



UNIVERSITAS BOSOWA
THE INTERNATIONAL OFFICE DEPARTMENT
MARCH 15-16, 2023



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PROCEEDING

HYBRID INTERNATIONAL CONFERENCE 1ST MULTIDISCIPLINES
BOSOWA INTERNATIONAL CONFERENCE (MBIC): CALL FOR PAPER

Volume 1 Number 2 2023

PROCEEDING

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**HYBRID INTERNATIONAL CONFERENCE 1ST MULTIDISCIPLINES
BOSOWA INTERNATIONAL CONFERENCE (MBIC)**

"Leveraging Sustainable Digital Economy, Entrepreneurship,
and Future Energy Systems role in the post COVID-19 Era"



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Future Energy Systems role in the post COVID-19 Era."

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TITLE:**PROCEEDING: Volume 1 No. 2 2023**

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E-ISBN: 978-81-963387-6-3

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Welcoming Note

I am delighted to present to you the proceedings of the 1st Multidisciplines Bosowa International Conference (MBIC) with the theme "Leveraging Sustainable Digital Economy, Entrepreneurship, and Future Energy Systems role in the post COVID-19 Era." It gives me immense pleasure to share the valuable insights and knowledge that emerged from this significant event.

The conference served as a platform for scholars, researchers, industry experts, and policymakers to converge and explore the potential of sustainable digital economy, entrepreneurship, and future energy systems in the post-COVID era. The proceedings encapsulate the essence of the conference, encapsulating a wealth of research papers, presentations, and discussions that took place during the event.

The COVID-19 pandemic has reshaped our world and brought forth new challenges and opportunities. As we navigate through these unprecedented times, it becomes increasingly crucial to foster sustainable economic models that leverage the power of digital technologies. The proceedings shed light on the role of the digital economy in driving growth, innovation, and resilience, while emphasizing the importance of sustainability, inclusivity, and environmental responsibility.

Entrepreneurship, another key focus of the conference, emerged as a powerful tool for economic recovery and development. The proceedings feature a wealth of research and case studies that highlight the role of entrepreneurship in post-pandemic revival. They showcase innovative entrepreneurial ventures that have adapted to the changing landscape, creating new opportunities and addressing emerging needs.

Future energy systems play a vital role in securing a sustainable future for our planet. The proceedings delve into the exploration of clean, renewable, and sustainable energy sources. They showcase research and technological advancements in the field of energy systems, highlighting their potential for mitigating climate change and building a greener and more sustainable world.

I extend my deepest appreciation to the authors whose contributions have enriched these proceedings. Their research, insights, and recommendations are invaluable resources for academia, industry professionals, policymakers, and all those invested in creating a sustainable and prosperous post-COVID era. I would also like to express my gratitude to the organizing committee for their relentless efforts in ensuring the success of the conference and the production of these proceedings.

I encourage all readers to delve into the content of these proceedings, engage in critical discussions, and explore

collaborative opportunities. Let us utilize the knowledge and insights contained within to shape our collective future, foster sustainable development, and navigate the challenges and opportunities of the post-COVID-19 era.

Once again, I extend my warmest gratitude to all contributors and readers. May the knowledge shared in these proceedings inspire innovative solutions and contribute to a sustainable, inclusive, and prosperous future for all.

Sincerely,

Prof. Dr. Ir. Batara Surya, ST.,M.Si.

Rector of Bosowa University, Indonesia

Preface

The COVID-19 pandemic has transformed our lives in ways that we never imagined. It has disrupted economies, healthcare systems, and social structures around the world. The pandemic has also shown us the fragility of our existing systems and the need for innovation and sustainable solutions. In this context, the role of digital economy, entrepreneurship, and future energy systems has become more important than ever. These three factors are key in building a resilient and sustainable post COVID-19 world.

The digital economy has revolutionized the way we live, work, and communicate. It has transformed traditional business models, created new opportunities for entrepreneurs, and opened up new markets. During the pandemic, the digital economy has enabled many businesses to continue operating remotely, and it has facilitated the delivery of essential goods and services. As we move forward, the digital economy will play an even greater role in shaping our future. Its potential to create new jobs, drive innovation, and improve efficiency is enormous.

Entrepreneurship is another critical factor in building a sustainable post COVID-19 world. Entrepreneurs are the drivers of innovation and change, and they have the ability to create new opportunities and solutions in times of crisis. The pandemic has demonstrated the resilience and adaptability of entrepreneurs, as many

have pivoted their businesses to meet new demands and challenges. Going forward, we need to support and encourage entrepreneurship, particularly among women and underrepresented groups, to drive economic growth and development.

Finally, future energy systems are essential in creating a sustainable post COVID-19 world. The pandemic has highlighted the need for cleaner and more sustainable energy sources, as the world shifts towards a low-carbon economy. Future energy systems, such as renewable energy and energy storage, will play a critical role in reducing greenhouse gas emissions and mitigating the impacts of climate change. They will also create new opportunities for innovation and entrepreneurship in the energy sector.

The three factors – digital economy, entrepreneurship, and future energy systems – are interconnected and mutually reinforcing. A sustainable digital economy requires innovation and entrepreneurship, which in turn rely on a reliable and sustainable energy supply. Future energy systems also rely on innovation and entrepreneurship to drive their development and deployment. These three factors form a virtuous cycle that can create a more resilient, sustainable, and equitable post COVID-19 world.

This book aims to explore the role of sustainable digital economy, entrepreneurship, and future energy systems in shaping our post COVID-19 world. It brings together

contributions from experts in these fields, who offer insights and solutions for building a more sustainable future. The book covers a range of topics, including digital transformation, innovation and entrepreneurship, renewable energy, and sustainable development. It also provides case studies of successful businesses and initiatives that are leveraging sustainable digital economy, entrepreneurship, and future energy systems.

The book is intended for a wide audience, including policymakers, business leaders, academics, and students. It offers practical insights and solutions for building a more sustainable and resilient post COVID-19 world. It is our hope that this book will inspire and inform readers, and contribute to a more sustainable and equitable future for all.

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The Use of Gallery Walk in Teaching to Improve Learning Outcomes in Madrasah Aliyah

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ABSTRACT

The goal to be achieved in this research is to find out the application of the Gallery Walk learning model in improving English learning outcomes in the subject of explanation texts for class XI IPA 6 MAN 3 Bone. This research is qualitative descriptive research designed through classroom action research. Conducted in two cycles in class XI IPA 6 MAN 3 Bone. The subjects of this study amounted to 31 people. Research instruments in the form of tests and observation sheets. Data were analyzed quantitatively and qualitatively. The results showed that the Gallery Walk learning model was effectively applied in improving English learning outcomes. This shows that the percentage of individual completeness increases each cycle. Students stated that learning using the Gallery Walk learning model was very interesting and helped them understand the subject matter.

Keywords: Gallery Walk, Explanation Text, Learning Outcomes

Introduction

Many students were observed to feel that learning English was more difficult than other subjects. English is a must to be mastered by everyone around the world. Mishra (2008) stated that the importance of English as a global language has increased tremendously, as it has become the most important telecommunication medium. According to the EPI (English Proficiency Index) (2022), Indonesians' English proficiency is ranked 81st out of 111 countries in Asia with a low level of

proficiency. This means that Indonesians' English skills are low, so Indonesians' English skills must be improved. In addition, all over the world, people should learn English because it is the main transactional language used in various fields of scientific, cultural, economic and business activities. For Indonesians, this pressure is unavoidable, because we must increase global competitiveness, so that we can easily adapt to the global era. These facts show that English is the most important language in the world.

In this world, the benchmark for the progress of a country is also seen from the level of education in the entire process of school education. Classroom learning activities are important. This means that the success in learning experienced by students at school is the answer to whether educational goals can be implemented. The ability must be possessed by the teacher in order to fulfill the achievement of educational goals, the teacher must be skilled in using learning approaches or models. Appropriate learning approaches and models are chosen so that they are easy to understand.

Implementation of learning in the 2013 curriculum also brings a new paradigm that learning English is text-based learning. Text-based English learning has implications for the implementation of learning that cannot be separated from the text, both in spoken and written form. Therefore, text-based learning of English is integrated into the four language skills, namely listening, speaking, reading and writing.

Being able to write or produce text is one of the skills that must be mastered by students. There are various types of texts taught in the English learning process at Madrasah Aliyah in the 2013 curriculum, the end result of which requires students to be competent in writing these types of texts. One of the writing competencies that must be mastered by students in learning Indonesian in the 2013 curriculum at the Madrasah Aliyah level is writing explanatory text contained in basic competency 4.4 producing explanatory texts orally or in writing taking into account structure and language. Anderson (2003: 80) reveals that an explanatory text is a text that contains a detailed explanation of a natural or social phenomenon that occurs based on causality and

chronological patterns. When writing explanatory texts, students are required to determine the topic of a phenomenon and then develop it with explanations according to in-depth facts with causal or chronological relationships so that it becomes a structured explanatory text.

One of the most student-centered activities that provides a good situation in the teaching and learning process is to use a gallery walk. As mentioned by Harris (2013, p. 90), students who follow the gallery walk strategy benefit from physical movement combined with sharing information with partners. In this strategy, students are divided into small groups. Then students go around the class and are asked to write down their thoughts on what they see.

Gallery walk is a form of active learning. Allen and Tanner (2005) define a gallery walk as: "looking for new information, organizing it in a meaningful way, and having the opportunity to explain it to others". This form of teaching and learning emphasizes interaction between peers and shifts the focus from teaching to learning by directing the focus on students to carry out lessons, rather than depending on the teacher to carry out lessons. In other words a teacher can ask students to present an oral report at the end of the gallery walk which can be extended as a written assignment (Chee et.al 2015). Studies have proven that an active learning approach to learning can improve student attitudes (Preszler et al. 2007; Prince 2004) as well as learning outcomes (Freeman and Herron 2007; Knight and Wood 2005). This technique seems to be suitable to provide fresh atmosphere in teaching English (Widaryanti, 2019)

Gallery walk provides an opportunity to encourage discussion between students when they move from one activity to another to complete assignments in each learning activity. Gallery walk is a learner-centred learning technique that promotes active participation in synthesizing crucial science concepts, writing and public speaking (Francek 2006). Teachers can use this strategy for students to share their work with classmates or to check learning materials that have been prepared by the teacher beforehand. This strategy can be very attractive to kinesthetic learners, because they

are required to be physically active in class. Auditory learners can also be stimulated because this strategy relies heavily on verbal relationships between students.

The problem that often occurs in learning is that the teacher is too monotonous in explaining the material, so that learning activities become ineffective. In other words, learning becomes undirected so that the goals of education itself are not achieved. Giving assignments is also rarely done by the teacher so that the ability of students is decreasing. The need for renewal in the learning system is homework for teachers, to build student learning enthusiasm so that learning is not boring. Bransford et al. (2000) noted that such teaching and learning methods encourage students to learn superficially without being actively involved. Student motivation, self-confidence and enthusiasm will not be stimulated (Weimer 2002). This condition results in students being involved in memorization to complete their subject matter but fail to learn meaningfully for problem solving, critical thinking and communicating effectively.

Based on the observations of researchers during August 2022 at MAN 3 Bone it is true that the learning process still uses conventional methods so that students' ability to master English material is still low. Teachers tend to stick to textbooks, LKS and other guidelines in teaching. The learning activity of writing explanatory texts in class has not fully involved students to be active in learning activities. This is caused by the learning model applied by the teacher who does not foster the enthusiasm and interest of students in writing explanatory texts. Likewise the use of media that is not maximized by teachers because teachers also still find it difficult to find suitable media for learning to write explanatory texts. The ability of teachers to manage distraction while utilizing digital tools for learning and professional purposes is a digital literacy skill that should not be ignored (Zaidah & Muliati, 2021)

Therefore, solutions are needed to overcome some of the problems in learning to write explanatory texts, especially with regard to how to increase motivation and improve students' skills in writing explanatory texts. As an alternative solution to this

problem, teachers can try to apply a model and learning media that involve students in it so that learning becomes more fun and meaningful. Based on the description above, the researcher conducted this classroom action research.

Methodology

Classroom action research was conducted at MAN 3 Bone which is located in Patangkai Village, Lappariaja District, Bone Regency, Indonesia. Burns (2010) states that action research is related to the idea of reflective practice and teachers as researchers. This involves taking a self-reflective, critical, and systematic approach to exploring our own teaching context. It also allows teachers to investigate their classrooms such as their teaching methods, student learning, assessments used, etc. Which is intended to improve their teaching and learning process.

This research was conducted in two cycles. The two cycles are a series of activities that are interrelated, meaning that the implementation of cycle II is a continuation and improvement based on reflections from cycle I. Cycle I was held 2 meetings plus one meeting for the final test cycle I and cycle II was held 2 meetings plus one meeting for the final test of cycle II. Each cycle consists of several stages, namely planning, action, observation, evaluation and reflection.

This study aimed to find out the application of the Gallery Walk learning model in improving English learning outcomes in the subject of explanation texts. The location of this research was determined by considering: (1) the school has used the 2013 curriculum; (2) there are problems in learning English, especially writing skills; (3) there is cooperation between teachers and researchers; (4) the affordability of schools with researchers; and (5) this school has never been conducted as an object of similar research, so that the possibility of repeat research is avoided. This research was conducted for six months from July to December 2022.

The observation technique used is passive observation. Suwandi (2012: 61) explains that passive observation is

observation made of teachers when carrying out teaching and learning activities in class and student performance during the learning process. Observations were made with the aim of obtaining data about the implementation of the learning process of writing explanatory texts both before and after the implementation of the cooperative gallery walk model. When making observations, researchers collaborate with teachers. The teacher carries out the learning process according to what is planned together. The researcher took the rear seat position with the aim of being able to observe all the events of the learning process freely. Observations of teachers are focused on the teacher's ability to manage the class, stimulate the activeness of students in ongoing learning. Observations of students focused on the activeness of students in participating in learning and student motivation towards ongoing learning.

The object of this research is the learning process, especially learning English to write explanatory texts through the application of the gallery walk cooperative learning model. The subjects of the study were teachers and students of class XI IPA 6 MAN 3 Bone. There were 31 students who worked on the task of writing explanatory texts. These students are aged 17 to 19 years, belonging to generation Z or Gen Z. Students are divided into six groups and assigned to present topics related to natural phenomena and social culture within 1 week. Based on the syllabus requirements, each group was asked to explain about earthquakes, recycling, acid rain, tsunamis, photosynthesis and catalysts respectively. Each group is also required to include the causes and prevention of the natural phenomena assigned to them. During the gallery walk, students are given instructions on how they should move from group to group. The time allotted for them to stay in each group is 5 minutes. Each group displays information about natural phenomena that they should display on the wall. One member, the presenter, remains in the group while the other three move from group to group. The presenter is responsible for presenting the lesson to the other five groups. Students are free to discuss natural phenomena in each group. In order to reinforce the lesson on the students, they moved through

the four stations twice. Different students are asked to show lessons in the next cycle. The purpose of repeating the cycle is also to involve students more in playing an active role. In addition, repeating the cycle will provide an opportunity for presenters in the first cycle to visit other groups.

After carrying out the learning process, the last activity carried out to be able to find out the students' writing explanatory text skills is the writing assignment given by the teacher. This writing assignment technique was carried out to obtain data in the form of the results of the students' explanatory text writing skills after the action was taken in the form of applying the gallery walk cooperative learning model.

Finding and Discussion

a. Planning

Learning planning for applying the Gallery Walk method in improving English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone, Bone Regency, is carried out for two meetings with reference to planning. The plan was prepared and developed by the researcher together with the teacher, namely in the form of: (1) reviewing the curriculum, (2) making a Learning Implementation Plan, (3) choosing learning media, (4) compiling Student Worksheets (LKS), and (5) compiling test questions end of cycle I.

The goal to be achieved in this learning action is that after the learning process is complete, students are expected to be able to understand personal letters. In achieving learning objectives, learning planning is divided into three stages of activity, namely: (1) initial stage, (2) core stage, and (3) final stage. Although this plan is divided into three stages of activity, each activity does not stand alone but is interrelated between one activity and another.

b. Action

Cycle I was held in two meetings with Text Explanation material. Based on the lesson plans that have been prepared, the learning in this study went through three stages of activity, namely: (1) initial stage, (2) core stage, and (3) final stage.

As for the teacher's initial activities, namely: first of all the teacher greets and opens the lesson. After that, the teacher does apperception to dig back students' knowledge about the material that has been studied. This activity lasts for 5 minutes.

The main activity is carried out for 25 minutes. The teacher's activity begins by displaying methods and teaching aids (learning media). To arouse student activity, the teacher asks questions about the media displayed and all students are expected to prepare answers. Under these circumstances, all students seemed to actively observe the media displayed.

The next activity is for the teacher to create creative conditions by organizing the class and displaying examples of Explanation Text. Furthermore, the teacher forms groups as an interactive tool, including group learning methods. The background of the class atmosphere is pleasant for students. Based on this activity, the teacher revived the spirit of active student learning in groups. The teacher asks each group to explain again about the structure of the Text Explanation.

In order for student learning outcomes to be achieved effectively, the teacher creates a pleasant learning atmosphere for students. In this case, the learning atmosphere is filled with the freedom to think critically and relaxed, which invites students to observe an object according to their wishes.

At the time of observation, the teacher assigned students to observe several examples of Text Explanation forms, learning was more fun when students were given freedom and encouraged students to find their own way of solving a problem, to express their ideas. This activity is monitored by the teacher. Then the teacher called all students into the room and continued with the assignment. Finally, each group is represented by one person reading the results and displaying the results of their work for other groups to examine. The teacher gives praise/gifts to each group with a great group category and other praise in the form of motivation. This activity lasted for 25 minutes. At the end of the activity for 5 minutes, that is asking students to collect material and close the lesson.

c. Observation

The results of observation/observation of student activity cycle I appear in the following description. Student activities that were declared sufficient or lacking, namely (1) Activities of listening to teacher explanations, (2) Activities of observing methods and teaching aids (learning media) displayed by teachers, (3) Student activities helping teachers organize classes, (4) Student activities forming groups as an interactive tool, including group learning methods, (5) Each group's activities carry out demonstrations to make Text Explanation examples, (6) Students explain the structure of Text Explanation, (7) Student activities in groups collect internet data about Text Explanation examples , and (8) Student activities collect the results of their work.

On the other hand, student activity in the very low category, namely (1) student activity trying to find their own way of solving a problem, (2) activity of each group reading out the results.

d. Evaluation

The use of the Gallery Walk method in improving English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone Bone Regency is measured based on test results and processes. The test results are carried out at the end of each cycle I. At the end of cycle I, a learning achievement test is carried out. The test results can be observed in the attachment and are presented in table 1 below:

Table 1.

The scores of using the Gallery Walk method in improving English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone, Bone Regency

Statistics	Statistical value	
	Cycle I	Cycle II
Subject	31	31

Ideal value	100	100
Highest score	90	100
Lowest value	50	70
Average value	70.65	84.84

Based on table 1 above, it can be seen that of the 31 students, the average test result in cycle I was 70.65. The scores achieved by the students are spread out with the highest score of 90 and the lowest score of 50 of the maximum possible score, namely 100 with a range of 50-90 and the mode, namely 60 achieved by 10 students. In Cycle II, it can be seen that of the 31 students, the average test result was 84.84. The scores achieved by students are spread out with the highest score of 100 and the lowest score of 70 of the maximum possible score, which is 100 with a value range of 70-100.

If the value of student learning outcomes is grouped into ability categories, then the frequency distribution is obtained as shown in table 2 below:

Table 2.

