaches consensus regarding learning objectives; tutors ensure learning objectives are focused, achievable, comprehensive and appropriate.
- Step 6. Private study – each learner collects information related to the assigned learning objective.
- Step 7. Synthesis – The group shares study results, the tutor checks the learning and provides an assessment to the group.

4 RESULTS AND DISCUSSIONS

4.1 RESEARCH INSTRUMENT TEST RESULTS

The research instrument test was carried out using a homogeneity test and normality test using SPSS Statistics version 26 software. The results of the homogeneity test on the combination of the two groups of data (pre-test and post-test) showed a significance value based on the mean, which was 0.402, or more than 0.05, meaning that the data variance is declared



significantly homogeneous (Table 2). Therefore, the next stage of statistical analysis can be carried out.

Table 2

Test of homogeneity of variance

		Levene Statistic	df1	df2	Sig.
Score	Based on Mean	0.711	1	68	0.402
	Based on Median	0.977	1	68	0.327
	Based on Median and with adjusted df	0.977	1	67.286	0.327
	Based on trimmed mean	0.725	1	68	0.398

The normality test was carried out using the Shapiro-Wilk technique because the number of respondent data for both groups, namely group 1 (pre-test) and group 2 (post-test) data was less than 50. Degree of Freedom (df) for the pre-test group was 36 and df for the post-test group was 34. Based on the Shapiro-Wilk technique, the normality test results for the two data groups show a significance value of more than 0.05, the pre-test group is 0.204, and the post-test group is 0.432 (Table 3). The normality of the two groups of data can be seen in the histogram graph (Figure 2 and Figure 3). The two groups of data can be said to be normally distributed, therefore the hypothesis testing stage with unpaired t-test can be carried out.

Table 3

Tests of Normality

Group		Kolmogorov-Smirnov ^a			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Score	PreTest	0.137	36	0.086	0.959	36	0.204
	PostTest	0.159	34	0.029	0.969	34	0.432

Figure 2

Normality histogram of the pre-test group

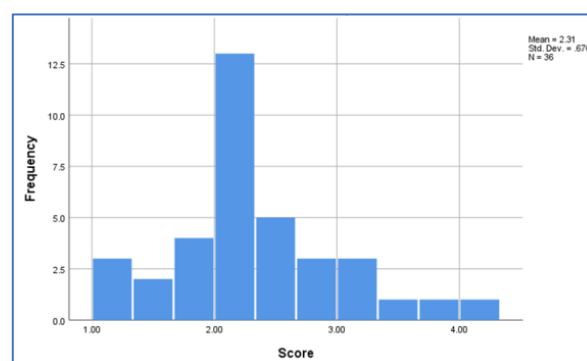
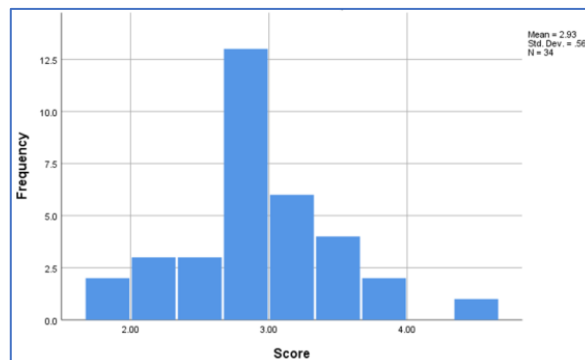




Figure 3

Normality histogram of the post-test group



4.2 HYPOTHESIS TEST RESULTS: INDEPENDENT T-TEST

The results of the independent t-test from the two groups of data (pre-test and post-test) show that the significance value in Levene's Test for Equality of Variances is more than 0.05, namely 0.402, which means that the data variance is declared significantly homogeneous. This is also stated in the homogeneity test in the previous step. The significance value of the comparative hypothesis based on equal variances assumed is 0.000, or less than 0.05. Thus, hypothesis H1 is accepted, namely that there is a difference in the average results of measuring the entrepreneurial orientation of purun craftsmen between before and after the implementation of learning and training (Table 4).

Tabel 4

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Score	Equal variances assumed	0.711	0.402	(4.179)	68.00	0.000	(0.625)	0.150	(0.924)	(0.327)
	Equal variances not assumed			(4.200)	67.10	0.000	(0.625)	0.149	(0.922)	(0.328)



Tabel 5

Descriptive Group Statistics

Group		N	Mean	Std. Deviation	Std. Error Mean
Score	PreTest	36	2.306	0.676	0.113
	PostTest	34	2.931	0.567	0.097

Apart from the above, in Table 4 it is also known that the t-count has a negative value, namely -4.179, which means that the average score before the learning and training (pre-test) is smaller than after the learning and training (post-test) is carried out. . This is reinforced by the descriptive test (Table 5) which shows that the average score before learning and training (pre-test) is 2,306 and the average score after learning and training is 2,931. Using standard deviation, it can be concluded that Entrepreneurial Orientation (EO) before implementing learning and training ranges between 1,630 and 2,982, after implementing learning and training it ranges between 2,364 and 3,498.