Frequency distribution and percentage of the use of the Gallery Walk method in improving English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone, Bone Regency

Number	Interval Value	Interval Value	Frequency		Percentage (%)	
			Cycle I	Cycle II	Cycle I	Cycle II
1	0-24	Poor	0	0	0	0
2	25-34	Very Low	0	0	0	0
3	36-54	Low	3	0	9.68	0
4	55-64	Moderate	10	0	32.26	0
5	65-84	High	14	16	45.16	51.61
6	85-100	Very High	4	15	12.90	48.39

Total	31	31	100	100
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Based on table 2 above, it can be stated that the results of learning English using the Gallery Walk method for students of class XI IPA 6 MAN 3 Bone, Bone Regency in cycle I are categorized as high. However, there are still students who score in the low and medium categories. This is what must be corrected in cycle II. It can be stated that the results of learning English using the Gallery Walk method for students of class XI IPA 6 MAN 3 Bone Regency of Bone in cycle II are categorized as high. In addition, there were no students who scored in the bad, very low, and moderate categories like in cycle I. The rest, scored in the very high category which was obtained by 15 students (48.39%) and 16 students (51, 61%).

Based on table 2, it is also known that the distribution of frequencies, percentages and categories of achievement of student achievement in cycle I and cycle II are shown in table 3 below:

Table 3.
Distribution of frequencies, percentages and categories of completeness of English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone, Bone Regency

Learning Test	Interval Value	Category	Frequency	Percentage (%)
Cycle I	Score 70 and above	Completed	14	45.16
	Score below 70	Incomplete	17	54.84
Cycle II	Score 70 and above	Completed	26	84.85
	Value below 70	Incomplete	5	15.5

Table 3 above shows that the percentage of completeness of the English learning outcomes using the Gallery Walk method for class XI IPA 6 MAN 3 Bone Regency in cycle I was 45.16% or 14 students were in the complete category and 54.84% or 17 out of 31 students are in the incomplete category. This means that there are still students who still need improvement in the next cycle, especially in improving student attitudes and behavior.

Based on the learning outcomes criteria regarding class completeness, namely 72%, the data from the research results in cycle one above were considered incomplete because only 45.16% of 31 students completed the class. Table 3 above shows that the percentage of completeness of the English learning outcomes using the Gallery Walk method for students of class XI IPA 6 MAN 3 Bone Regency of Bone in cycle II was 84.85% or 26 students were in the complete category and 15.15% or 5 students are in the incomplete category.

e. Reflection

Efforts made in using the Gallery Walk method can improve English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone Regency of Bone, the teacher/researcher is inseparable from the attention of changes in student attitudes, student activity, and student responses to the learning process . This can be seen from the results of observations made during the implementation of the action.

Student activities in this first cycle, the enthusiasm and attention of students in the learning process is still lacking. This is evident from the lack of serious attention from students so that they respond to the material. The attitude of students in general is still lacking in giving positive responses or responses to the methods presented.

When the teacher monitors students in learning material, generally only a small proportion of students are really active. In addition, it was found that there were students playing and going in and out of the classroom.

Based on the results of observations it is necessary to pay attention to so that the attention and enthusiasm of students' learning increases, namely:

1. Strengthening the motivation given to students needs to be improved.
2. The structure and variety of groups need to be changed by including one or more tutors who can guide their group mates so that each student (individual) can excel.
3. The pictures and objects described must be more interesting according to the context and habits of the child.
4. Changing the seating arrangements and the distance between each group so that less positive incidents can be minimized.
5. Learning settings can be done outside the classroom.

In cycle II, most students have started to actively show a sense of responsibility in their group. This can be seen from the existence of competition and students' curiosity about the material being discussed. Students who initially only followed the example of their friends when doing assignments have started to appear curious about how to complete the assignments given.

When the teaching and learning activities took place, the activeness of students in giving responses experienced a significant increase, marked by the fact that many students were serious in paying attention to the material.

Likewise, after being given a test to test their abilities that have been discussed in cycle II, it can be said that the results obtained by students have increased when compared to the tests carried out at the end of cycle I, where the average value obtained in cycle II has increased significantly. significant.

Increasing activeness and learning outcomes through the use of the Gallery Walk method in improving English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone Regency of Bone can be achieved through the following:

- 1) Apperception and motivation to learn.
- 2) The teacher identifies student problems thoroughly and helps solve them.
- 3) The teacher must help and direct students in understanding the material.
- 4) The teacher must form heterogeneous groups.
- 5) Teachers must apply praise in the form of prizes for students who are active in learning.
- 6) Teachers must apply punishment to students who do not pay attention to lessons.
- 7) The teacher applies group assignments and creates peer tutors in learning according to the learning context.
- 8) The class structure must always be changed which can eliminate student boredom by taking students out to observe objects.

Based on the presentation of the results of data analysis, it can be described using the Gallery Walk method in improving English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone, Bone Regency. The increase in question is an increase in English learning outcomes on the subject of Text Explanation in class XI IPA 6 MAN 3 Bone Regency of Bone by using the Gallery Walk Method.

The process of teaching and learning English based on the results of observations on the initial conditions or conditions shows the existence of several problems: (1) teaching and learning activities do not provide opportunities for students to find themselves and solve problems, (2) lack of opportunities given to students to develop their knowledge, (3) the teacher in teaching does not understand the use of appropriate learning methods and in accordance with the conditions of the school and students, (4) the teacher in teaching still uses conventional methods for reasons that are quite simple and easy to do, (5) there is no use of learning media that can help students in understanding a concept.

Based on this, it is not surprising that later on, unsatisfactory learning results are obtained.

Judging from the problems that occur, the teaching and learning process activities are carried out by applying the inquiry method as one of the Gallery Walk method applications. Activities carried out in two stages or continuous cycles. There are two kinds of data taken, namely learning process data taken during teaching and learning activities, including student activity data and student learning outcomes data taken at the end of each cycle using a written test.

Based on the results of observations, it shows the achievement of indicators in several aspects by looking at the frequency of students who are active in each aspect. In the first cycle, it shows that there is still a lack of seriousness and enthusiasm of students in several indicators of student activity. This can be seen from the teaching and learning process where students are still lacking in being able to find, generate ideas, experiment and solve problems. In addition, the expected learning objectives have not been achieved and are not in accordance with the steps of the inquiry method. This is because teachers usually use the lecture method to convey material through explanations and only teachers who actively find and solve student problems themselves sometimes only write and listen to teacher explanations. In cycle II, it has shown the seriousness and enthusiasm of students in taking lessons. This can be seen from the activeness of students in discovering, generating ideas, daring to experiment and being able to solve existing problems, asking each other questions both to the teacher and to their own friends. This shows that the achievement of learning is in accordance with the steps of the Gallery Walk method.

The results of learning English before participating in learning with the gallery walk method were included in the low category with a percentage reaching 70.65% and an average score of 70. After the implementation of cycle II there was an increase to the high category with a percentage level of 84.84% and an average score 90. This is assumed to be the result

of a change in the teacher's teaching model which requires students to be active in learning using the Gallery Walk method. Based on this data it can be said that student learning outcomes through the use of the Gallery Walk method have increased from learning outcomes in cycle I to cycle II learning outcomes.

The use of the Gallery Walk method in learning is the main attraction for students in carrying out learning activities, because the use of the Gallery Walk method is a new way for them to acquire and develop their knowledge, where students are more active in learning because students are required to be able to discover, build knowledge, formulate the problem.

Conclusion

Based on the presentation of the results of data analysis and discussion, it can be concluded that the use of the gallery walk method can improve English learning outcomes on the subject of Explanation Text in class XI IPA 6 MAN 3 Bone, Bone Regency. The increase was seen in the average value in cycle I, which was 70.65, increasing in cycle II to 84.84. The category of learning outcomes in cycle I was categorized as high with a percentage of 45.16% increasing in cycle II to 83.87%. The activity of the first cycle is categorized as moderate while in the second cycle it increases to high.

Based on the conclusions put forward, the suggestions put forward by the author are expected for class teachers to be able to use the Gallery Walk learning model because it makes students more active in learning to find and build their knowledge. In addition, the gallery walk method educates students to connect the knowledge they acquire with the real world. Thus, learning and student achievement in the classroom can run well and get learning outcomes in accordance with what has been expected by the teachers.

For other researchers who wish to conduct research in teaching English, they can use the results of this study as a source for conducting other research and as an additional reference for

further relevant research, of course with different variables, places and conditions. Other researchers can also consider the weaknesses of the results of this study to conduct better research.

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IoT-based Climate Smart Agriculture Monitoring Information System

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ABSTRACT

The development of agricultural information is almost in balance with the pace of technological development which has reached the level that anyone, anytime and anywhere can obtain agricultural information in a fundamental study of the effects of climate change is one of the topics that has caught the public's attention. Apart from the problems, climate change has occurred, is happening, and will occur directly or indirectly, which will impact the activities of the agricultural sector. The making of this tool is carried out by developing and implementing the Design Science Research Methodology (DSRM) approach, models, methods, and interconnection design, namely the ability of machines, devices, sensors, and people to connect and communicate with each other through IoT or the Internet of People (IoP). The results of the implementation, the tool is able to read data from objects of observation through sensors of temperature and humidity, soil humidity, rain, and wind speed and establish communication with the ESP32 microcontroller to send and store data on the web firebase realtime data base, for further data can be viewed or monitored on the Android-based Climate Smart Agriculture-AWS mobile phone application using an internet connection.

Keyword : DSRM, IoT, ESP32, web firebase realtime data base , Climate Smart Agriculture-AWS

Introduction

In the era of disruption and strengthening of the phenomenon of information technology and the ease and efficiency offered by online media in its use, this media has become a forum for disseminating information that is very influential in society, including information in the field of agriculture, for example, the development of agricultural information is almost in balance with the rate of technological development that has reached the level that anyone, anytime and anywhere can obtain agricultural information in a fundamental study of the effects of climate change on food crop production in addressing food security in a region or country. Climate change is one of the topics that attracts public attention both at the practical level and at the political level. Regardless of the problems, climate change has happened, is happening, and will happen. In this regard, Indonesia's geographical position is very vulnerable to the impacts of global warming and climate change.

The main ideas above indicate the need to pay serious attention to agriculture through mastery of information media and technology, for example developing an IoT-based climate smart agriculture system through developing the best agricultural resources to support food security-based agricultural development policy priorities by taking into account climate change conditions (threats). in monitoring weather conditions using adaptation technology that synergizes with mitigation in the use of internet-based digital technology. One of the four design principles of Industry 4.0. namely interconnection (connection), namely the ability of machines, devices, sensors, and people to connect and communicate with each other through IoT or the internet of people (IoP) (Muhammad, 2018).

Research conducted (Surya Permana, 2019) in the development of learning media for IoT (Internet of Things) microcontroller-based systems with the "Easy" category can monitor and control learning media on microcontroller systems. This research can be further developed with various versions including the development of an android-based monitoring information system that is easy to monitor, henceforth it is a goal

solution that will be developed using the Design Science Research Methodology (DSRM) approach for any existing problems, especially in monitoring the measurement of elements climate/weather including temperature and humidity, soil humidity, rain, and wind speed which can be accessed from anywhere via the internet with the Android-based Climate Smart Agriculture-AWS mobile phone application.

On this occasion the author will use some of the requirements used to build an IoT-based climate smart agriculture information system application architecture that is used to monitor air temperature and humidity, soil humidity, rain, and wind speed which can be used to help agricultural extension workers in the field regarding weather/climate change. .

ESP32 microcontroller

The brain of a system that is packaged in the form of an Integrated Circuit (IC) chip that is designed to perform tasks in accordance with the program listing programmed to carry out monitoring functions.



Figure 1. Microcontroller ESP32

Sensor

Elements that convert physical signals into electronic signals that are used to sense objects of observation on climate/weather elements.



Figure 2. DHT 22 Temperature Humidity Sensor

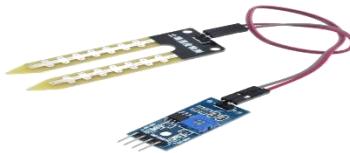


Figure 3. Soil Moisture Humidity Sensor



Figure 4. Tipping Bucket Rainfall Gauge



Figure 5. Anemometer Cup Wind Sensor Wind Speed Meter

Wifi modems

This device transforms the signal from internet services into digital services.

Mobile Phones/PCs

Is a tool that is used to observe the results of measurements on objects of climate/weather elements dynamically anywhere and anytime, both ongoing observations in real time or those made some time ago by utilizing the web firebase realtime data base which is integrated with an information application system. which has been made.

Method

In this study, the development design model used was designed using the Design Science Research Methodology (DSRM) which consists of six syntaxes including Problem Identification and Motivation, Define the Objectives for a Solution, Design and Development, Demonstration, Evaluation, and

Communication. This method involves a rigorous process for designing artifacts to solve observed problems, to make research contributions, to evaluate designs, and to communicate results to appropriate audiences (Peffers et al., 2007). However, in this study only used four syntaxes out of the six existing syntaxes, this was done bearing in mind that the goal to be achieved was only limited to the use of information system applications in monitoring measurements of climate/weather elements.

Problem Identification and Motivation

This stage begins with identifying the problems found in the field, to identify these problems is done by means of a literature study related to the concept to be developed from various related sources while a needs analysis is carried out.

Define the Objectives for a Solution

defines the solution to the problem and is the result of the previous stage by determining the objectives of the research and conducting a literature study to obtain theories and concepts from the method used, namely Climate Smart Agriculture based on the Internet of Things (IoT). Theories and concepts can be taken from books, journals, papers, websites, Focus Group Discussion (FGD) and other sources.

Design and Development

This stage is carried out by making design and development plans as a solution to the problem. In this process, the placement of interaction elements and the design of learning media interfaces are carried out based on the results of an analysis of specific criteria and requirements at the Define the Objectives for a Solution stage. Making designs in the form of wireframes, mockups, and prototypes. The development is coding or creating program code and development by utilizing the web firebase realtime database for storing data (database) for a service at Google. The following is a picture of the prototype design.

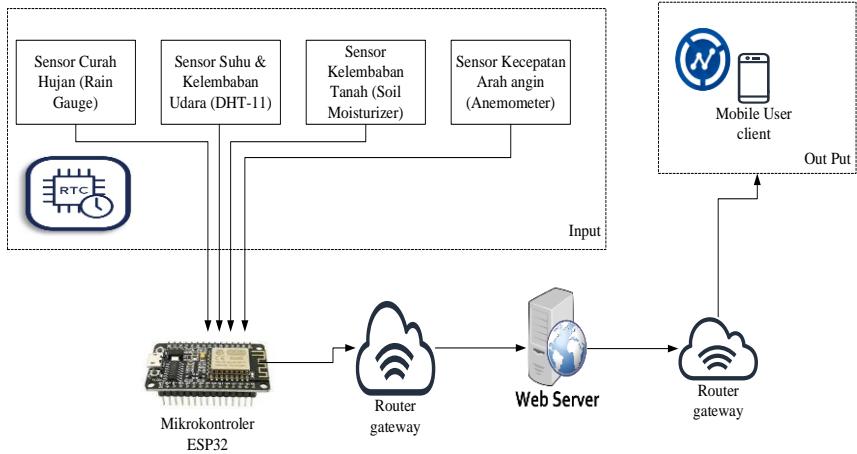


Figure 6. Prototype System Informasi Pemantauan Climate Smart Agriculture

For the next step, the development of the design mentioned above is carried out by utilizing coding to create a mockup of the program design that will run on the Android Platform. From the system that has been created, it can be run on an Android-based smart phone or on a PC on Windows OS by first installing an Android emulator.

Demonstrations

Socialization and testing of the information system application developed after implementation was carried out to analyze the model created which is a design process and simulation of media use resulting from the previous design and development stages.

Results and Discussion

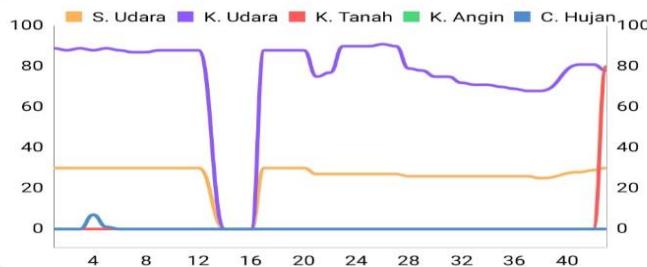
A series of research stages have been successfully carried out to obtain an IoT-based smart agriculture climate monitoring application system. The appearance of the system that was successfully carried out in this study consists of an overview in this research. This is in the form of air temperature and humidity values, soil moisture, rainfall, and wind speed henceforth. The working stages of this system start with the sensors which will start taking analog data which will then be forwarded to the Wireless Sensor Network node where at this node the data

obtained by the sensor will be included in a package where each protocol has a different package structure. After the sensor data is included in a protocol delivery package, it will then be sent to the coordinator where this coordinator will provide a microcontroller to decode the data packet so that sensor values are obtained which are sent to the node. The next step is that the data that has been obtained will be continued through internet communication channels on the cloud computing database by utilizing Google services on the Firebase web Realtime database. After the data is entered in the database, it will always be updated regularly within a certain period of time and can be accessed in real time by users via mobile devices in the form of smart phones or PCs based on Android or other operating systems (OS), of course by first integrating with an Android emulator.

The mobile user client information system application is the last element in an instrumentation system that processes data and displays data. This element displays measured values in a form that can be recognized by an observer, such as through a display device. Display of the results of observation monitoring data on weather/climate elements of temperature and humidity, soil moisture, rain, and wind speed on January 21, 2023 at 11:47 am and January 31, 2023 at 10:45 am; 10:00; and 11:15.



Grafik AWS



Pengontrololan



Figure 7. Display Data through an Android-based application that was created

Table 1

Detailed Observation Data of Climate/Weather Elements

Detailed Data on Climate/Weather Elements			
Elements of Climate / Weather	Unit of Measurement	Time	Date/Month/Year
	Observation Value		

Air temperature	25 °C	11:47/21/January/2023
Humidity	68 %	
Soil moisture	0 %	
Wind velocity	0kmh	
Rainfall	3mm	
Air temperature	28 °C	10:45/31/January/2023
Humidity	81 %	
Soil moisture	0 %	
Wind velocity	0kmh	
Rainfall	0 mm	
Air temperature	29 °C	11:00/31/January/2023
Humidity	81 %	
Soil moisture	0 %	
Wind velocity	0kmh	
Rainfall	0 mm	
Air temperature	30 °C	11:15/31/January/2023
Humidity	78 %	
Soil moisture	80%	
Wind velocity	0kmh	
Rainfall	1mm	

Conclusion

Based on the results of the research that has been done, it can be concluded that this tool has worked well, namely by carrying out sensor functions on each observed object to then send data via electronic signals to the microcontroller to be processed based on the input previously given and sent to the wifi modem and configured to be subsequently stored in the Firebase realtime database and data can be viewed at any time in real time using the Android-based climate smart agriculture information system application that was previously integrated with devices via the internet network.

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Internal Impact on The Quality of Regional Government Financial Reporting In South Sulawesi Province

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ABSTRACT

This study aims to determine the factors that influence the quality of financial reporting for the local government of South Sulawesi Province . This research was carried out within three months.

The population and sample of this research are employees who work in the Office of the Governor of South Sulawesi Province, totaling 60 employees. This study uses field research methods. The type of data we use in this research is quantitative data, while the data source is primary data. To collect field data, this study used a survey method by distributing questionnaires. The statistical method used to test the hypothesis is to use multiple linear regression with the help of SPSS software.

The results showed that: partially, the variables of the quality of human resources, the use of information technology and internal control systems have a positive and significant effect on the quality of financial reporting.

Keywords: Quality of human resources, utilization of information technology, internal control system and quality of financial reporting.

Introduction

Public demand for good governance that continues to grow encourages both central and regional governments to carry out

public accountability. The government is asked to be more responsible for bookkeeping, presentation, reporting, and disclosure of everything to fiduciary holders who have special rights and are entitled to this responsibility (Re|nyowijoyo 2010).

The increasing need to strengthen public accountability has an impact on the information provided to the public by the management of government agencies, one of which is information in financial reports. Government Regulation no. 71 of 2010 concerning Government Accounting Standards for government financial reports, the values or benefits described in the Government Accounting Conceptual Framework include: (1) relevant, (2) reliable, (3) comparable , (4) can be understood. Considering that reliability is one of the relevant information elements for stakeholder decision-making, local governments are required to improve the system of recording and reporting regional budget so that the information obtained is reliable. In general, reliability can be explained as the ability of information to provide confidence that information is true or valid. "Government Accounting Standards are accounting principles that are applied in compiling and presenting LKPD (PP Number 71 of 2010) which have the force of law in an effort to improve the quality of LKPD in Indonesia (Kawedar, 2010). Application of Government Accounting Standards by local governments will produce quality financial reports and contain useful information (Zeyn, 2011).

HR is the most important factor in creating quality financial reports as objects that apply SPIP and SAP Simanjuntak (2005). No matter how good a system is, it will be useless if it is not supported by the quality of human resources, which consists of potential education, experience, and training (Indriasih, 2014) and is measured by the knowledge, skills and behavior (Irwan, 2011) of the human resources concerned.

The findings carried out by Ire|ne and Priyo (2020) provide positive results on the quality of human resources, IT utilization, and internal control systems which have a greater impact on timeliness. In terms of reliability, only the use of information technology and internal control systems can have a positive

impact. Research findings conducted by Helda Marlia (2020) regarding human resources, the use of information technology and internal control have a positive impact on the reliability of financial reporting.

The first factor affecting the reliability of government financial reporting is the quality of human resources. There are two main elements involved in producing valuable information, namely the information generated and the resources to produce quality human resources, which play a very important role. In producing reliable information to save time in preparing financial reports. This is consistent with the findings of Anggraeni (2014) which shows that the quality of human resources has a positive effect on the reliability of regional financial reporting. Qualified human resources need to have adequate accounting skills or expertise, which can be achieved through a willingness to learn and hone skills in accounting.

The second factor affecting the reliability of government financial reporting is the use of information technology. Because the use or utilization of information technology plays a very important role in electronic transactions and other matters. Utilization of information technology can facilitate the work of government officials, especially in preparing financial reports because it can be done more easily, quickly and accurately compared to using traditional techniques in preparation of financial reports.

The existence of quality human resources along with the use of information technology can be carried out well if assisted by a third factor, namely a good internal control system (SPI). The internal control system is a complete process of ongoing actions and activities by the leadership and all employees to provide adequate assurance and regulation to achieve organizational goals through effective and efficient activities, reliability of financial reporting, protection of state assets, and compliance with laws. To convince the public of the accuracy and reliability of the financial reports prepared by the government, an optimal internal control system is needed. These internal controls are expected to prevent or detect errors in the accounting process and to protect

organizational data from threats of fraud or system violations (PP No. 60 of 2008). Wardani (2017) states that internal control has a positive effect on the reliability of regional financial reporting.

Timeliness is one aspect of ensuring that financial reports run as they should. Timeliness can be achieved if government employees can quickly prepare financial reports without losing the value of accuracy and consistency of financial reports. To support this timeliness, the role of information technology and internal control systems can help create regularity in financial reporting, financial reporting that is timely and orderly. Carry out internal control to achieve the principle of order in accordance with laws and regulations in local government financial reporting.

Literature Review Financial Reporting Quality Reliability of Financial Reporting

Government financial reporting is a structure and process covering all aspects related to how the provision, reporting, and delivery of government financial information is provided and reported to achieve reporting objectives that will help achieve economic and social goals (Suwardjono, 2012). PP No. 71 of 2010 states that "reliability of financial reporting is information in financial reports that is free from misleading notions and material errors, presents facts honestly, and can be verified. Information may be relevant, but if the nature or presentation is unreliable then the use of that information could potentially be misleading.

Timeliness of Financial Reporting

Mardiasmo in Marlinawati and Wardani (2018), "financial reports are presented in a timely manner so that they can be used as a basis for making social, economic and political decisions and to avoid delays in making decisions". Information must be presented in a timely manner so that the information does not experience loss strength in influencing decisions.

Government Regulation No. 2 of 2005 states that, "the deadline for submitting reports is no later than 6 years or months after the end of the fiscal year." Timeliness is not only needed by

public organizations, non-public organizations also need timeliness so that the information needed can be used in all matters of decision-making so that both public and non-public organizations know what actions to take. can be done (predictions).

Research Methodology

This research uses a quantitative approach. The type of data used is primary data obtained from the results of questionnaires that have been distributed and filled in by OPD respondents throughout the city of Makassar which are then returned to researchers for processing. Researchers use questionnaires as a data collection technique. The data analysis used was quantitative descriptive, namely multiple linear regression analysis with the SPSS application program. Regression correlation is used to see the influence of the independent variables on the value element of financial reporting, namely the quality of financial reporting.

Result

The results of the validity test can be seen from the adjusted total item correlation value, which is then compared with the r-table value sought at a significance of 0.01 with a 2-tailed test (Ghozali, 2016). The value of r table is calculated using df (degrees of freedom) analysis, namely the formula $df = n - 2$ where n is the number of respondents. The instrument is said to be valid if the correlation value $r_{count} | g > r_{table}$, otherwise the instrument is said to be invalid if the correlation value $r_{count} | g < r_{table}$ (Astuti et al., 2014: 32). Therefore, $df = (n - 2) = 60 - 2 = 58$ value 0.2542. The results of the validity test for each variable are shown in Table 1 below:

Table 1.
Validity Test Results

Question Items	R Count	R Table	Conclusion
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X1.1	0,780	0.2542	Valid
X1.2	0,827	0.2542	Valid
X1.3	0,765	0.2542	Valid
X1.4	0,841	0.2542	Valid
X1.5	0,828	0.2542	Valid
X2.1	0,632	0.2542	Valid
X2.2	0,786	0.2542	Valid
X2.3	0,916	0.2542	Valid
X2.4	0,548	0.2542	Valid
X3.1	0,939	0.2542	Valid
X3.2	0,875	0.2542	Valid
X3.3	0,649	0.2542	Valid
Y1	0,530	0.2542	Valid
Y2	0,490	0.2542	Valid
Y3	0,577	0.2542	Valid
Y4	0,509	0.2542	Valid
Y5	0,513	0.2542	Valid
Y6	0,452	0.2542	Valid
Y7	0,469	0.2542	Valid
Y8	0,447	0.2542	Valid
Y9	0,564	0.2542	Valid
Y10	0,564	0.2542	Valid

Source: Primary data processed in 2022

Based on the results of the validity test in Table 1, the variables shown in all items in the questionnaire are the quality of human resources (X1), utilization of information technology (X2), internal control systems (X3) and quality finance. reporting (Y) is valid if the R table value is greater than 0.2542. Thus, the results of the validity test of all the variables above indicate that the validity test is in accordance with the statement in the data analysis method. According to Ghazali (2016).

Reliability Test

The reliability test is used to determine whether a measuring instrument can be relied upon when measuring dimensions. This measurement was carried out by using the Cronbach Alpha (α) statistic to measure reliability. According to (Sunyoto, 2013: 81), a variable is said to be reliable if the Cronbach Alpha value is > 0.60 . The results of the reliability test are shown in Table 2 below:

Table 2.
Reliability Test Results

Variable	Number of Items	Cronbach <i>Alpha (a)</i>	Information
<i>Quality of Human Resources</i>	5	0,858	Realible
Utilization of Information Technology	4	0,683	Realible
Internal Control System	3	0,766	Realible
Financial Reporting Quality	10	0,632	Realible

Source: Primary data processed in 2022

As can be seen from Table 2 above, the reliability test for each variable has a Cronbach Alpha > 0.60 , so it can be concluded that the statements in the questionnaire distributed to respondents have a good level of reliability so that the questions can be used as instruments. study. Therefore, the results of the reliability test are stated to be consistent with the statement in the data analysis method, according to (Sunyoto, 2013: 81).

Classic assumption test

Normality test

The data normality test is used to determine whether the resulting errors have a normal distribution in a regression model. In this study, to test the normality of the data, the normal P-P plot of the standard regression residual plot was used, and the test results are shown in the following figure:

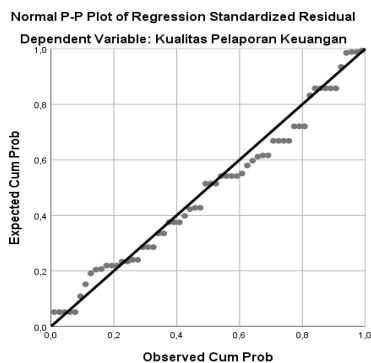


Figure 1. Normality Test Results
Source: Primary data processed in 2022

As shown in Figure 1, the points spread around the diagonal, and the direction of the spread follows the direction of the diagonal. This shows that the regression model is successful because it meets the assumption of normality.

Multicollinearity Test

The multicollinearity test is designed to see if there is a high correlation between the independent variables in the multiple linear regression model. If there is a high correlation between the independent variables, then the relationship between the independent variables and the dependent variable is disrupted. Multicollinearity test, which can be seen from the tolerance value and the VIF (Variance Inflation Factor) value. If the VIF value is not greater than 10 and the tolerance value is not less than 0.1, then the model can be said to be free from multicollinearity (Sunjoyo, et al., 2013). The results of the multicollinearity test are shown in Table 3 below:

Table 3.
Multicollinearity Test Results

Model		Coefficients ^a	
		Tolerance	Collinearity Statistics VIF
1	Quality of Human Resources	,704	1,420
	Utilization of Information Technology	,532	1,880
	Internal Control System	,634	1,578

a. Dependent Variable: Quality of Financial Reporting

It can be seen from Table 3 that the tolerance value of the variable quality of human resources, utilization of information technology and internal control systems is above 0.1, and VIF is less than 10. This means that there is no multiplicity of symptoms in the equation model regression so that the data can be used for this research.\

Multiple Linear Regression Analysis

Multiple linear regression analysis is used to determine the relationship between one variable and another. Regression is an analysis tool that is used to measure the level of influence of the independent variable on the dependent variable. Based on data processing using the SPSS program, the equations are shown in

Table 4 below:

Table 4.
Regression Equation Model

Model	Coefficients ^a					
	B	Error	Unstandardized Coefficients Std.	Standardized Coefficients Beta	T	Sig.
1 (Constant)	1,178	,237			4,981	,000
Quality of Human Resources	,172	,051		,274	3,387	,001
Utilization of Information Technology	,258	,072		,334	3,594	,001
Internal Control System	,278	,054		,436	5,117	,000

a. Dependent Variable: Quality of Financial Reporting

Based on table 4, the regression equation obtained from the calculation results is as follows:

$$Y = 1.178 + 0.172 X_1 + 0.258 X_2 + 0.278 X_3$$

The model can be interpreted as follows:

- 1) A constant of 1.178 means that if the variable Quality of Human Resources (X_1) Utilization of Information Technology (X_2) and Internal Control Systems (X_3) is 0, then the variable Quality of Financial Reporting is 1.178.
- 2) Based on Table 4, the results of the regression test show that the regression coefficient of the variable quality of human resources (X_1) is positive, $b=0.172$. This means that if the value of the HR quality variable (X_1) increases, the value of the financial reporting quality variable (Y) will also increase.
- 3) Based on Table 4, the results of the regression test show that the regression coefficient of the information technology

utilization variable (X_2) is positive, $b = 0.258$. This means that if the value of the information technology utilization variable (X_2) increases, the value of the financial reporting quality variable (Y) also increases.

- 4) Based on Table 4, the results of the regression test show that the regression coefficient $|n$ of the internal control system variable (X_3) is positive, $b = 0.278$. This means that if the value of the internal control system variable (X_3) increases, the financial reporting quality variable (Y) also increases.

Determination Coefficient Test

The coefficient of determination is used to measure the percentage of the independent variable's overall effect on the dependent variable. The results of the test for the coefficient of determination are shown in table 5 below:

Table 5.
Test Results for the Coefficient of Determination (R2)

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,862 ^a	,743	,729	,17833

a. Predictors: (Constant), Internal Control System, Quality of Human Resources, Utilization of Information Technology

b. Dependent Variable: Quality of Financial Reporting

Based on the results of the coefficient of determination (R2) in Table 5, the value of Adjusted R-Square yields a value of 0.743, which means that 74.3% of the variable quality of financial reporting (Y) is influenced by variables human influence variable quality of resources. (X_1) Utilization of information technology (X_2) and internal control system (X_3). The rest (100-74.3%) is 25.7%, influenced by other variables outside the equation.

T Test (Partial)

Partial test is used to see the effect of each independent variable on the dependent variable. The test uses the t test, namely

to see the significance value of the t-count. If the significance value of t-count $|t| > 0.05$, it can be said that the independent variable has an influence on the dependent variable. The test results are as follows.

Table 6.
Test Results t
Coefficients^a

Model	B	Error	Std. Beta		
				t	Sig.
1 (Constant)	1,178	,237		4,981	,000
Quality of Human Resources	,172	,051	,274	3,387	,001
Utilization of Information Technology	,258	,072	,334	3,594	,001
Internal Control System	,278	,054	,436	5,117	,000

a. Dependent Variable: Quality of Financial Reporting

Based on the results of the t test in table 6, the variable quality of human resources (X1) has a significant level of 0.001, less than 0.05, meaning that the hypothesis is accepted. The information technology utilization variable (X2) and internal control system (X3) have the same significant value as the X1 variable so that it can be said that the three variables have a significant effect on the financial reporting quality variable (Y).

Simultaneous F test

Simultaneous test (F test) is used to determine whether all independent variables have the same effect on the dependent variables. This test is carried out using the F distribution test, namely by comparing the critical value of F(table) with the calculated F value $|F|$ contained in the ANOVA table. The F test is used to test whether there is an effect of variable quality (X1), the

use of information technology (X2), and the internal control system (X3) on the quality of financial reporting (Y).

Table 7.
F Test Results
ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5,137	3	1,712	53,841	,000 ^b
	Residual	1,781	56	,032		
	Total	6,917	59			

a. Dependent Variable: Quality of Financial Reporting

b. Predictors: (Constant), Internal Control Systems, Quality of Human Resources, Utilization of Information Technology.

Table 7 shows a significance level of 0.000 which is less than 0.05, so it can be said that the variables Quality of Human Resources (X1) Utilization of Information Technology (X2) and Internal Control Systems (X3) simultaneously (along with -sama) has an effect on the variable Financial Reporting Quality (Y), with a probability of 0.000. Because the probability is much smaller than the significance value of 0.05, the regression model can be used to predict the level of quality of financial reporting.

Discussion

The Influence of the Quality of Human Resources on the Quality of Financial Reporting

The results of the hypothesis test show that the variable quality of human resources (X1) has a significant positive effect on the variable quality of financial output (Y). The better the quality of human resources owned by an organization, the better the quality of the financial reports prepared, conversely the worse the quality of the human resources of the organization, the worse the quality of the financial reports prepared.

The results of this study support the first hypothesis that the quality of human resources has a positive and significant effect on

the quality of financial reporting. This can be shown with a significance value of 0.001 for values less than 0.05. The quality of human resources has a positive but not significant effect on the quality of financial reporting. This is because there are other factors that can encourage people to improve the quality of their financial reporting. The regression equation is $Y=1.178 + 0.172 X_1$. This equation means that if the value of the human resource quality variable is considered constant, then the financial reporting quality variable will remain at 1.178. However, if the value of the HR quality variable increases by 1 point, then the value of the quality of financial reporting increases by 0.172 points.

This shows that the quality of human resources has a good influence on the quality of financial reporting. The results of this study support previous findings, including those conducted by S. Sitohang (2010) which showed that the quality of human resources has a positive and significant effect on the quality of financial reporting. So the better the quality of human resources, the better or comparable to the quality of financial reporting.

The Influence of Utilization of Information Technology on the Quality of Financial Reporting

The results of hypothesis testing show that the information technology utilization variable (X_2) has a positive and significant effect on the financial reporting quality variable (Y). The better the use of information technology by an institution, the better the quality of the financial reports prepared, and conversely the worse the use of information technology applied by an institution, the worse the quality of the financial reports prepared by an institution. The results of this study support the first hypothesis that the use of information technology has a positive and significant effect on the quality of financial reporting.

The results of this study support the second hypothesis that the use of information technology has a positive and significant effect on the quality of financial reporting. This can be shown with a significance value of 0.001 for a value less than 0.05. The use of information technology has a significant but not large effect on the

quality of financial reporting. This is because there are other factors that can encourage people to improve the quality of their financial reporting. The regression equation is $Y=1.178 + 0.258 X_2$. This equation means that if the value of the information technology utilization variable is considered constant, then the financial reporting quality variable will remain at 1.178. However, if the value of the information technology utilization variable increases by 1 point, then the value of financial reporting quality will increase by 0.258 points.

This shows that the use of information technology has a positive impact on the quality of financial reporting. The results of this study support the findings of previous studies, including Haza (2015) which shows that the use of information technology has a positive and significant effect on the quality of financial reporting. Therefore, the better the use of organizational information technology, the better or comparable to the quality of financial reporting.

The Influence of the Internal Control System on the Quality of Financial Reporting

The results of hypothesis testing show that the internal control system variable (X_3) has a positive and significant effect on the financial reporting quality variable (Y). The more internal control systems an institution has, the better the quality of the financial reports it will produce, and vice versa, the worse the internal control system of an institution will have a negative impact on the quality of the financial reports it will produce. generated. The results of this study support the first hypothesis that the internal control system has a positive and significant effect on the quality of financial reporting.

The results of this study support the third hypothesis that the internal control system has a positive and significant effect on the quality of financial reporting. This can be shown with a significance value of 0.000 which is less than 0.05. The internal control system has a significant but not significant effect on the quality of financial reporting. This is because there are other factors that can encourage people to improve the quality of their

financial reporting. The regression equation is $Y=1.178 + 0.278 X_3$. This equation means that if the value of the internal control system variable is considered constant or constant, then the financial reporting quality variable will remain at 1.178. However, if the value of the internal control system variable increases by 1 point, the value of financial reporting quality will increase by 0.278 points.

It can be seen that the internal control system has a good impact on the quality of financial reporting. The findings of this study support the findings of previous studies, including those conducted by Rokhlinasari & Hidayat (2016), which show that the internal control system has a positive and significant effect on the quality of financial reporting. Therefore, the better the internal control system in an organization, the better or comparable to the quality of financial reporting.

Conclusion

Based on the data collected and testing the hypothesis of multiple linear regression analysis, the conclusions of this study are as follows:

The variable quality of human resources (X_1) has a significant positive effect on the quality of financial reporting. The better the quality of human resources owned by an institution, the better the quality of its financial reporting.

Information technology utilization variable (X_2) has a significant positive effect on the quality of financial reporting. The better the use of organizational information technology, the better the quality of financial reporting.

The internal control system variable (X_3) has a positive and significant effect on the quality of financial reporting. The better the institution's internal control system, the better the quality of its financial reporting.

Future Research

If interested in conducting research in the same field, it is recommended for further research using more other independent variables that can affect the quality of financial reporting.

Future research is expected to use additional test equipment for processing other data.

Future research is expected to be able to take a wider sample of respondents and add limited research subjects to employees who work in the South Sulawesi Governor's Office.

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Development of Punagaan Coastal Land as a Marine Tourism Area in the Selayar Islands Regency

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ABSTRACT

Research Team, 2022 "Development of the Punagaan Coastal Land as a Marine Tourism Area in Selayar Islands Regency". This study aims to examine the potential and attractiveness of the Punagaan coastal tourism area, provide directions for the development of Punagaan coastal land so that they become guidelines and basic directions in developing the Punagaan area as a coastal tourism area in Selayar Islands Regency, as well as provide regional directions that create economic growth through the tourism sector. marine tourism special economy. This study uses a qualitative descriptive analysis method with an evaluative, extrapolative approach, and functional relationships between activities. This study also uses data collection methods in the form of field observations, interviews, and documentation studies. The data obtained were then analyzed descriptively and qualitatively so that a concept was born and served as the basis for further analysis. The results of this study indicate that the Punagaan coast has the potential to be developed and used as a tourist tourism area in the Selayar Islands Regency, South Sulawesi Province. This is supported by the potential and attractiveness of the Punagaan coast which is quite diverse and the involvement of the community as subjects or actors in conservation programs so that the impact on the community's economy is increasing.

Keywords: Marine Tourism, Coastal Land, Punagaan Beach.