Based on the results of the independent t-Test and the descriptive analysis above, it was concluded that the implementation of outreach activities could significantly increase the entrepreneurial orientation of purun craftsmen in Kampung Purun, Banjarbaru, South Kalimantan.

4.3 DISCUSSION

The results of this study provide a concrete model for improving entrepreneurial competence expressed in wetland entrepreneurial orientation (EO). The increase in the average EO score before and after learning and training, from 2,306 to 2,931, shows that the success of learning and training was able to increase entrepreneurial competence by 27.11% within 8 weeks. Apart from that, the problem-based learning (PBL) approach is able to generate critical, practical and applicable thinking, as well as good analytical skills for purun craftsmen MSMEs in the purun craft center of Banjarbaru, South Kalimantan, Indonesia. The results of this study also provide strong implications in building a sustainable wetland entrepreneurial spirit that is competitive, has creativity and innovation, increases a proactive attitude, and is able to measure business risks so that it can meet market needs and improve marketing performance.

MSME entrepreneurs, especially in Indonesia, generally have various limitations, including in terms of managerial understanding, selling skills, strategic thinking, creativity and so on, which are practically driving factors in building a strong and agile entrepreneur, and



adaptive to changes in the business environment. In addition, MSME business actors generally have a psychological barrier, such as the perception of cash capital, which assumes that a business can only run if it has sufficient capital in the form of money. Therefore, support from all parties or stakeholders is needed, such as government, academics, the private sector, society and the media. This is a new challenge that can be used as a direction for future research and learning.

5 CONCLUSION

Implementing learning and training to increase entrepreneurial orientation (EO) for wetland MSMEs, especially purun craftsmen, is a crucial step that needs to be carried out on an ongoing basis in order to increase welfare and play a role in creating environmentally friendly products that replace plastic-based products. Practically, this has a strong contribution to increasing entrepreneurial competence which ultimately improves business performance. In this context, an appropriate learning and training approach is needed to improve entrepreneurial orientation, producing entrepreneurs who have good problem solving skills, critical, practical, applicable and adaptive thinking skills, namely the problem-based learning (PBL) approach.

In terms of future research, the research needs to be focused on building entrepreneurship that is oriented towards environmental sustainability, called as sustainable entrepreneurship (SE), a new concept related to sustainable development to business activities (Urbaniec, 2018). This is important for two reasons, first, the business environment in the future is oriented towards three elements of sustainability (economic, socio-cultural, and environmental) where businesses can prosper economically while maintaining socio-cultural and environmental sustainability (Kim, et al, 2018; Moliner-Tena, et al, 2021; Conti, et al, 2023), second, from the market perspective, awareness and pro-environmental behavior of the world community as a market is increasing. Several studies that support sustainable entrepreneurship include Thahir, et al., (2022), Nguyen, et al. (2023), Sung & Park (2018), Saadat Nakyejwe, et al, 2020).

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REFERENCES

- Begley, T. M., & Boyd, D. P. (1987). Psychological Characteristics Associated with Performance in Entrepreneurial Firms and Smaller Businesses. *Journal of Business Venturing*, 2 (1), 79–93.
- Chiang, C.-T., Chen, Y. C., & Satjawathee, T. (2023). Evaluating Students' Learning Attitudes Towards Problem-Based Learning On Online Learning Experiences And Learning Performance In Tourism And Hospitality Schools. *The International Association of Organizational Innovation*, 15(3).
- Conti, S., Dias, Á., & Pereira, L. (2023). Perceived City Sustainability and Tourist Behavioural Intentions. *Smart Cities*, 6, 692–708.
- Correa, V. S., & Queiroz, M. M. (2021). Social Capital and Individual Entrepreneurial Orientation: Innovativeness, Proactivity, and Risk-Taking in an Emerging Economy. Benchmarking: *An International Journal*, 28(7), 2280–2298.
- Dollinger, M. J. (2008). *Entrepreneurship: strategies and resources fourth edition*. Lombard, Illinois U.S.A.: Marsh Publications.
- Galbreath, J., Lucianetti, L., Thomas, B., & Tisch, D. (2020). Entrepreneurial orientation and firm performance in Italian firms. *International Journal of Entrepreneurial Behavior & Research*, 26(4), 629-646.
- Geng, M., Li, F., Gao, Y., Li, Z., Chen, X., Deng, Z., Zou, Y., Xie, Y., Wang, Z. (2021). Wetland Area Change from 1986-2016 in the Dongting Lake Watershed at the Sub-Watershed Scale. *Polish Journal of Environmental Studies*, 30(2), 1611–1620.
- Ghosh, S., & Srivastava, B. K. (2021). The Functioning of dynamic capabilities: explaining the role of organizational innovativeness and culture. *European Journal of Innovation Management*, 25(4), 948–974.
- Gjorevska, E. (2023). Entrepreneurial Orientation and Performance Analysis At the Private Healthcare Sector. *Business Ecosystem & Strategy*, 5(3), 80–95.
- Hase, S., & Kenyon, C. (2007). Heutagogy: A Child of Complexity Theory. Complicity. *An International Journal of Complexity and Education*, 4(1).
- Kim, M.-S., Thapa, B., & Kim, H. (2018). International Tourists' Perceived Sustainability of Jeju Island, South Korea. *Sustainability*, 10(73).
- Kreiser, P. M., & Davis, J. (2010). Entrepreneurial Orientation and Firm Performance: The Unique Impact of Innovativeness, Proactiveness, and Risk-taking. *Journal of Small Business and Entrepreneurship*, 23(1), 39–51.
- Long, H. C. (2013). The Relationship Among Learning Orientation, Market Orientation, Entrepreneurial Orientation, and Firm Performance of Vietnam Marketing Communications Firms. *Philippine Management Review*, 20, 37 - 46.
- Miller, D. (1983). The Correlates of Entrepreneurship in Three Types of Firms. *Management Science*, 29(7), 770–791.