Introduction

In carrying out regional development plans, of course, stakeholders or activity actors must be involved. The role of these stakeholders is needed to optimize the implementation of development, one of which is in the tourism sector. One of the

stakeholders who play a role in tourism development is the government, but according to Widodo (2015), the government has certain limitations, namely: financial limitations, technical limitations, and limited program reach so the role of stakeholders outside the government is needed so that the goals of tourism development can be implemented. The implementation of tourism development should be able to bring government elements closer to community elements or can be called a bottom-up approach.

Selayar Islands Regency, which geographically consists of 123 clusters of islands, is very supportive of tourism activities, especially marine tourism. The regency, which 95 percent of the area is water, has the potential for exotic natural panoramas, underwater beauty which is very pleasing to the eye with coral reefs and many types of fauna, as well as white sand and friendly waves, which are things that can be enjoyed when visiting and traveling in the regency. Selayar Islands.

Based on the Decree of the Regent of Selayar Islands Regency No 453 of 2017, there are 154 natural tourism destinations with a variety of attractions that both local and foreign tourists can enjoy when visiting and choosing this district as a place to tour. Besides that, there are 20 cultural tourism destinations with interesting histories and distinctive local wisdom of the Selayar people which can be another choice for tourists. The wide choice of tourist destinations has become a potential attraction which, if it becomes a special economic zone, will make Selayar Islands Regency a major contributor to foreign exchange and can increase local revenue (PAD) for the region itself and the province of South Sulawesi.

Selayar Islands Regency has a sea area of 9,144.66 km² with a coastline length of 670 km² which is also a strength for tourism development, especially beach tourism in this area. So many existing beaches need to be developed and can be proposed to be part of the Special Economic Zone, one of which is Punagaan Beach. Punagaan Beach is one of the beautiful beaches in the east of Selayar Islands Regency, precisely in Pattilereng Village, Bontosikuyu District. This beach is 25 km

away and can be reached by land transportation for ± 45 minutes from the Capital City. Apart from Punagaan Beach in Pattilereng Village, there are various types of tourist attractions such as Ngapaloka Beach and Pangi-pangiang Beach.

The coast of Punagaan beach is a beach with various potentials ranging from the beauty of the sea, various underwater ecosystems such as coral reefs, groupers, lobsters, and various other marine biota, not only the natural scenery with beautiful mountain reliefs and supported by the housing for tourists who exotic. Punagaan Beach with a beach length of only about 457 m², however, Punagaan Beach is in great demand by the community in tourism activities such as snorkeling, swimming, and other tourism activities, so it is not wrong for the South Sulawesi Provincial Government to designate Punagaan Beach as one of the tourism development nodes in Selayar Islands Regency. with a mainstay on marine tourism.

Punagaan Beach with a development area of up to 7.5 ha is managed by a Village-Owned Enterprise (BUMDES). In the 2012-2032 Selayar Regency Spatial Planning, the Punagaan beach area is a coastal border area and does not interfere with existing protected areas. These things can be taken into consideration, the Punagaan coast is proposed to be a marine tourism area because it meets the existing criteria. The policy for declaring the potential for developing marine tourism at Punagaan Beach is also considered to have its value to be submitted as one of the options in proposing the area. tourism but this is certainly inseparable from the development that will be carried out and the potential of existing natural resources. This research refers to research conducted by Valenshia Destaningtyas (2010) examining special economic zones in Indonesia as an effort to increase investment and international competitiveness. This research is to understand the matter of policy. In this study, the method used is the normative juridical method, namely the method that refers to the legal norms contained in the laws and regulations relating to the topic of the issues discussed.

Silvia (2015) also examines the analysis of the influence of infrastructure development in the Sei Mangke economic area on economic growth in Simalungun Regency. The purpose of this study is to determine the development of infrastructure availability after the establishment of Sei Mangkei as one of the Economic Zones, as well as to estimate the effect of infrastructure variables on economic growth in Simalungun Regency and to determine the socioeconomic conditions of the Sei Mangkei people in Simalungun Regency. This analysis uses time series data. The results show that the infrastructure development for the Sei Mangkei area in Simalungun Regency continues to increase except for the length of the road which has not experienced development. Based on the model in the analysis, positive road infrastructure is not significant, electricity is positively significant, and clean water is negatively significant to economic growth in Simalungun Regency and has a positive effect on the people of Simalungun Regency, especially in terms of the socio-economic community. Then Maftuhah (2017) also examines the impact of the development of economic zones on the growth of micro, small, and medium enterprises (MSMEs) in Tanjung Lesung, Pandeglang Regency, Banten Province. The purpose of this study was to determine the impact of regional development on the growth of MSMEs in Tanjung Lesung. The results of this study indicate that the development of the area has a positive impact on the growth of MSMEs in Tanjung Lesung because MSMEs experience an increase in sales turnover and customer growth due to an increase in the number of tourists to Tanjung Lesung.

Several studies have been carried out, it provides an overview and can be used as a reference in studying and researching the Development Potential of the Punagaan coastal tourism area in Selayar Islands Regency to become a tourist destination.

Research methods

In this study, the method used is a qualitative descriptive

analysis method with an evaluative, extrapolative approach, and functional relationships between activities. This study also uses data collection methods in the form of field observations, interviews, and documentation studies. The data obtained were then analyzed descriptively and qualitatively so that a concept was born and served as the basis for further analysis.

In this study, the population consisted of 2 types, namely the regional population, namely the entire Punagaan Beach area, and the human population, which consisted of tourists, local people around the Punagaan Beach area, and managers of the Punagaan Beach area. The sample in this study is the community in the area or around the location that has activities related to the Punagaan Beach area.

The variables and indicators used in the Study Activity on the Potential for Marine Tourism Development on Punagaan Island, Selayar Islands Regency, are one of the tourist destinations in South Sulawesi as follows:

Table 1.
Variables and Indicators of Tourism Area Development Study Activities

N o.	Variab le	Indic ator
1	Natural Conditions	<ul style="list-style-type: none"> • Weather conditions • Natural forms • Diversity of flora and fauna • The uniqueness of tourist objects
2.	Community Socio-Cultural Attractions	<ul style="list-style-type: none"> • Local traditions • Types of traditional arts • Local wisdom • Local souvenirs • Typical food

3.	Accessibility	<ul style="list-style-type: none"> • Access to tourist sites • Cost to travel sites
4.	Facilities and infrastructure	<ul style="list-style-type: none"> • Accommodation • Tourist facilities • Tourist infrastructure
5.	Traveler	<ul style="list-style-type: none"> • Tourist identity • Purpose of travel • Length of stay at tourist sites • Activities while at tourist sites
6.	Local Community	<ul style="list-style-type: none"> • Community identity • Community response to tourism • Forms of participation in tourism events • A form of environmental appreciation • Level of tourism understanding

Source: Team Analysis Results for 2022

Result and Discussion

This section contains data, data analysis, and interpretation of the results. When viewed from the proportion of writing, this section should take up the highest proportion, it can reach 50% or more.

Result

1. Analysis of Tourism Object Interconnection

Selayar Archipelago Regency, which has tourism potential and attractions, can be accessed through two transportation systems, namely land transportation and sea transportation. Even though it is connected by two different transportation network systems, not all tourist objects in Selayar Islands Regency have access to the road network. And several tourist objects are connected by a road network with asphalt

surface conditions, concrete surfaces, and road surfaces with pavement conditions.

Furthermore, in terms of coverage by using land transportation modes, two-wheeled vehicles and four-wheeled vehicles can be used. As is well known for access roads leading to the location points of Tourist Destination Objects, the access roads are not fully reachable. This is a challenge for the Regional Government of the Selayar Islands Regency to build and improve the function of roads as the lifeblood of the economy in this region. Road conditions are generally moderately damaged and heavily damaged so the development of land transportation access is a top priority program in economic development.

Thus it can be concluded that connectivity between tourist objects in the Selayar Islands Regency has a weak relationship, so it does not have a major influence on the development of the tourism sector and economic growth in the Selayar Islands Regency.

Availability of accessibility in reaching tourist objects, especially Punagaan Beach, can be reached by land as far as 25 km² from the Regency Capital. This makes it easier for tourists because the roads are in good condition and are paved, However, some roads are still in a state of potholes, so the local government needs attention.

2. Analysis of Topography and Slope of the Area.

In general, the topography of the planning area is an undulating area. Topographical conditions can indicate slope stability, determine the direction of water discharge, and indicate areas prone to landslides. The Punagaan beach tourism area is located at an altitude of between 270 meters above sea level with slopes ranging between 0-2% and 2-5%

% with the condition of the slope that dominates the planning area is a slope of 2-5% with an area coverage of up to 7.50 Ha. So that with these topographical conditions, development in the Punagaan Beach area can be carried out

while still paying attention to environmental aspects.

3. Analysis of Tourism Attraction and Object Assessment

This data analysis uses the Guidelines for Analysis of Operational Areas for Natural Tourism Objects and Attractions (ADO-ODTWA) of the Director General of PHKA 2003, which is a method for providing an assessment of tourist objects and attractions at Punagaan Beach. More details about the results of the calculation of the attractiveness criteria for Punagaan Beach can be seen in the following table:

Table 2.

Existing Assessment of Punagaan Beach Tourist Attractions and Objects

No	Elements/sub-elements	Value	%
1	Natural beauty Variations in views of island objects or rocks in the sea, The beauty of the beach, The harmony of the view of the beach with its surroundings, There is uniqueness, The view of the environment in the object	19.7	18.58
2	Safety/Security No dangerous back currents, and no base steepness. Free from harmful animals, no disturbing beliefs, no human interference	27.6	25.84
3	Sand color Red sand, white sand, black/brown sand, loamy sand, not a bit of sand	15	10.30
4	Activity Variations Sunbathing, surfing, swimming, enjoying the scenery, sports, canoeing, fishing	23.5	22

5	Cleanliness There is no port influence, no settlement influence, no river influence, no fish market/factory influence, no other sources of pollution, no season influence, no influence of traders/visitors 9	12	14.04
6	Comfort No trash, no noise-free doodles, not much animal disturbance, no human disturbance	9	9.36
Total Value		106.8	100
Total Number: Total Value x Weight		640.8	

Source: 2022 Analysis Results.

The table above shows that the largest percentage is in the element of safety and variety of activities. From the overall results of the elements of attractiveness assessed, after adding them up, a value of 106.8 is obtained. After that, this value is multiplied by the weight of the value for the areal attractiveness criteria, namely 6, the value for the attractiveness criteria for the Punagaan beach area becomes $106.8 \times 6 = 640.8$. So the Punagaan beach area has an element of attraction with potential that is "potential enough to be developed".

4. Analysis of the Physical Carrying Capacity of the Area

Superimpose analysis or often referred to as the area's physical carrying capacity analysis (Overlay). This land capability analysis intends to examine the land capability of Punagaan Beach, this basic aspect is one of the materials needed in an area development plan, this is stated in the Regulation of the Minister of Public Works No.20/PRT/M.2007 concerning technical guidelines for physical and environmental analysis, economic and socio-cultural in the preparation of Spatial Plans.

Classification of land capability is done by overlaying

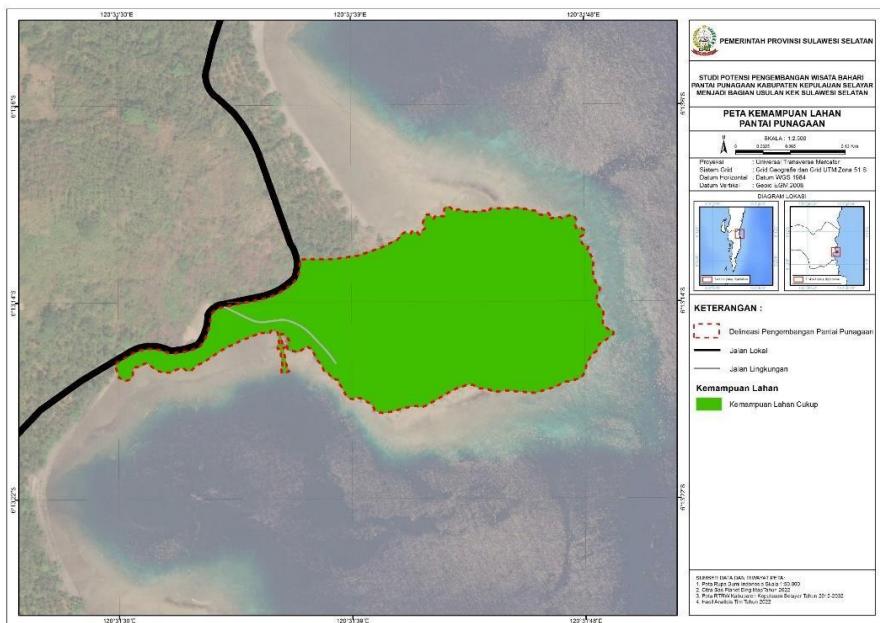
each land capability unit which has been obtained by multiplying the final value (the level of land capability in each SKL) with its weight one by one so that a map of the total final value is obtained multiplied by the cumulative weight of all SKL. The result of multiplying the final score by the weight of each unit, in this analysis is referred to as the score (Score = final_value x Weight). The weight of each land capability unit (SKL) is as follows:

Table 3.
Kriteria Kemampuan Lahan

Total Value	Land Capability Class	Information
48-70	Class E	Poor Development Capability
71-92	Class D	Low Development Capability
93-114	Class C	Moderate Development Ability
115-136	Class B	Adequate Development Ability
137-160	Class A	High Development Ability

Source: Minister of Public Works Regulation No.20/Prt/M/2007

Based on the results of the overlapping or overlay method analysis of the assessment or weighting of each existing criterion/variable, according to the flow of the analysis chart, it can be seen that the total value or score of each region, so that each area can be grouped into several classes based on the existing total score range. Based on this value, the land capability of the Punagaan Beach area is "SUFFICIENT (Enough Development Ability)" development land capability with a total value of 115-136 which covers the entire area of 7.50 Ha or 100% of the planned area. For more details, see the following Land Capability Map



Map of Punagaan Beach Land Capability

5. Analysis of Regional Utilities Development

a. Electric network

The development of the electricity system, namely the development of the electricity network in the planning area of Punagaan Beach, can be directed to follow the spatial layout pattern and the existing road network:

- Installation of a new distribution network to meet electricity needs
- Installation of street lighting/lamps, especially on the main connecting roads within the area.

b. Clean water

The development of a clean water network system must be based on the needs of the Punagaan Beach area so that its distribution can be evenly distributed in other areas. The directives for clean water development are:

- i. Fulfilling the need for clean water for activities in the planning area with a good and smooth distribution pattern.
- ii. Carrying out the construction and maintenance of clean water utilities such as connection systems and piping systems considering that maintenance requires special treatment according to the physical condition of the area.
- iii. Reducing the level of water loss by optimizing service zones, repairing consumer connections, installing water loss detection, maintenance of transmission and distribution pipelines.

c. Telecommunications Network

Network development in the planning area needs to be given special attention with the following directions:

- i. Provision of wired telephone network as needed
- ii. Tower construction must be arranged and integrated with the environment around the location to be built, to improve the quality of physical development and urban environmental management.
- iii. The height of the tower must be adjusted according to the telecommunications operator's plan to increase service coverage, capacity, and quality while still paying attention to harmony with the surrounding environment.
- iv. The maximum permitted height of the tower building is 74 m above the existing ground level under the tower building height recommendations.

d. Drainage System

The development of a drainage system in the planning area must synergize with the urban area drainage development master plan so that it can become a sustainable and sustainable plan. The physiological conditions of the area also greatly affect the condition of the area's drainage system.

e. Regional Wastewater Disposal

Currently, there is no sewage treatment system in the planning area, so waste disposal still uses an off-site system in each plot with an individual septic tank. The following are directions for the development of wastewater disposal systems in the planning area:

- i. To accommodate domestic wastewater and to reduce the increasing capacity of liquid waste, it is necessary to have a regional-scale Wastewater Management Installation (IPAL).
- ii. Separation of household sewage from the drainage network to facilitate the control system and not cause pollution and environmental pollution.

f. Waste Management

Regional waste management is still carried out using an individual system, there is no organized waste management system under a waste collection and transportation system. Therefore, some directives regarding waste handling and management are as follows:

- i. Provision of communal containers in the form of container locations or trash cans as Temporary Disposal Sites (TPS) in the planning area.
- ii. System settings and transportation cycles are following the potential for waste generation on a macro scale.
- iii. Separation of dry and wet waste generation.

g. Analysis of Regional Development Strategy (SWOT)

SWOT analysis is used to formulate concepts and strategies for developing tourism on the Punagaan coast, it is necessary to identify problems, opportunities, and challenges to formulate concepts and strategies for tourism development in the context of the marine tourism master plan for Punagaan Beach. future and determine development scenarios.

From the description of the SWOT regarding the marine tourism object Punagaan Beach in Pattilereng Village,

Bontosikuyu District, several strategies can be implemented to lead to progress in the tourism sector in Selayar Islands Regency, especially in Pattilereng Village, Bontosikuyu District in general. Some of these strategies are:

- a) Utilizing connectivity between several airports in South Sulawesi (Sultan Hasanuddin) by making Sultan Hasanuddin airport the main promotion node for the Punagaan Beach Tourism Object in particular and all tourist attractions in the Selayar Islands Regency in general.
- b) Utilizing the potential for beautiful and exotic natural charms, to be developed into community-based natural tourism products to meet the needs of domestic tourists who have time between business activities.
- c) Utilize the support of various government parties and related institutions to develop tourism-supporting facilities and utilities that have a low impact on the environment, and save on the use of natural resources, by using appropriate technology.
- d) Develop infrastructure standards to improve the quality of tourism facilities in Pattilereng Village
- e) Develop an investment strategy in the field of tourism, which is following ecotourism principles.
- f) Utilizing advances in communication technology as a medium for marketing marine tourism products at Punagaan Beach later.

6. Analysis of the Socio-Economic Conditions of the Surrounding Communities

Administratively, the planning location for the Punagaan Beach marine tourism object is located in Pattilereng Village, Bontosikuyu District, considering the geographical conditions, especially Pattilereng Village, which in most areas is included in the mountainous area. The economy in Pattilereng Village is supported by three things, namely the agricultural, plantation,

and livestock sectors which are the basis that is a source of economic income for the community.

The dominant agricultural commodities in Pattilereng Village, Bontosikuyu District, are corn, peanuts, green beans, cassava, bananas, and eggplants. The livestock sector consists of cows, buffaloes, free-range chickens, horses, goats, sheep, and deer. Meanwhile, income from the tourism sector is managed by the local village government, therefore, to anticipate an increase in dependency if the Pattilereng Village area has become a tourist destination, community empowerment activities are needed, including, namely:

- a) Formation and development of conservation cadres followed by the community around the Punagaan Beach tourist attraction;
- b) Communities as workers in the implementation of habitat-feeding activities;
- c) Educating village communities as interpreters;
- d) Community empowerment through economic improvement in the form of community training.

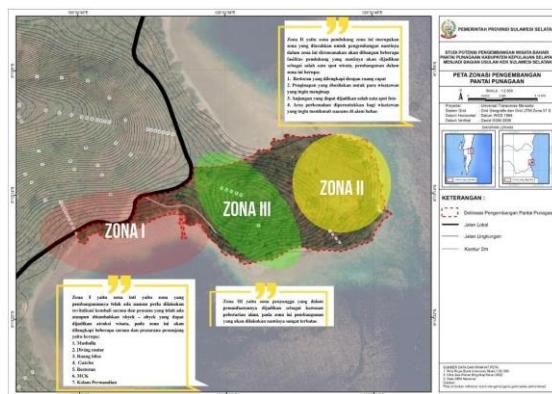
Discussion

1. The Concept of Regional Development

- a) The formulation of the concept begins with the identification of development potential and problems in the planned area. Identification of potentials and problems in the use of space does not only include attention to the present, but also potentials and problems that will arise in the future. Identification of these potentials and problems requires communication between planners and the people who will be affected by the plan.
- b) The concept of developing the area is intended to determine the direction of the development of the area being carried out, thus the concept of developing marine tourism in

Punagaan Beach is to place several facilities that are considered capable of becoming icons or special attractions in the development of the Punagaan Beach area, while several developments of supporting facilities can be carried out, respectively. – each divided into certain zones as follows:

- a) Zone I, this zone as the core zone which is allocated in the form of Pier, road, swimming pool, canteen/cafe, gazebo, mini plaza, diving center, toilet and rinse room, and prayer room;
- b) Zone II, this zone is a support zone that is allocated in the form of meeting rooms, lodging, pavilions, toilets, roads, parking lots, campsites;
- c) Zone III, this zone is a buffer zone whose utilization is used for nature conservation, in this zone development activities are very limited, development in this zone is only in the form of a connecting road between Zone I and Zone II.

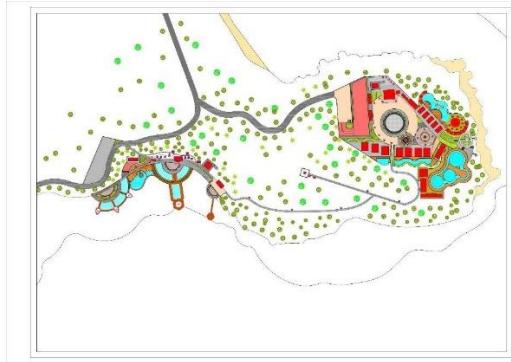


Map of Punagaan Beach Development Zoning

2. Area Element Layout Plan

Building mass planning using cluster composition. Cluster composition does not require a sequence so visitors are free to choose which building to visit. The cluster mass arrangement is grouped based on the contour of the land without being based on a hierarchy. The following is the Design

Layout Plan for Area Elements in each development zone.



Area Elements Layout Plan Design

Zona I

The determination of the first service center area or core zone of Punagaan Beach is based on sloping topography and low vegetation density, so it is good to be used as a built-up zone area. The following is a picture perspective from the development of facilities in Zone I



Zona II

Zone II is a buffer zone of Punagaan beach, considering the condition of the contoured land above 20m asl so that in its utilization it is used as a green area and nature conservation. The following is a picture perspective from the development of facilities in Zone II.



Zona III

Zone III is the second support zone and service center from Punagaan Beach. The determination of the second service center area is carried out by taking into account the physical condition of the area, especially the topography and slopes of Zone III. The following is a picture perspective from the development of facilities in Zone III.



Conclusions and suggestions

This study concludes that the potential for developing marine tourism at Punagaan Beach in Selayar Islands Regency is feasible for development with a feasibility rating or predicate, namely "Decent Enough to be Developed". Although the development of the Punagaan Beach Area is quite feasible for development, its feasibility is still limited, this is because the capacity and carrying capacity of the location (site) of Punagaan Beach to be developed is quite limited.

For the development of the Punagaan coastal land, it is also necessary to pay attention to the concept of landslide disaster management, this is due to the location of Punagaan Beach which is on a slope, and in the disaster map of the Selayar Islands Regency, the location of Punagaan Beach is included in the category of earthquake-prone disaster, and is traversed by a land fault, but its very nature low but still needs to be considered in future development.

In developing the coastal area of Punagaan it is also necessary to involve the community in various conservation programs that will be carried out later, the community needs to be the subject or actor of the conservation program. Advice that can be given in the future development of Punagaan Beach is for the local government to continue to develop the Punagaan Beach marine tourism area, with the concept of sustainable development. The government must also continue to provide insight into tourism to the community around Punagaan Beach.

This is intended so that people understand the importance of industry from the tourism sector to improve their economy. Promotional activities are needed both nationally and internationally to introduce the marine tourism area of Punagaan Beach so that it will increase tourists to this area.

For the surrounding community to contribute by participating in tourism activities and supporting all forms of government programs related to the development of the Punagaan Beach marine tourism area.

It is necessary to carry out coaching and counseling activities related to ethics and morals, to the local community, to increase the cultural resilience of the community's family to outside influences

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Local Wisdom Comparison in South Sulawesi and its Contribution to Character Education

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Abstract

Education of character is built from the values of local wisdom comparison. The value of local wisdom contains noble values of the ancestor of a nation that can be used as capital to establish a nation with good and strong character. The role of local wisdom can contribute to character education.

This study aims to determine the comparison of local wisdom in South Sulawesi, indigenous comparisons of character education, the comparisons of character education implementation, and the Embodiment of learners' behavior in South Sulawesi which nuances of local wisdom. This study is descriptive-qualitative research with brief descriptive and systematic data regarding the facts in the study site. Determination of the informants of this study was conducted by purposive sampling technique. The study consisted of elements and components in South Sulawesi. Data was obtained through observations, interviews, and documentation, then the data collected were processed using qualitative analysis. The result of this study showed that the comparison of local wisdom in South Sulawesi contributes to character education contained in the customs, religion/belief, literature, and environmental preservation. Comparisons of implementing character education in South Sulawesi sourced from the value of local wisdom, through habituation, self-development, and integration into subjects. With character education nuances of local wisdom can change the

behavior of students to become human beings who are faithful, knowledgeable, cultured, and love the environment.

Keywords: Local Wisdom, Character Education

Introduction

Education is a business pursued by humans to acquire knowledge which is then used as a basis for attitude and behavior. Therefore, education is a process of forming human character. Education is said to be a process of humanizing humans. The whole process of human activity is a process of education that will produce attitudes and behaviors that ultimately character, personality, or character. To earn degrees whole human being is impossible without going through the process of education.

Education is also a community and national business in preparing its young generation for sustainability better life for society and the nation in the future. Sustainability is marked by the inheritance of culture and character owned by the community and the nation. In the process of cultural education and national character, students actively develop their potential. They carry out the process of internalization, and appreciation of values becomes their personality in socializing

with the public. Students develop community life more prosperous and develop the life of a more prosperous nation dignified. In line with the pace of development of society, educators.

In parallel with the pace of development of society, education becomes very dynamic and adapted to the developments. The educational curriculum is not a standard and static, but very dynamic and must adapt to the situation and existing conditions. For education reform to become urgent, education remains conducive.

Regarding the influence of global hegemony, the phenomenon which happened has also made educational institutions feel lost wiggle room. Besides that, it also makes it thinner students' understanding of local history and cultural

traditions that exist in society. Therefore, how much more it's good if you try to find a variety of ways we can protect and preserve the culture that we have together.

We are optimistic that education is based on local wisdom then we are optimistic about the creation of education capable of giving meaning to Indonesian human life. This means that education will then be able to become a spirit that can color the dynamics of Indonesian people in the future. Our national development/education must be able to shape human beings with high integrity and character so that they can give birth to the nation's children who are great and dignified accordingly with the spirit of education, namely humanizing humans.

Therefore the noble values that have been passed down by the older generation to the younger generation should not be abandoned, then school has a major role in maintaining the existence of noble values. Because at the same time, the school was prosecuted to respond to the challenges of technological advances and communication increasingly sophisticated and complex world.

Furthermore, Bugis culture has certain unique characteristics known as a religious community. In Bugis culture, magical balance (in customary law science it is called religion magic) is maintained by carrying out traditional ceremonies, while the social balance of the Bugis community is carried out by cooperation. Things like that then become a thing dialectics in the daily life of the Bugis community.

Method

A literature review is one of the methods that exist in the research. The theory underlying the problem to be investigated can be found by doing a literature study related to the problem studied. The researcher can obtain information about the research in connection with the problem studied. Review of the literature on the take from the study literature review. The study of literature is the study of how data collection with the study review of literature books, records, and reports related to the problem

studied. Pohan in Prastowo (2012), activities preparation of the literature review has the objective to collect information about scientific studies, in the form of theory, method, or approach that is ever growing and has been documented in the form of books, journals, manuscripts, notes, recording history, the documents contained in the library. Literature review in this study uses the literature related to character and local wisdom, Review of this role is to reveal the values of local wisdom can be used to develop a character education

Discussion

Value Concept

According to Baier (in Mulyana, 2004:8), value is often formulated in different concepts, and these things are due to different points of view. For example, a sociologist defines value as a desire, a person's needs and pleasures come to sanctions and pressure from society. A psychologist will interpret values as a behavioral tendency that begins with symptoms psychological, such as desires, motives, attitudes, needs, and beliefs individually owned to the stage of its behavior special. Meanwhile, an anthropologist sees value as a "price" attached to the cultural patterns of society as in language, customs, beliefs, laws, and forms of human-developed social organization. The difference in their view of understanding value has been implicated formulation of the definition of value. Following are some definitions Each value has a different pressure.

Allport (Mulyana, 2004: 9) defines value as beliefs that make a person act based on his choice. As an expert on personality psychology, Allport stated

that value occurs in a psychological area called belief. Belief is the highest psychological area of the other areas such as desires, motives, attitudes, wants, and needs. Therefore, right-wrong, good-bad, beautiful-not-beautiful decisions in this area are the result of a series of psychological processes that then directs the individual to actions and actions that are according to the selected value.

Kupperman (Mulyana, 2004: 9) interprets the value as normative benchmarks that influence humans in determining choice among alternative courses of action. He emphasized norms as external influencing factors in human behavior. As a sociologist, Kupperman views norms as one of the most important parts of social life. Hence, one of the most important parts of the process of value judgment is the involvement of values norms prevailing in society.

Meanwhile, Mulyana (2004: 11) simplifies the definition of value as a reference and confidence in making choices. According to him, this definition can represent other definitions described above, although specific features such as norms, beliefs, and the way the purpose, nature, and characteristics of values are not expressed explicitly.

Local Wisdom Concept

Local wisdom can be defined as a cultural synthesis created by local actors through an iterative process, through the internalization and interpretation of religious and cultural teachings socialized in the form of norms and made guidelines for people's daily lives. Local wisdom is the unwritten rules that become the reference of society which covers all aspects of life, in the form of (1) a set of rules concerning the relationship between human beings, for example in social interaction both between individuals and groups, which are related with hierarchies in governance and custom, marriage rules, manners in everyday life; (2) regulations concerning the relationship between humans and nature, animals and plants more aimed at nature conservation efforts; (3) the rules set concerning the human relationship with the supernatural, such as God and supernatural spirits. Local wisdom can be in the form of customs, institutions, wise words, and proverbs. (Harmony, Multicultural Journal and Multireligious, Volume IX, Number 34, 2010).

Judging from its authenticity, local wisdom can be in the form of original or the form of reproduction (institutional development) namely renewing old institutions that have been functioning properly and building tradition, building a set of

institutions of tradition that once functioned well in meeting the specific socio-political needs of the certain period, which is constantly being revised and re-invented according to changing socio-political needs in society.

These changes must be made by the local people themselves, involving government and non-government elements, with a combination of top-down and bottom-up approaches.

Local wisdom is a cultural product. As a cultural product, local wisdom is born out of the necessity of values, norms, and rules that serve as models for (models for) acting. Local wisdom is one source of knowledge (culture) of society, is in tradition and history, formal and informal education, arts, religion, and other creative interpretations. Cultural discourse makes it possible continuous exchange of all kinds of ideas and interpretations which necessitates the availability of references to communication and self-identification. When the wave of modernization, and globalization hit all parts of the world, then the reference in the form of values, symbols, and thoughts undergo reassessment. There is a prenatal that remains stable, but not a few have changed, moderate shape and are shaped by social processes. (Harmony, Journal Multicultural and Multireligious, Volume IX, Number 34, 2010).

Local wisdom can be understood as a human endeavor by using the mind (cognition) to act and behave towards something, object, or event that takes place in a certain space. The definitions above are arranged sequentially in etymology, where wisdom is understood as a person's ability in using his mind in acting or behaving as a result of an assessment of something, object, or event happening. As a term, wisdom is often interpreted as wisdom.

According to Koentjaraningrat, local wisdom has a social dimension and strong culture, because it was born from treatment activities and human patterns in social life. Local wisdom can be incarnated in various forms such as ideas, notions, and regulations in the realm of culture, while in social life it can be in

the form of religious systems, social systems and organizations, systems knowledge, livelihood systems, and technology systems and equipment. (Summary of Local Wisdom Studies, 2006).

Substantially, local wisdom is the prevailing value in society. Values that are believed to be true and become a reference in people's daily behavior locally. Therefore, it is very reasonable that Greetz said that local wisdom is a very decisive entity of human dignity in the community. It means something local wisdom which contains elements of creative intelligence and the local knowledge of the elites and the community is the one decision in the development of human civilization.

Character Education Concept

According to Wayan Lasmawan, character education is a conscious and systematic effort in developing potential learners. Education is also a business for society and the nation in preparing the younger generation for the sustainability of the life of society and a better nation in the future. Sustainability is marked by cultural inheritance and character that has been owned by society and nation. Therefore, education is the process of inheriting the culture and character of the nation for the younger generation and also the process of cultural development and a national character to improve the quality of people's lives and society in the future. In the educational process of culture and national character, students are actively involved develop their potential, carry out the process of internalization, and appreciation of values becomes their personality in socializing community, developing a more community life prosperous, and developing a life of a nation that is Dignified.

Character is moral character, or personality a person who is formed from the results of the internalization of various policies (virtues) that are believed and used as a foundation to view, think, behave, and act. Virtue consists of several values, morals, and norms, such as honesty, courageous acting, trustworthiness, and respect for others. (Wayan Lasmawan, 2011: 4).

Character is behavior based on values based on religious norms, culture, law/constitution, custom customs, and aesthetics.

Character education is an endeavor planned to make students know, care for, and internalize values so that students behave as perfect humans. The character is judged according to human relations with God, oneself, others, and the environment, as well as the nation and

country. The relationship between man and God is judged according to the degree of piety and religious attitude. The human relationship with oneself is assessed based on honesty, responsibility, a healthy lifestyle, discipline, hard work, self-confidence, entrepreneurial spirit, creativity, innovation, independence, and curiosity. Human relations with others and their environment are assessed based on an attitude of awareness of rights and obligations, compliance with social rules, respect for the work of others, politeness, and democracy, and care about the social environment and the environment life. While the relationship between humans and their nation and state is assessed based on the attitude of nationalism and respect for diversity

and understanding of culture and economy. (Directorate General Basic Education, Policy Brief Magazine, 4th edition, July 2011, p.8)

A more operational understanding was put forward by Philip H. Phenix in Abdul Lathif, (2009:7) "Education is a process of engendering essential meaning", that education is a process of emergence of essential meanings. Six patterns of meaning essential can be raised through an analysis of possible ways different human understandings, including symbolic, empirical, aesthetic, ethical, and synoptic.

Today many parties demand increased intensity and quality of the implementation of character education in educational institutions formal. These demands are based on social phenomena growing, namely increasing juvenile delinquency in society, such as mass fights and various cases of decadence and other morals. Even in certain big cities, these symptoms have to a very disturbing degree. Therefore, institutions' Formal education is the official forum for fostering the younger generation expected

to increase its role in the formation of student personality through increased intensity and quality character building.

Conclusions

Education is a humanizing process to make humans have a sense of humanity, become adult human beings, and be complete human beings to be able to carry out the main tasks and functions fully and develop culture. Educating means making humans more perfect, making man improve his life from natural life and be cultured. Educating is cultivating humans. Education makes people cultured. The higher the culture, the higher is education or how to educate them.

Education develops cultural values and national character of people in South Sulawesi so that they have values and character as characters themselves, applying these values in their life, as members of society, and as citizens who are religious, nationalist, productive, and creative. Local wisdom can be used as a foundation for building national character, as long as it does not conflict with Pancasila values. It takes effort to stem the negative effects of globalization. formal education pathway, non-formal, and informal is involved in the maintenance of local wisdom to build the character of the Indonesian nation. The character that is built is not the only character that is attached to the society of South Sulawesi, but all citizens must also be built. So that in this way, the character will be awakened Indonesian nation.

Character education based on local wisdom is expected to improve at least a little by little crisis experienced by the character of this nation now. Character education based on local wisdom is expected to create rich generations and the wisdom of local culture can develop properly.

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Gender and Reality of Life; Sociological Review of Vegetable Traders on the Roadside of the Office of the Coating Power Plant (PLTU) in Tello Baru Village, Makassar City

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ABSTRACT

Limited job opportunities for workers in the regions cause people to move to cities looking for job opportunities, especially in cities that can absorb labor. Vegetable traders that are often found on the side of the road in the city of Makassar are informal sector economic activities that are increasing and are run by traders from outside the city of Makassar. Migrants who trade as husband and wife feel more motivated to work, especially informants, because there is a husband who accompanies and protects them to work for a living. Socio-cultural norms can accept the existence of women who work outside the home as a form of awareness of the gender roles of husbands and wives who jointly address the economic needs of their families. The facts analyzed are the vegetable sellers on the side of the road around the PLTU Makassar city. Analysis focus; the reason for migrating to trade vegetables to Makassar, is a form of gender awareness for vegetable traders. This type of research uses a qualitative phenomenological approach. A total of 3 (three) informants were determined by purposive sampling. Then, 2 (two) informants were added who were determined by snowball method. Data collection techniques were carried out by observation, in-depth interviews, and documentation. The research results show that 1). The income that is obtained is greater when trading vegetables to the city of Makassar; 2). Vegetable traders run by husband and wife are felt to be more effective because they reinforce each other, support each other, and together they try to meet the economic needs of the family so that equality of gender roles is realized.

Keywords: gender roles, circular migrants, boarding migrants, socio-cultural norms

INTRODUCTION

Efforts to create a harmonious relationship between men and women is the goal of achieving a condition of position and role relations that are carried out dynamically between men and women. Equal rights, obligations, positions and opportunities in family, community, nation and state life for men and women can be realized in planning, implementing, monitoring, evaluating and enjoying the efforts that are carried out together.

Normatively, the positions and roles of men and women are the same. However, in reality this is not always the case because social norms and socio-cultural values create the positions and roles of men and women in a society. The position and roles of men and women who are aware of gender mean positions and roles that are in accordance with the concept of gender which includes productive roles, reproductive roles, and social roles that can change or be changed and have dynamics that can be exchanged with each other. To realize these roles, it is necessary to support policies from the government that are just and sensitive or gender responsive which provide men and women with equal opportunities for activities, equal recognition in society and equal recognition. Policies that favor the interests of men and women will empower both of them by providing equal and fair bargaining positions in the public sector as well as in the domestic sector.

Human resources contain the meaning of being able to carry out activities that can have economic value in producing goods or services to meet the needs of society. The involvement of women in earning a living is often treated differently from male workers in obtaining wages, especially in jobs where the management is not yet modern, still using the family system. So that many of the male and female workforce run businesses in the informal sector. The activities and appearance of informal sector businesses have experienced a shift and are increasingly in demand by the public, especially since the Covid-19 pandemic until now. Informal sector business actors are increasingly creative in running their business. An increasingly advanced city will become the destination for informal sector actors. They will no longer occupy the corners of

the city, but will occupy all corners of the city where it is possible for informal sector actors to run their businesses.

The city of Makassar is increasingly advanced, including in the informal sector of the economy where many actors come from outside the city of Makassar and run their businesses in places that are not official, causing problems with the regulation by officials related to these activities such as Civil Service Police Unit (Satpol PP) officers. You can find vegetable traders around the Makassar City Steam Power Plant (PLTU) trading along the roadside in the morning. Based on this description, the problems in this research are; 1). Why do migrant vegetable traders carry out mobility to trade vegetables to the city of Makassar?; 2). Has the expansion of employment opportunities implemented gender awareness for migrant vegetable traders who trade around the PLTU Makassar city?

Methodology

This type of research uses a qualitative phenomenological approach to analyze the activities of migrant vegetable traders who trade around the PLTU in Makassar city. Researchers determine informants using purposive sampling technique as many as 3 (three) women. Together with their husbands, they sell vegetables and are the main job for them to support their family's economic needs. Informants carry out their work for at least the last 3 (three) months. Because the information was still lacking, the researchers added 2 (two) informants by means of snowball. The additional informants are also migrants who live in Makassar for about a month and then return to their place of origin. The research informants were circular migrants who were in the city of Makassar for 2 (two) days and there were also those who migrated or commuted migrants every day.