- Moliner-Tena, M. A., Monferrer-Tirado, D., Ferreres-Bonfill, J. B., & Rodríguez-Artola, R. M. (2021). Destination Sustainability and Memorable Tourism Experiences. *Sustainability*, 13(21).
- Nasution, M. L., Yerizon, Y., & Gusmiyanti, R. (2018). Students' Mathematical Problem-Solving Abilities Through The Application of Learning Models Problem Based Learning. *IOP Conference Series: Materials Science and Engineering*.
- Nguyen, T. T., Pham, H. C., Le, Q. H., Phan, T. T., Bui, V. H., & Nguyen, T. T. (2023). Moderating role of green knowledge sharing and employee green behavior among the relationship of green supply chain management, green entrepreneurship, and sustainable development goal: Evidence from vietnam textile sector. *Environmental Science and Pollution Research*, 30, 58866–58881.
- O'Brien, E., McCarthy, J., Hamburg, I., & Delaney, Y. (2019). Problem-Based Learning in the Irish SME Workplace. *Journal of Workplace Learning*, 31(6), 391–407.
- Ok, C., & Ahn, H. S. (2019). How Does Entrepreneurial Orientation Influence the Sustainable Growth of SMEs?: The Role of Relative Performance. *Sustainability*, 11.
- Permatasari, C. P., Yerizon, Y., Arnawa, I., M., & Musdi, E. (2020). Improving Students' Problem-Solving Ability through Learning Tools Based on Problem Based Learning. *Journal of Physics: Conference Series*, 1554(1).
- Pulka, B. M., Ramli, A., & Mohamad, A. (2021). Entrepreneurial Competencies, Entrepreneurial Orientation, Entrepreneurial Network, Government Business Support and SMEs Performance. The Moderating Role of the External Environment. *Journal of Small Business and Enterprise Development*, 28(4), 586–618.
- Saadat Nakyejwe, L. K., Orobia, L., Humphrey, M. S., & Tsuma, C. K. (2020). Sustainability intention: Mediator of sustainability behavioral control and sustainable entrepreneurship. *World Journal of Entrepreneurship, Management and Sustainable Development*, 16(2), 81-95.
- Şendağ, S., & Ferhan Odabaşı, H. (2009). Effects of An Online Problem Based Learning Course on Content Knowledge Acquisition and Critical Thinking Skills. *Computers and Education*, 53(1), 132–141.
- Shu, C., De Clercq, D., Zhou, Y., & Liu, C. (2019). Government Institutional Support, Entrepreneurial Orientation, Strategic Renewal, and Firm Performance in Transitional China. *International Journal of Entrepreneurial Behavior & Research*, 25(3), 433-456.
- Ssemugenyi, F. (2023). Teaching and Learning Methods Compared: A Pedagogical Evaluation of Problem-Based Learning (PBL) and Lecture Methods in Developing Learners' Cognitive Abilities. *Cogent Education*, 10(1).
- Sung, C. S., & Park, J. Y. (2018). Sustainability orientation and entrepreneurship orientation: Is there a tradeoff relationship between them? *Sustainability*, 10(2).
- Thahir, H., Hadi, S., Zahra, F., Hidayah, N., Karim, F., Mendi, R. I., & Fatahilla, M. R. (2022). A conceptual framework for sustainable entrepreneurship in patchouli farming. *IOP Conference Series: Earth and Environmental Science*, 1075(1).



- Urbaniec, M. (2018). Sustainable Entrepreneurship: Innovation-Related Activities in European Enterprises. *Polish Journal of Environmental Studies*, 27(4), 1773–1779.
- Wang, M., Li, W., Zhang, Y., Cheng, X., & Cui, K. (2023). Entrepreneur Heterogeneity and Environmental Information Disclosure in New Energy Industry: Mediating Role of Environmental Management Practice. *Polish Journal of Environmental Studies*. *Polish Journal of Environmental Studies*, 32(4).