Data collection techniques were carried out by means of observation, in-depth interviews and documentation. The data collection process was carried out by recording, recording and taking photos of vegetable traders who were used as informants. Data collection was carried out unstructured but conditioned

when the researcher was at the research location. All questions asked to informants were in accordance with the interview guidelines. The researcher himself became the instrument in this study.

Results and Discussion

1. The reason for the informant's mobility to trade vegetables to the city of Makassar

As many as 3 (three) informants who came from outside the city of Makassar. Some came from Gowa Regency, some from Barru Regency, and one informant came from Pinrang Regency. Three informants explained that economic pressure was the main reason for selling vegetables to the city of Makassar. All informants were housewives. All informants explained that it was common for their husbands to be absent, so they were trading alone, but this rarely happened. All informants explained that since the time of the Covid-19 pandemic until now the economic situation of their households is uncertain and it is difficult to overcome them. The job of selling vegetables is an alternative after having previously tried several other jobs. From the experience of running various types of work, selling vegetables is an option because vegetables are a daily necessity and the demand for vegetables in the city of Makassar tends to continue to increase.

According to a vegetable trader from Gowa district, he migrates every day. Vegetables sold are the result of their own garden and some are bought and then resold after arriving in Makassar. It depends on the loading capacity of the car used to transport vegetables from the village to Makassar. The car used to transport vegetables is a car rented by someone who is a resident of his village. After about a year of trading vegetables around the Makassar PLTU, he now has regular customers who buy his vegetables, besides there are buyers who are not bound to buy and sell with him.

The relatively wide road about 10 (ten) meters allows vegetable traders to trade vegetables feeling safe and comfortable. Every day Civil Service Police Unit (SATPOL PP) officers stand

guard around the place. All traders are allowed to carry out activities along the shoulder of the road every day until 9.00 a.m. Even though the time for trading is relatively short, traders make the best use of this opportunity, especially migrant traders from outside the city of Makassar like the research informant. The position of the location is strategic because it is a crossing for road users who drive from various directions. This has caused many people to choose to shop at that place because it is easy to reach by local people and the condition of the vegetables is fresh and the prices are very competitive with vegetable traders elsewhere.

Furthermore, according to an informant who came from Gowa, buyers were increasingly crowded at the place selling vegetables since the morning before the scorching sun appeared. The location is easy to reach, the price of vegetables is cheaper than in other places, the atmosphere is safe and comfortable to be the reason for residents to shop at this place.

Observing the vegetable traders who have been active since the morning, it looks like they are happy because the SATPOL PP is involved in maintaining security. Residents of the community also feel happy when shopping because the place is relatively clean, comfortable and safe so that they are interested in shopping at that place. If many visitors shop, it is a risk for vegetable traders. Based on observations and interviews with informants, this is the reason they trade vegetables in that place even though they have to migrate across the boundaries of their area of residence.

Furthermore, according to an informant who came from Barru Regency, he migrated to Makassar city every day because of the opportunity to earn more income than trading in his area. Transportation that is smooth, easy, safe, and comfortable while on the way to the destination and feeling happy carrying out trading activities is the main consideration so that they decide to trade vegetables in the city of Makassar. Always being with your husband is also important when trading vegetables. According to the informant, the husband's role is to accompany his wife and look after matters related to socio-cultural norms. If a wife is busy outside the home, if she is not with her husband, she may get gossip in the community. Routinely every day the informant

bought vegetables in his area and then brought them to Makassar city to be sold. Household duties and earning a living are joint responsibilities of husband and wife. If one of the husbands or wives cannot accompany them to trade for any reason, the husband or wife must be able to carry out all of these tasks independently and responsibly. The pattern of division of tasks for tasks in the home and the obligation to earn a living working outside the home already reflects the equality of the roles of husband and wife.

Furthermore, based on observations and interviews with informants from Pinrang Regency, data was obtained that he went to Makassar city regularly once a week. The pattern of migration is not going home every day but as migrants who live for two or three days in the city of Makassar and then return to the village to prepare vegetables that can be sold in Makassar. This is in accordance with the theory put forward by Mantra (2000) that there is a force that drives a person to migrate which is called centrifugal force and there is a force that binds a person to stay in his area of origin and will carry out non-permanent mobility when looking for a living in other areas. According to the informant, she felt strong in trading because she was always accompanied by her husband. There are certain conditions that must be decided as soon as possible related to vegetable trading activities. So it is very easy for informants to make decisions because there is always a husband who accompanies them. The results of the study show that the involvement of husbands and wives shows cooperation, togetherness, mutual support, and encourages informants to work for a living, even though they have to migrate, but get a lot of results compared to just trading in the village. Informants who are 27 years old and have a son who is one year old are of productive age who need to be directed to be guided, given a sense of security at work so that they can freely work for a living. Money earned in Makassar will be brought back to their regions so that improved economic conditions can spread to areas that are not centralized in the city. The results of this study are in accordance with the findings of research conducted by Martini (2018) which explains that villagers have relatively small income

before migrating to city to work for a living. Furthermore, according to Todaro's theory in Martini (2018) that a person does mobility to work in urban areas because of differences in income that occur between villages and cities. People migrate to cities because they expect more income in bigger cities.

Conclusion

Based on the explanation of the results of the study, it was shown that the main reason for the three informants to migrate to trade vegetables was because the income they earned in Makassar was more than selling vegetables in their area. The other finding is the pattern of migration of informants, namely circular mobility who carry out activities every day going back and forth from their area of origin to the city of Makassar and there are also migrants who stay for two or three days in Makassar to trade then return to their area of origin for two or three days. then back again to the city of Makassar. There has been an expansion of employment opportunities and an increase in income as a result of labor migration between regions. Involving husband and wife jointly earning a living is a gender-aware role that shows cooperation, togetherness, mutual support, hand in hand to meet the economic needs of the family. The pattern of division of household tasks that is carried out with husband and wife as well as earning a living outside the home which is carried out by the informant with the husband is a form of equality between the roles of husband and wife. Socio-cultural norms provide support and protect informants who work outside the home accompanied by their husbands and informants can be more productive in their activities outside the home accompanied by their husbands. Smooth transportation between regions, easy, safe and comfortable and monitored by officers to maintain security as a form of government concern that supports citizens. A strategic, safe and comfortable trading location makes the location busy with traders and lots of buyers which brings the community's economy better and spreads to the regions because of the income of the informants earned in Makassar

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Socio-Cultural and Situational Aspect of *Uma Lengge* in Society Life Wawo District, Bima Regency

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ABSTRACT

This research aims to see the role of Uma Lengge which is a heritage building from the ancestors of society in Wawo District, Bima Regency, West Nusa Tenggara that contain socio-cultural values. This research is expected to be able in making a large contribution of the preservation local cultural products that are increasingly being squeezed by the flow of globalization. The method used ethnographic research which is a research cluster related to the social sciences. This research used library and field research techniques in the form of interview. Library research is directed to find supporting theories which is regarding the role of Uma Lengge. Field research was conducted by interviewing several informants who were considered as representative to provide an overview of all matters relating to Uma Lengge. The results showed that the Uma Lengge building has a relationship with the social values of the society life in the Wawo district such as; the value of mutual cooperation, hospitality, deliberation, helping people and the relationship of cultural values in the life of society such as; Ampa Fare (put rice in Uma Lengge), Wa'a Co'I (dowry delivery ceremony) and Maka Tua Dance (Tribe Chief Dance).

Keywords: Uma Lengge, Socio-Cultural, Social Values

Introduction

Culture has an inseparable attachment to humans because these two things complement each other. Culture is the result of activities and the creation of the human mind, such as beliefs, customs, norms that regulate the order of life in the community where culture is rooted. According to Gazalba (1968), culture is

the incarnation a way of thinking or acting from a community or ethnic group. In this case, tribe is a group of people in an area who have the same idea that comes from the same descent, own land, customary language and led by a tribal chief. Culture is not something that can be inherited biologically, but it is obtained from the process of education and formation (p. 88-89). This means that the cultural heir must grow in the community group where the culture lives. Without these two factors, it will be difficult for a person to inherit the cultural features of his tribe.

Pi-Sunyer et al in *Humanity and Culture; An Introduction to Anthropology* (1978) emphasizes to the reader to distinguish a culture (a culture) and culture in general (culture). According to him, a culture is a complex thing that encompasses a certain group of people with regard to their behaviour and environment (p. 9). Meanwhile, culture in general refers to all human habits, whether in large or small areas.

Every nation has its own culture which basically has its own characteristics that may be difficult to find in other groups or ethnicities. Literary work which is one of the cultural products. Even though every country, nation or group of nations has a different literary style, this is because literary works are a reflection of the life of a group of people as outlined in a written or oral work. As it has been said before, each region has its own cultural uniqueness.

One of the unique cultures inherited from our ancestors, Uma Lengge, is located in Bima, West Nusa Tenggara, to be precise in Wawo District. The Uma Lengge building is a traditional building which is estimated to have existed since in the 12th century AD to 1960. This building has a function as a residence for the Mbojo (Bima People) tribe society as well as a storage area for crops from agricultural land and plantations. The location of the Uma Lengge building is in two different locations, it is in Maria Village, Wawo District and Sambori Village, Lambitu District. Each of these buildings has different characteristics, especially in the shape and structure of the building. The Uma Lengge building in Sambori Village has only one building that is still intact, it has three floors and it is still being cared for by the

owner as a residence as well as a place to store food ingredients. The Uma Lengge building in Wawo sub-district has two floors and it is used as a storage area for staple foods such as rice, corn and cassava.

The Uma Lengge building in Wawo District has been established since 1912 with the main material for its manufacture using only wood as poles and reeds as the roof as well as the walls and roots or bark of trees used to tie bamboo and reeds on the part of the roof connection with the ridge. In 1957, after it was made into the Uma Lengge Complex in Wawo sub-district, the total number of buildings that were intact reached 117 buildings. Now the Uma Lengge only has 13 buildings left, while the one that dominates is the Uma Jompa building (another place to store the rice). The main reason is that the Wawo society difficult to find reeds as well as high prices and the lack of attention from the local government in maintaining the Uma Lengge building.

Charle S. Peirce's division of signs into icon, index and symbol is the simplest of his many classifications of signs, and is, moreover is important of them all, for it contains the essence of the even the most complicated of them without sharing their repetitive and unwieldy character. Historically, the more complicated classification developed as expansions of the simpler one, in recognition of distinctions that can and should be made. This research aims to determine changes in the function and role of Uma Lengge in the socio-culture of the society in Wawo district, Bima regency deeply through semiotic of Pierce's icon, index and symbol.

Literature Review

The are some previous studies about culture. Saxe in Maynard (2014) "Cultural Development of Mathematical Ideas: Papua New Guinea Studies (Learning in Doing: Social, Cognitive and Computational Perspectives)". In this essential work, Geoffrey B. Saxe brings to life the process of how humans use shifting representational forms in emerging cognitive functions across historical time. Saxe's approach, steeped in ethnography, careful methods, and deep theory, provides a lengthy history and

a careful description of how the development of mathematical ideas has happened over generations in one cultural community, the Oksapmin people of Papua New Guinea.

Richard (2012) "Humanities and Social Sciences in Critical Dialogues with Cultural Studies". This article expounds on three central aspects necessary to comprehend the critical dialogue between the humanities and social sciences and Cultural Studies in Latin America: (1) The aesthetic and the critical versus the popular and the techno cultural; (2) Transdisciplinary and the clashes between the disciplines and (3) The displacement of literature in the redefinition of the 'Latin American' in the cultural theory of the 1980s in Latin America. This critical narrative reveals that the techno cooperativity of the culture market demands that Cultural Studies leave aside knowledge of the negativity of the splitted, the errant and the lost. It corresponds to art and literature, to critical thinking, to reintroduce – in a minor key – the disorders of the unclassifiable in the world of the classified and the classifier. Only with the critical play of disobedient languages against the university techno market can the resigned homology between the politics of governability, the administration of the social, the industrialization of the cultural and the professionalization of useful knowledge be bankrupted.

Baker (2014) "Parenting and Cultural Socialization as Predictors of African American Children's Science and Social Studies Achievement". This study examined predictive relations between early parenting and African American children's science and social studies achievement in kindergarten ($n = 2,461$). Early parenting was defined as parents' participation in home learning stimulation (e.g., shared book reading) and cultural socialization (e.g., discussing cultural heritage). Hierarchical regression analyses including early parenting and demographic characteristics explained nearly a quarter (i.e., 23 %) of the variance in African American children's science and social studies achievement in kindergarten. Mother age, education, and family income positively predicted achievement while single-parent status and more siblings in the home negatively predicted

achievement. Notably, even after these demographic controls were entered into the regression equations, parenting and cultural socialization also predicted achievement. African American parents who engaged in more frequent home learning stimulation and cultural socialization had children with more advanced science and social studies scores in kindergarten.

In this research, the researcher would like to analyze the function and role of Uma Lengge in the socio-culture of the society in Wawo district, Bima regency with the study of semiotics which is contained in some symbolic meaning, it will be very detailed in terms of meaning. The researcher tries to know more deeply by studying it through the semiotic theory to find the symbolic meaning through the function and role of Uma Lengge.

The similarities between this research and the previous findings above is analyzing culture. The differences are method, approach, the theory and the object of the research.

Method

This research is a qualitative descriptive research that includes the use of the subject under study and a collection of empirical data sharing, case studies, personal experiences, introspection, life journeys, interviews, observational texts, historical, interactional and visual. In collecting data, the researcher is writing based on library research for some references about semiotic analysis based on Peirce's theory. This research is a study of oral literature as a cultural product, therefore the method that is considered appropriate to be used is the ethnographic method. With this method, the researcher goes to the field to observe and feel the sensation of Uma Lengge directly. The type of data used primary data which is data obtained directly based on observations or sourced from respondents / sources who have the competence to provide information related to research and secondary data is data obtained library research through books, journals and online articles. The data obtained both

primary and secondary were then analyzed qualitatively. The analysis stage was preceded by data reduction, namely simplifying the data obtained through literature and field data. The next step is the presentation of data, at this stage the researcher presents a compiled set of information that gives the possibility of drawing conclusions. This is done because the data obtained during the qualitative research process are usually in the form of narrative descriptive, so it requires simplification without reducing the content. The final stage in this technical analysis is to express the conclusions from the data that has been obtained. This activity is intended to find the meaning of the data collected by looking for relationships, similarities, or differences used semiotic by Charles Sanders Peirce about *icon, index, and symbol*. Conclusions can be drawn by comparing the suitability of statements from research subjects with the meanings contained in the basic concepts in research.

Result and Discussion

Peirce's theory stated the signs of language which is thought relies on the use of signs, every thought is a sign, and every act of reasoning consists of interpretation signs. Sign serves as a mediator between the external world and the internal world of objects ideas. He said, 'the sign stands for something', its object and it also called the ground of the representamen. Note here that the sign stands for the object in the world, the class of things (extension) via the ground of representamen, a sort of idea.

A. General Description of the Wawo Society

Wawo is one of the districts in Bima Regency, consisting of 9 villages, namely Ntori, Maria Utara, Maria, Pesa, Kambilo, Kombo, Raba, Tarlawi and Riamau. The western part of Wawo District is directly adjacent to the City of Bima, the eastern and southern part is bordered by Sape District. The main livelihood of the Wawo people is as farmers, the majority of the Wawo people are Muslims. The Wawo community is still very thick with the

culture passed down by their ancestors from generation to generation. Although touched by the modernization era, the community still carries out the functions and roles of Uma Lengge as they should. The Bima Regency Government also helps maintain the culture of the Uma Lengge building because it is a form of historic cultural preservation in eastern Indonesia.

B. Uma Lengge Building Condition

The condition of the Uma Lengge building In Wawo District before it was made into the Uma Lengge Complex has changed, both in terms of the shape and building materials used. Before the fire that occurred in 1957 in Wawo District, this building was still being maintained by the owner by replacing the damaged building components. The number of Uma Lengge buildings are remaining exceeds 117 buildings. The fence of the Uma Lengge Complex uses a natural fence of jatropha trees that surround the complex. This is an illustration of the condition Uma Lengge building in Wawo District before it was made into a complex.



Figure 1. The Condition of Uma Lengge in 1993

(Source: Alan Malingi, 2012)

Through the fire incident in 1957, Wawo District policy makers decided to create a special location for the Uma Lengge building. This policy causes the Wawo society who owns Uma Lengge lives in to take food and dry the rice at that location. Uma Lengge is an icon which has index referred to a building that has a special function as a storage place for crops. Uma Lengge also has a symbolic meaning, namely the unity of the Wawo community in living life. This building serves to strengthen the

family in social and culture through a series of activities in this building.

After decades of development, the Uma Lengge underwent several changes, including: from the total 117 Uma Lengge buildings, only 13 were left; from the building complex fence material turned into a permanent fence with concrete material. This change was caused by the high price of reeds which was difficult to obtain in Wawo District, so the owner of Uma Lengge had to spend more to make repairs to the roof as seen in figure 2. The Uma Lengge complex has been managed by the Bima Regency Tourism Office since 2000. The Regent of Bima Regency designated Uma Lengge as a traditional building and made this location as a cultural and tourism sub-district in 2011. despite the changes, the activities held in Uma Lengge continue every year.



Figure 2. The Condition of Uma Lengge now

(Source: Research Documentation, 2019)

C. Parts of the Uma Lengge Building

The Uma Lengge building in Wawo District has three main parts that make it up. The first part is the foundation, the second part is the first floor and the third part consists of the second floor as well as the roof and doors. Each part has a different size and material. Here is a picture of the parts of the Uma Lengge building. Each part has its own function and role, the icon of the foundation represents the load-bearing device and other parts of the building. In the Uma Lengge building, the foundation also functions as a protector from the threat of wild animals because it is located in a hilly area.

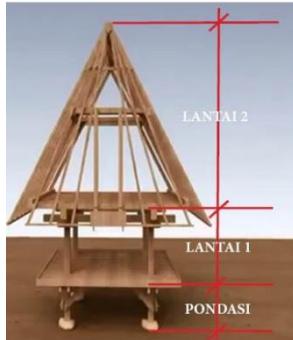


Figure 3. Parts of Uma Lengge Building

(Source: Ekskursi Bima, 2017)

The icon on the first floor of the Uma Lengge Building serves as a place for the daily activities of the Wawo people. In addition, the first floor has an index of the Wawo community in their activities so that the meaning of the symbol from here, with the first floor can be used as a place to relax, deliberation and receive guests. Based on figure 3, the second floor icon of Uma Lengge serves as a storage area. As a form of index the second floor is used for storage of food ingredients from the harvest. The symbolic meaning of the second floor building in the form of an isosceles trapezoid is a building that is good for storing heat and in accordance with the weather conditions in Wawo District which are quite cold at night.

D. Social and Cultural Values of Wawo Society

Social values in society life showed how an individual relates to other individuals as members of society. The society of Wawo district have social values, including: mutual cooperation, hospitality, deliberation, and helping each other.



Figure 4. Mutual Cooperation in Uma Lengge

(Source: Crisantia *et al*, 2019)

The Wawo society still have a culture of mutual cooperation as an icon which is always implemented by the community in various activities. This mutual cooperation has an index which is activity usually carried out if there are large activities that require many people to prepare the things such as the Ampa Fare ceremony, wedding receptions, celebrations, road construction, the construction of new houses and existing infrastructure in Wawo District. This mutual cooperation activity has existed since the formation of the Wawo society in ancient times, so it has become a culture that exists in the sub-district. The mutual cooperation activities held at the Uma Lengge Building Complex in preparation for the Ampa Fare ceremony (praying together). Before the Ampa Fare ceremony is held, the customary chairperson will give instructions to the administrators of the Uma Lengge to gather the society to prepare all needs for consumption and other equipment during the ceremony. The mutual cooperation has a symbolic meaning create good cooperation to carry out an activity so that everything can go well as seen on figure 4.



Figure 5. Ampa Fare Ceremony

(Source : Crisantia *et al*, 2019)

The Uma Lengge building has an influence to the life of the Wawo society, especially on the social values of hospitality as an icon. The location of the building which is in one complex will bring to meet each other through the activity of drying rice, taking and increasing the yields into Uma Lengge. Through these activities as the index, the Wawo society will greet each other so

that the communication is occurred. By the communication, it can strengthen the brotherhood. On the first floor Uma Lengge is made open without any walls covering and it seems like on the second floor. The purpose is to serve as a place for the Wawo society to conduct deliberations with the building owner's family and neighbors, and also it has function as a place to relax when visiting the Uma Lengge Complex. The Uma Lengge building in Wawo District now only has functions as a storage area for foodstuffs, so every food items will be stored in Uma Lengge. Every society or family that has run out of their crops, the neighbours will participate in helping by giving their crops to the families in need. This case showed that the symbolic meaning of the Uma Lengge building has an influence on the social value of helping each other in the life of the Wawo society.

A cultural heritage can be in the form of a material culture which is shaped, can be seen, held and observed. There are also not objects, cannot be seen and held but the behaviors or customs of society are understood by all circles in life generally.



Figure 6. Custom Activity (Maka Tua Dance)

(Source : Crisantia *et al*, 2019)

The Ampa Fare ceremony is one of icon cultures that still exist in Wawo District. This ceremony created index of exists because long ago in the historical story of the Wawo society there was a crying rice in the Uma Lengge building. The rice cried because he wanted to be treated as well as we love our own children. In addition, this ceremony is also held as a joint prayer of gratitude because the society has succeeded in carrying out the

harvest of garden products. As seen in figure 6, this ceremonial procession has symbolic meaning which is guided by the tribal chief, it is beginning with prayer, remembrance and eating with sub-district officials and also the society of Wawo District. It is a symbol of a gratitude for the success in the harvest and at the same time saving the harvest in Uma Lengge. After the prayer, the ceremony was continued with the Maka Tua dance, which was carried by the tribal chief who was wearing traditional Wawo District clothing and a keris in his dance. Sub-district officials cut the ribbon using the root of the sambiloto tree as a symbol to carry out their duties and responsibilities as well as possible so that there is no division in Wawo District because we are the same in all conditions. As for the other culture, namely the Delivering Dowry, this icon is a process that must be carried out as a prospective groom as an initial capital in living a married life. The people of Bima, especially in Wawo District, the icon of Wa'a Co'i (delivering dowry) has an index which must be carried out by the groom if he wants to propose the bride. Based on an interview with Hasan (2018) as the traditional leader of Wawo District, this ceremony is always carried out after the ashar prayer (in the afternoon) which is followed by the groom's family, traditional leaders, relatives, neighbors and scholars to go to the bride's residence on foot and wearing Bima's traditional clothes. Before delivering the dowry, the groom will pray together first.



Figure 7. The Procession before Delivering Dowry
 (Source : Crisantia *et al*, 2019)

During the trip, the groom is accompanied by the society by bringing religious supplies, Bima traditional food, jewellery and special music of Bima Arubana (tambourine). Before arriving at

the bride residence, the society from the bride's side welcomes the groom by performing a Buja Kadanda (war dance) attraction between each society of the bridal party. Before handing over the dowry, there will be a joint prayer and rhyme (pantun) reply by each of the customary leaders from the bride and groom's side. This activity has a symbolic meaning of the unification of two families based on the processes and customs that take place as seen in figure 7.

Conclusion

After observing and analyzing the Uma Lengge building, it turns out that there are changes in function and role based on the aspects of the situation and culture that have occurred in the Wawo society from time to time. It can be seen the icon, index and symbol from the function of the Uma Lengge which is used to be all society united to save their crops, like rice into Uma Lengge, but as the structure of the houses surrounding developed, the society preferred to save rice to their respective homes, but the other society some of them are still keeping rice in Uma Lengge. Likewise, the role of Uma Lengge in producing many noble social values of the ancestors that the Wawo society adhere to mutual cooperation, hospitality, deliberation and helping each other are still being applied today. As for other customs and cultures of Uma Lengge such as Ampa Fare (praying together), Wa'a Co'i (delivering dowry), Maka Tua Dance (tribal chief dance), Buja Kakanda (war dance) etc. with stand for their own icon, index and symbolic meaning. According to the local society, the Uma Lengge festival is always held every year which is certainly interesting to watch regarding the cultural performances of the Wawo society.

Acknowledgement

The researcher would like to thank the Bima Regency government, especially the Wawo District and community leaders

who have provided data and information for the purpose of this research.

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Post-Regional Autonomy Coastal Resources Management Confusion (Study on the Takabonerate Coastal Area of the Selayar Islands)

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Abstract

Coastal resources are natural resources that have very high biological productivity to improve the community's economy. However, it is very unfortunate that these potential natural resources have not been able to be managed properly by coastal communities so that utilization in regional economic development is still not optimal, especially with the revolving of regional autonomy which in principle is decentralized, but in practice it is still centralized. This study aims to analyze the strategy of managing coastal areas in an integrated and sustainable manner in Takabonerate Selayar Islands. Data and information collection methods are carried out through interviews and questionnaires to respondents in a structured manner. The results of the research show that the strategy for managing coastal areas based on constraint-based development must be carried out based on joint management between the community, local government and all existing stakeholders. The strategies that can be implemented are to improve the quality of human resources, improve people's welfare, improve infrastructure development, and optimize collaboration and communication on regional policies to mutually support the management of coastal areas.

Keywords: Policy-coastal resources-regional autonomy

Introduction

The Indonesian environment is a gift from God Almighty to the Indonesian people who need to be grateful for and must preserve its function and develop its capabilities so that it benefits both present and future generations (Bandung n.d.).

Therefore, in order to utilize natural resources, including natural resources the coast must be, then must managed independently environmentally sound based on legal norms by taking into account the level of awareness and global environmental developments as well as legal instruments related to the environment.

In Article 8 of Law Number 32 of 2009 concerning Protection and Management of the Environment, in consideration, it is determined that the declining quality of the environment has threatened the survival of humans and other living things, so it is necessary to protect and manage the environment seriously and consistently . by all stakeholders.

Management area coast and sea on the islands small (PPK) moment This is crucial problem . _ kindly In general , PPK has great potential experience habitat destruction , changes to natural processes ecosystem and pollution (Marasabessy et al. 2018: 1)

However, whether you realize it or not, the coastal area is an area that is experiencing very dynamic growth and development. In various regions, including the Taka Bonerate Coastal area, Selayar Regency is a very strategic coastal area, but in its management policies the central and regional governments overlap. This then triggers environmental problems, damage to resources, and the inability of the carrying capacity of the land to support life activities in the area.

In addition, the high population growth in the coastal area has resulted in changes in natural conditions. Currently the Takabonerate coastal area is no longer a natural area that is able to preserve natural resources, habitats and existing ecosystems and functions to protect the area behind it. The Takabonerate area which has changed its function to become an agricultural, fishing area, settlement, center of economic and industrial activity. The

logical consequences that arise include: the emergence of environmental pollution (water, air, noise and soil), land and environmental quality degradation, conflicts of interest and social problems, emergence of environmental health problems, lack of clean water resources, and land use conflicts.

Even in the Takabonerate Coastal area , the exploitation of resources such as the utilization of fishery resources reaches around 112.38% of the total potential for sustainability, meaning that the level of fish taking exceeds the ability of fish development in the area. In addition, Takabonerate is a coastal area that is rich in natural resources of coral reefs and sea grass, but until now it has experienced very severe damage. Especially for coral reef resources, around 41.7% has been damaged as a result of destructive fishing activities (poisoning and blasting) and coral and sand mining. (East Tribune Daily, September 2015 Edition)

A very crucial phenomenon that is happening in the Position Area of Takabonerate is water pollution originating from the disposal of household industrial waste and oil spills in sea transportation, as well as reduced fish resources, so that the catches of fishermen are decreasing. Researched problems _ is how empowerment public local in management resource coast in Takabonerate Island Selayar .

Literature Review

Definition and Characteristics of Coastal Areas

The coastal area is the confluence of land and sea towards the land, the coastal area includes parts of the land, both dry and submerged in water, which are still influenced by the characteristics of the sea, such as tides, sea breezes and salt water seepage. While the part that is towards the sea, the coastal area includes the part of the sea that is still influenced by natural processes that occur on land, such as sedimentation and fresh water flow or human activities on land, for example pollution and deforestation (Sudirman saat.pdf nd)

According to Nila A. Yuyanan (Sudirman saat. p. 174) that in coastal areas there are at least two forms of ecosystems, namely:

1) natural ecosystems include coral reefs, mangrove forests, seagrass beds, sandy beaches, lagoons, delia and others ; 2) artificial ecosystems include ponds, tidal rice fields, tourism areas, industrial areas, agro-industries, settlements and others. Meanwhile, according to Amiruddin A. Dajaan Imami (Grandgirard et al. 2002 : 457) that the coastal area is a residential zone whose area is limited by the boundaries of the influence of the sea towards the land, and the boundaries of the influence of the land towards the sea

In the case of a coastal village or what is equated with a coastal term, Sugiarto (20 1 5: 4) states that the boundary of a coastal village is that its territory is adjacent to a coastal area, the population is dense, most of the profession is fishermen and fish managers, the economic system of the area is dominated by the agricultural sector. base with main activities in the form of fishing and marine product management industries.

The resources of the coastal area consist of natural resources consisting of renewable natural resources including various marine biota that grow and live around the coastal area including coral reefs. While non-renewable resources include oil, gas, minerals, new rocks, sand and so on.

This situation is fully reflected in the Takabonerate National Park area which the government has designated as a marine conservation area. Because the area has so much marine natural potential, it is of course in demand by some groups for investment, tourism, including for living, both for migrants from other areas around it, as well as those who are native local residents.

Furthermore, by Mukhlis (Saad S, 2000 : 16) argues that in fishing communities the activity network is very limited only to fishing activities. The knowledge system that develops is closely related to fishing activities and marine resources, while the social network is only limited to the ponggawa sawi network (*Patronklien*).

In coastal communities, it is generally known as fishing communities (fish producers) both on a large scale and on a small

scale. Deep fishing community group Large-scale are those who cultivate fish which are generally in ponds, while small-scale groups are those who produce fish or its equivalent depend heavily on catching directly at sea. Although the two groups of coastal communities are both fish producers or similar or equivalent, the point of difference lies in their work pattern.

Conception of Local Wisdom

Conceptually the local wisdom that developed in Indonesia or better known as Coastal Ulayat Rights (hereinafter abbreviated H P) is a translation of the English, *sea tenures*. A marine expert, *Laundsgaarde* stated that the term *sea tenure* refers to a set of mutual rights and obligations that arise in connection with the ownership of sea areas. Furthermore, *sea tanure* is a system, in which several people or social groups take advantage of the sea area, regulate the level of exploitation, including protecting it from over-exploitation. Therefore, completing Sudo's limitations, Akimido (Sudirman saat, 2000 : 44) says that *property* rights have the connotation of having (*to own*), entering (*to access*), and utilizing (*to use*).

This kind of connotation does not only refer to the fishing *ground*, but also refers to fishing techniques, fishing equipment, technology used and even the resources that are caught and collected. In this perspective, in summary it can be said that HUP is a set of rules or practices for the management or management of marine areas and the resources contained therein. This set of HUP rules or practices concerns who has rights over an area, types of resources and techniques for exploiting those resources. So, the main question in this HUP study is who controls the sea (territory, type of resource, technology and level of exploitation) and how and in what ways do they control it.

The study of HUP also needs to pay attention to its dynamic aspects in the sense of changes as local institutions related to the social, cultural, technological, economic and political aspects of the fishing community where the HUP is located. So there is a functional relationship between HUP and other cultural aspects.

However, the functional approach referred to here is not as a closed system, but as a *general system theory* (Sudirman saat, p. 22) namely an open system in accordance with the character of a mobile maritime society, but at the same time it is also characterized by systemic socio-cultural interactions.

Thus, based on literature sources that discuss HUP issues (Dr. Vladimir 2017) concludes that the main variables in the HUP study are related to (i) region; (ii) social ownership units; (iii) legality *and* its implementation (*enforcement*). Territory in the context of HUP regulation is not only limited to area size restrictions, but also to area *exclusivity*. *The exclusivity* of this area can also apply to marine resources, the technology used, the level of exploitation and temporal boundaries.

Wahyono further said that the rights holders in the HUP case, from several writings he found, indicated that in different places there was diversity both individually, kinship groups, village communities, to the state. What is interesting about this unit of rights holders is the issue of *transferability*, namely how exploitation rights are transferred from one party to another, and *equity*, *namely* the division of rights into one unit of rights holders (Tobroni 2016).

Based on the study of Wahyono et al (Sudirman saat. (2000: 21) regarding HUP in eastern Indonesia, it turns out that there are similarities and differences. The striking similarity is that claims to HUP territory only cover fishing grounds *which* have been traditionally exploited by groups local fishing communities. In general it is illustrated that the boundaries of the HUP area are connected with the land and sea conditions that are closest to the claimed sea area for example bays, headlands, mountains, hills, coral reefs, islands, tidal lines (meti), shallow waters, sea with a certain distance from the coastline

Rights and Obligations of Local Communities on Coastal Natural Resources

Utilization of coastal areas cannot be separated from its influence on environmental changes in coastal areas. The impact of environmental changes that have occurred, the first to feel it are

the people who live around the coastal area, so the community's participation in the utilization or management of the coastal area must be involved.

Arrangements regarding the rights, obligations and roles of the community in managing the environment including the environment in coastal areas are contained in Law Number 32 of 2009 concerning the Protection and Management of the Environment mainly in Articles 65, 66 and 68, as well as other regulations such as Law Number 26 of the year 2006 concerning Spatial Planning, Law No. 5 of 1999 concerning Conservation of Living Natural Resources and Ecosystems and Law No. 32 of 2004 concerning Regional Government.

Coastal communities/fishermen are a group of people who live in coastal areas or island areas, whose economic structure depends on the sea. Potentially, the sea is the main capital for their life. Local norms greatly influence how they work in fishing and in the pattern of mastery over their fishery resources.

Utilization of coastal areas is often carried out with irregular utilization patterns and does not pay attention to local wisdom norms in the management of marine resources, also often does not pay attention to the interests of the people in coastal areas who make the sea their source of livelihood, resulting in damage and pollution in the area. coastal areas, for example in the form of destruction of mangrove forests (mangrove), destruction of coral reefs and dumping of industrial waste. Activities to use coastal areas for tourism and industrial development on the one hand are socio-economic development for the welfare of the population but on the other hand the reclamation and dredging of beaches have an impact damage to the function of the beach as a barrier to seawater abrasion (Adam and Surya 2013) .

According to Koenadi Hardjasumantri that everyone has the right to a good and healthy environment. This gives those who have a legal claim to demand that their interests for a good and healthy environment be respected, a claim that is supported by legal procedures, with legal protection by the government and other instruments. (Sulistiyowati 2014) .

Besides that, everyone has the right to enjoy a good and healthy environment, they are also obliged to protect the environment, prevent and deal with any damage and pollution. Everyone has the right and obligation to participate in managing the environment. (Judge 2016 : 313).

The management and utilization of coastal areas does not pay attention to the interests of the people in the area, even the livelihoods that have been the backbone of their lives have been neglected and cannot be replaced by the management and utilization of coastal areas built by the community more often being displaced, rather than being included in the development process (Priyanta 2021 : 444).

Basically, efforts to increase community participation, especially in coastal areas, must begin with an attitude that is open to various problems faced in managing coastal areas. This attitude of openness aims to achieve integrated management of coastal areas, where integration includes relations between government agencies, between government agencies and the community. The community here acts as a government partner in the development process. According to M. Butarbutar (Juwana 2012: 1) that the marine aspect is a relatively new thing to develop, so that for its development it requires cross-sectoral handling.

The aspect of community participation has a very large role in the utilization and management of natural resources in coastal areas. Formal community participation has been acknowledged, however, the mechanism is not yet clear, such as hearings to discuss compensation issues. By Pahir Halim sees the role of society in the form of 1) participation as a policy; 2) participation as a strategy; 3) participation as communication; 4) participation as social therapy (Horoepoetri, Arimbi, and Achmad Santosa 2003).

In terms of the urgency/importance of community participation, it can be seen as follows: a). Providing public information to the government; b) increasing the willingness of the community to accept decisions; c) assist legal protection; d) demonstrating - ratify decision-making.

According to Mochtar Kusuma Atmadja, in line with threats to the preservation of the marine environment, it is necessary to carry out efforts to protect and preserve the marine environment, because this relates to parties or interests that benefit from a sustainable marine environment, namely 1) human settlements and public health; 2) recreational and tourism interests; 3) fishery interests and other biological wealth (Andreanto, Soetarto, and Mardiana 2022) .

Sustainable Management of Coastal and Marine Resources in the Perspective of Local Wisdom

Draft development resource coasts and oceans , in particular fish resources _ sustainable contain four aspect continuity that is (Adam and Surya 2013: 32) :

- a) Continuity ecology : care continuity fisheries stock /biomass so that No pass Power support it , as well increase capacity and quality ecosystem to be attention main ,
- b) Socio-economic sustainability: paying attention to the sustainability of the welfare of fisheries actors at the individual level. Maintaining or achieving a higher level of societal well-being is a sustainability concern.
- c) Community Sustainability: Sustainability of welfare from the side of the community or society must be a concern for sustainable fisheries development.
- d) Continuity institutional : concerned maintenance aspect sound financial and administrative _ in system management as precondition from third development fishery .

In connection with policy government , so all objective development sustainable This can reached , then in context connection between objective social and economic needed policy covering economy _ intervention government in a manner directed , equal income , creation chance work and giving subsidy for activity development that requires it . In the context of the relationship between social and ecological goals, the strategy that needs to be taken is the participation of the community

(customary and non-traditional) and the private sector.

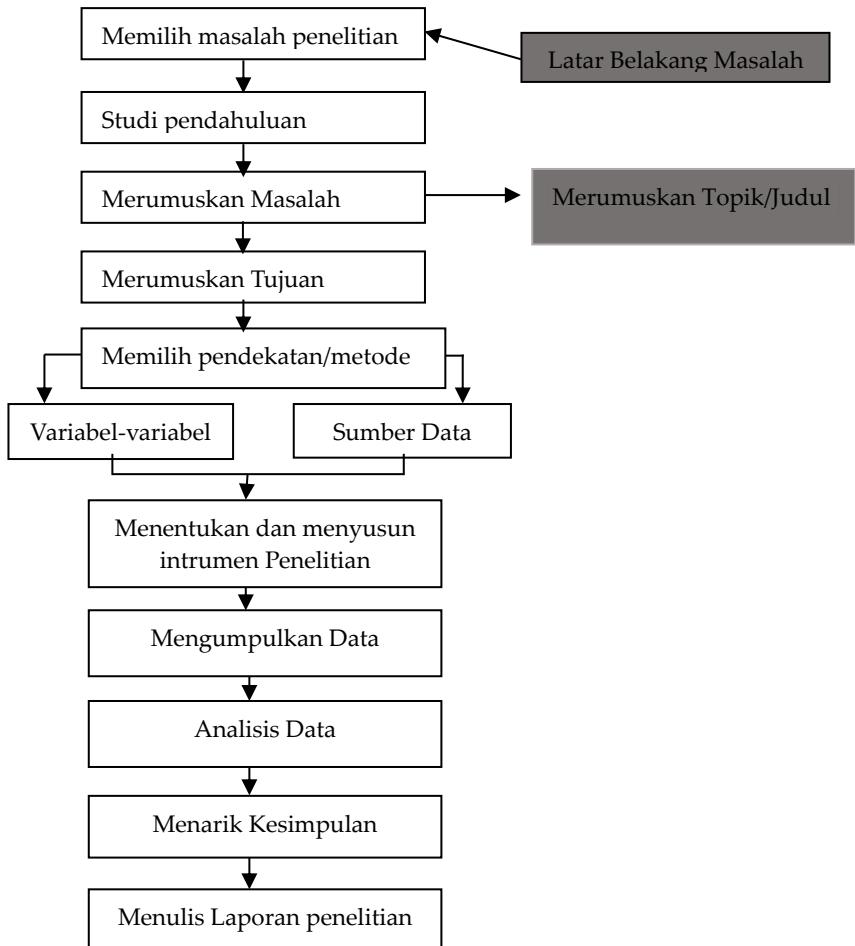
In managing coastal and marine resources, it is necessary to organize an institutional system *to prevent damage to ecosystems such as mangroves and coral reefs, reduce the symptoms of overfishing that are now occurring, and prevent conflicts between stakeholders in fighting over resources and fishing grounds*. The institutional arrangement of the management system needs to be carried out in order to support concepts and programs for the development of coastal and marine resources in a sustainable manner.

Along with the enactment of the decentralization policy (regional autonomy) and the enactment of the PWPPK Law and its derivatives, the formulation of fisheries and marine sector development policies in relation to increasing the institutional capacity of indigenous peoples, it is necessary to pay attention to the rights of ownership of the sea (marine) . *property rights*) in the management of fishery resources, and local wisdoms of traditional communities (*traditional wisdoms*) that are still alive, as well as other traditional social institutions.

Based on this, the policies that need to be carried out include: (a) increasing the education and skills of traditional communities and (b) strengthening local community organizations and institutions, so that they can support ocean-based economic development which has so far been *neglected* .. In addition, various other policies are needed that support the preservation of coastal and marine resources and increase the welfare of indigenous peoples.

Methods

Method research used _ in study This is method study normative-empirical . Method study normative study norms related laws _ with right public coast in management my source coast . Whereas method empirical is method study working law _ For see it works environmental law _ society , especially the people who live in the area coast in manage source Power nature . As for the chart flow study This are :



Results and Discussion

Draft Permission Management Coasts and Islands Small in Law No. 1 of 2014 is permission granted _ For do activity utilization source Power Waters Coasts and waters islands small . On the side must own Permission Management Coasts and Islands Small too formerly every subject law must own permission location which is So base gift Permission Management Coastal and Small Islands . For every subject law has own Permission Management Coastal and Small Islands with condition certain , then for they absolute For control object from Permission Management Coasts and Islands Such small and of course can maintained to anyone . That is , there is obligation for

subject another law for No utilise regulated area _ in Permission Management Coastal and Small Islands .



Figure 1: Distribution Flow Permission Coastal Area Management

In Article 22C it says that provision more carry on about terms , procedures award , revocation , term time , area , and expiration permission location and permissions management arranged with Regulation Government . That It means form Permission Management Coasts and Islands Small clear later will also packed inside provision period time , area , and expiration permission set location _ in regulation executor under law . Although thereby in Article 17 paragraph (3) is emphasized that later existence permission location Certain in form area and time certain .

Permission location as base gift Permission Management Coastal and Small Islands then the terms will too follow arrangement in permission location , for That existence Permission Management Coasts and Islands Small later will use provision area and time certain too. Form from regulation executor related provision period time , area , and expiration

permission location is characteristic from right material . During specified time later _ _ law will protect area object from owner Permission Management Coastal and Small Islands _ (Adam and Surya 2013) .

concerning obligation Licensing is also regulated in Perda Regency Selayar Number 10 of 2011 concerning Management of Coastal Zone stipulates that utilization and exploitation _ source power in coastal areas in a manner traditional and simply For fulfil need House ladder No required For own permission . But in matter (Fajri Chikmawati 2019) (Fajri Chikmawati 2019) :

- (1) Utilization source Power coast For fulfil activity business required own permission .
- (2) Utilization source Power coast can given right exploitation waters coast
- (3) Exploitation source Power coast can given to individuals and/ or legal entities .

According to Ir. Makkawaru Head of Maritime Affairs and Fisheries Service Regency Island Selayar (interview March 12 , 2021) that basically desired goal _ achieved from coastal area management in a manner integrated held with objectives : (a) protect , conserve , rehabilitate , utilize and enrich resources of coastal areas and islands small as well as system its ecological in a manner sustainable ; (b) creates harmony and synergy between government and government area in management resources of coastal areas and islands small ; (c) strengthen role as well as society and institutions government as well as push initiative public in management resources of coastal areas and islands small to achieve justice , balance , and sustainability ; and (d) increase mark social , economic and cultural public through role as well as public in utilization resources of coastal areas and islands small . Clear stated that role society and institutions government become the main element . That is , if government divert responsibility on the part private as well as role coastal area community No dominant so with itself draft coastal area management integrated the No based coastal area community .

Furthermore according to Ir. Makkawaru that desired change _ from Law No. 1 of 2014, in fact demand coastal area community role active start stage planning , utilization , supervision and control on management of coastal areas and islands small . Existence Permission Management Coasts and Islands Small actually No become problem , however according to writer agree if Permission Management Coastal and Small Islands _ pure managed by the people of the coastal area , either public custom with provision law custom , society tradition and society local with applicable laws . _ Temporary That government only participate mix hand in give facilities and empowerment coastal area community that , in order to be able to manage and utilize resources of coastal areas and islands small in increase well-being them .

Coastal community is public or communities that live and grow on the coast and bond with wisdom local local . Potential Flora and Fauna in Takabonerate National Park is very vital. For he explained can entangled on table

Table 1
Potency Resource Natural coast Takabonerate

No	Category	Number (Species)	Type Dominant
1	Coral	242	Consists of 63 genera of Scleractinia coral and 5 genera of non-Scleractinia coral. The dominant coral species are the families Acroporidae, Favidae, and Fungiida.
2	Fish	564	Dominating families Pomacentridae, Chaetodontidae, Labridae, Scaridae, Chaetodontidae, Acanthuridae, Serranidae
3	Molluscs	299	4 classes, 62 families. Class Gastropods, Pelecypoda,

			Cephalopoda and Scapopoda. Dominant Gastropods (snails) and Pelecypoda (shellfish)
4	Reptilia	6	6 Species of green turtles (<i>Chelonia mydas</i>), hawksbill turtles (<i>Eretmochelys imbricata</i>), olive ridley turtles (<i>Lepidochelys olivacea</i>) and loggerhead turtles (<i>Caretta caretta</i>), leatherback turtles (<i>Dermochelys coriacea</i>), flatback turtles (<i>Chelonia depressus</i>)
5	crustacea ns	15	Crab and shrimp
6	mammals	5	Dugongs, dolphins and whales
7	Echinoderi	64	22 types of starfish, 13 types of sea urchins, 16 types of sea cucumbers, 13 types of crinoidea
8	Algae	112	Chlorophyta/green algae 55 species, Rhodophyta/red algae 33 species, Phaeophyta/brown algae 24 species
9	daydrea m	11	Commonly found types of Thalassodendron ciliates, <i>Halophila ovalis</i> and <i>Cymdocea rotunda</i> , <i>C. serrulata</i> , <i>Thallasia hemprichII</i>
10	Bird	34	12 species of land birds, 9 sea birds and 13 shore birds

11	Land Flora	70	Dominated by Cocos nucifera
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Source : DInas Fishery and marine Regency Island Sailing 2021

Based on results study writer in society coast Takabonerate show that planning and implementation development as well as management source power in the area coast Takabonerat that lasted This run Still characteristic sectoral and disaggregated . No integrated in development in the area coast caused There is policy no law _ appropriate or less policy _ involve role as well as public in planning nor in management of coastal areas , whereas characteristics ecosystem coast in the Takabonerate region each other related . With thereby management source coastal power _ optimally and sustainably only can embodied through approach integrated and holistic . Management of coastal areas integrated stated as a utilization process source Power coast as well as caring space _ aspect conservation and sustainability . As for context cohesiveness covers dimensions sector , ecological , governance , inter nation and state, society coast and discipline science .

Communities living in coastal areas (community coast) be the most important part in ecosystem coast . Coastal community is components that have role important in developing sustainable coastal areas .

According to Ir. Makkawaru Head of Maritime Affairs and Fisheries Service Regency Island Selayar (interview March 12 , 2017) Success based management of coastal areas in Takabonerate public influenced by two (2) types namely :

1. Clear and definite consensus _ from three actor or perpetrator main that is government , society and researchers (social , economic , resources power).
2. Understanding deep roles and responsibilities _ from each actor or perpetrator main especially in plan and implement management programs area based coast _ society .

Furthermore according to Ir. Makkawaru Head of Maritime Affairs and Fisheries Service Regency Island Selayar (interview March 12 , 2017) that suppose the model of coastal area

management in Takabonerate more directed at draft management based public Of course will own superiority including :

1. Function environment in coastal areas still maintained , sustainable and sustainable .
2. Income public coast will increase .
3. Improve participation active public based coast _ values wisdom local .
4. Development of coastal areas community centered _ coast or not Again country based or government .
5. Access source Power coast open wide For public coast , no exclusively in hand government .
6. Priority development and management of coastal areas in accordance with need public coast .
7. Benefits source Power coast direct can enjoyed by society coast alone .

The advantages above related tightly with composition resident Regency Island Selayar based on livelihood the most is fisherman with percentage 90.91%, farmers , 06%, trade /services 2%, bricklayers 1.21%, and drivers transport general with percentage of 0.61%. So in general public do activity arrest Good around the area and outside Takabonerate . Catch fish already become descending culture _ lowest , because That public own various tool catch and boat as completeness from activity them .

In Article 4 Regency PERDA Selayar Number 10 of 2011 concerning Coastal Zone Management mentioned that objective Management coast done with purpose :

- a. create systems and mechanisms management source Power coast To use ensure utilization in a manner rational and sustainable ;
- b. create even distribution benefit economy source Power coast To use enhancement well-being society ;
- c. protect coastal areas from impact negative effects caused by activities inside and outside the regional territory ;
- d. look after sustainability functions ecosystem coast to stay can support development in a manner sustainable ; And

- e. increase capacity , ability and independence public coast in utilization and management source Power coast .

According to Ilham Sani As Figure public Takabonerate (interview March 22 , 2017) that behavior coastal communities _ Takabonerate can influenced by aspect environment and finally will change life social and economic . This because change behavior is direct internal factors from public yourself and make an impact straight to life coastal communities _ Takabonerate . As for influence change behavior to aspect economy coastal communities _ Takabonerate , that is decline income coastal communities _ Takabonerate , caused level education Still low .

Conclusion

1. Arrangement Permission Management Coastal and Small Islands in Law No. 1 of 2014 makes state domination _ management of coastal areas and islands small in Takabonerate Still dominant or not capable give prosperity for coastal communities . Existence Permission Management Coastal and Small Islands as right material Still tend side on private . Policy Permission Management Coastal and Small Islands in review of Law No. 1 of 2014, still Not yet in accordance with draft management coast integrated based coastal area community .
2. Coastal area Takabonerate No Again is area naturally capable _ guard sustainability source Power nature , habitats, and existing ecosystems as well as function For protect the area behind it . The changing Takabonerate area function become area agriculture fisheries , settlements , centers activity economy and industry

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The Influence of ChatGPT (Generative Pretrained Transformer) Application Based on OpenAI (Artificial Intelligence) on the performance of Journal Reviewer

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ABSTRACT

ChatGPT is software developed by Open artificial intelligence (AI) which can assist researchers in making manuscripts and sentences in journals. The purpose of this study is to find out the response of journal reviewers to researchers who use ChatGPT in making journals. This research uses qualitative research with a case study approach that is used to understand a particular phenomenon or event that is complex, in-depth, and contextual. The results of this study indicate that the constraints faced by a reviewer are at the submission review stage. The obstacle in question is that when examining the manuscript received from the researcher, the Turnitin application has not been able to check in detail the sentences taken via chatGPT. Even though ChatGPT has the ability to assist researchers in making sentences and getting information, ChatGPT also has a drawback, namely not being able to provide accurate references according to the sentences made.

Keywords: ChatGPT; openAI; journal reviewer.

Introduction

Artificial intelligence (AI) technology recently gave rise to applications that are considered dire for the world of education. AI has just created an application called ChatGPT which can assist

researchers in creating text, giving opinions, providing suggestions that make it easier to get information (Taecharungroj, 2023). The GPT language model is one of the most sophisticated AI models ever created, and ChatGPT is a variant of this model which is focused on the task of understanding natural language and answering questions (Mhlanga, 2023). The strength of ChatGPT is its ability to interact with users via text and provide high-quality and natural answers.

ChatGPT's model has taken the world by storm because of its extraordinary capabilities and wide potential applications, such as automated customer service, virtual assistants and FAQ systems. Some people even consider ChatGPT as one of the important steps towards more advanced artificial intelligence. Even though ChatGPT is very sophisticated, there are still some things that must be considered in the development and implementation of this model, such as ethics and human rights, privacy, and security (Tlili et al., 2023). Therefore, it is important to ensure that the development and implementation of ChatGPT is carried out wisely and takes into account the interests of all parties.

The role and function of ChatGPT as a large language model is to provide question and answer services or conversational AI (conversational artificial intelligence) to users. ChatGPT is trained using machine learning technology based on neural networks that can process natural language and provide responses that match user questions or statements (Lin et al., 2023). The purpose of ChatGPT is to provide assistance and information to users who need information. As an AI (Artificial Intelligence) or artificial intelligence system, ChatGPT is designed to provide automatic and fast responses or replies to questions and commands given by users (Pavlik, 2023). ChatGPT is designed to master various topics and knowledge domains so that it can provide accurate and reliable information.

In answering questions and providing information, ChatGPT relies on natural language processing to understand questions or commands given by users, then provides answers that are relevant to the context and purpose of the questions (Shen

et al., 2023). In addition, ChatGPT can also provide recommendations or solutions that can assist users in overcoming the problems or challenges they face. Overall, the main goal of ChatGPT is to provide users with accurate and reliable assistance, information and solutions, so that they can help increase user productivity, creativity and satisfaction in carrying out various activities or tasks.

Journal reviewers are individuals who are trained and experienced in a particular field, whose job is to read and assess the quality of a manuscript to be published in a scientific journal (Triyanto, Nurkhalis, Saputra, Yana, et al., 2020). They play an important role in the journal's publication process, ensuring that only the best scientific work is published. Journal reviewers are tasked with examining aspects such as relevance, originality, clarity, and validity of the manuscript. They also made recommendations and suggestions for manuscript improvement where necessary. The main goal of a journal reviewer is to ensure that published scientific work meets high and quality standards (Triyanto, Nurkhalis, Saputra, Yana, et al., 2020). Journal reviewers are usually selected by journal editors from the scientific community related to the research field of the manuscript. They serve voluntarily and the process is carried out in secret to ensure independence and objectivity. Journal reviewers play an important role in ensuring the quality and integrity of scientific journal publications. Therefore, their duties and responsibilities are very important to the scientific community and society in general. The obstacles faced by journal editors and reviewers according to Tennant et al (2017) are:

- High workload: Many journal editors and reviewers have a large number of manuscripts to read and assess, which makes their workload very high and time consuming.
- Lack of time: Due to the high workload, journal reviewers often do not have sufficient time to do their job thoroughly and provide useful recommendations.
- Variation in quality of manuscripts: The varying quality of manuscripts makes the task of journal reviewers difficult as

they must ensure that the manuscripts they review meet high standards.

- Lack of objectivity: Journal editors and reviewers often have to assess manuscripts related to their own field, which makes their task difficult as they must remain objective.
- Limited resources: Some journals may not have sufficient resources to pay journal reviewers so their work is done on a voluntary basis.
- Lack of recognition: Journal reviewers are often not fairly recognized for their work, which makes them feel dishonorable and unaccepted in the scientific community.
- Conflicts of interest: Journal reviewers often have to overcome conflicts of interest when assessing manuscripts from peers or collaborators.

The above are some of the obstacles that are often faced by journal reviewers. Nonetheless, their duties and responsibilities are very important to the quality and integrity of scientific journal publications. Therefore, it is important for journal publishers to overcome this obstacle and ensure that journal reviewers have the support and resources they need.

Method

Qualitative research methods with a case study approach are used to understand a particular phenomenon or event that is complex, in-depth, and contextual. Case studies require intensive and in-depth data collection from several sources, such as observation, interviews, and documentation, so that researchers can understand the situation and context that influence the phenomenon or event being studied (Creswell, 2019). Here are some steps in conducting qualitative research with a case study approach:

- A. Determine the research problem and the purpose of the case study: Identify the problem to be studied and define the research objectives clearly and in detail.
- B. Selecting cases or research subjects: Select cases or research subjects that are relevant to the research problem and can provide sufficient information to answer the research questions.

- Collect data: Collect data from various sources, such as observation, interviews and documentation, to understand the situation and context of the case being studied.
- Analyze data: Analyze data from multiple sources, using relevant qualitative analysis methods, such as thematic analysis or narrative analysis, to understand the meaning and concepts that emerge from the data.
- Validating data: Validating data to ensure the accuracy and reliability of data collected.
- Draw conclusions: From data analysis, draw conclusions about the phenomenon or incident being studied, and present the research findings in a clear and systematic way.
- Compile a research report: Prepare a research report by following a qualitative research structure, which consists of an introduction, background, research methods, results and discussion, as well as conclusions and suggestions.

Qualitative research methods with a case study approach allow researchers to understand a phenomenon or event that is complex, in-depth, and contextual, so as to provide a better understanding of a case or research subject

Results and conclusions

Artificial intelligence (AI)

The history of AI (Artificial Intelligence) began around 1956, when John McCarthy, Marvin Minsky, Claude Shannon, and several other experts organized the first conference on AI at Dartmouth College (Haenlein & Kaplan, 2019). At the time, they introduced AI as a new branch of computer science and said the goal was to build machines that could perform tasks previously only able to be performed by humans, such as problem solving and understanding languages.

Since then, AI has evolved through several waves, with the first wave (1956-1974) being known as the “First Wave of AI” (Priyadarshini et al., 2022). In this wave, AI experts focused on solving problems through logic and searching, and succeeded in creating several programs that could perform tasks such as

solving math problems and understanding simple languages. The second wave of AI (1974-1980) is known as the "Second Wave of AI" and marked a shift in the focus of AI from logic to machine learning. In this wave, AI experts began to focus on machine learning techniques, such as artificial neural network algorithms, and succeeded in creating several AI applications that can learn from data (Priyadarshini et al., 2022).

The third wave of AI (1980-2010) is known as the "Third Wave of AI" and marked a major development in AI technology (Priyadarshini et al., 2022). In this wave, AI experts introduced new technologies such as Deep Learning algorithms and created AI applications that are more complex and have better capabilities. Now, AI is undergoing rapid improvement and is becoming an essential part of our daily lives, involved in various applications such as speech recognition, facial recognition and language recognition. AI is also being used in areas such as commerce, healthcare, and manufacturing, and is expected to help solve some of the world's biggest problems today.

OpenAI is an AI research organization founded in 2015 by Elon Musk, Sam Altman, Greg Brockman, Ilya Sutskever, and Wojciech Zaremba (Subaveerapandian A et al., 2023). One of their big products is the GPT language model, or Generative Pretrained Transformer, which is trained using millions of text documents from the internet. GPT-3 is the latest version of the GPT model, which has more than 175 billion parameters and is capable of performing various language tasks, such as creating quality English text, understanding conversations and answering questions. This model was trained in 2020 and released to the public in June 2020. ChatGPT is a variant of the GPT-3 model that is focused on natural language comprehension tasks and answering questions (Paula & Teo, 2023). This allows the user to interact with the model via text, such as making natural conversations and asking for information. This model is particularly useful for applications such as automated customer service, virtual assistants, and FAQ systems.

"In our opinion, the GPT chat is very useful for researchers if they want to find information that is just understanding and

history related to what information they want to search for, but it is very unfortunate if a researcher makes the GPT chat a reference and quotes all the information that the GPT chat has and enters it in a journal that is being written, this is very detrimental and threatens the quality of the researcher's knowledge."

Artificial intelligence or AI can bring several potential threats, but also bring many benefits to society. Some of the potential threats associated with AI Todili Signes (2021) include, 1) Job replacement: There are fears that AI will replace human jobs and cause mass unemployment. 2) Discrimination and injustice: AI can ignore or reinforce existing prejudices and discrimination, if the data and algorithms used to train the model are not good enough. 3) Security and privacy: AI can be used by irresponsible parties to spy on or extract personal information from individuals.

Although there are some potential threats associated with AI, there are also many potential benefits according to Malik et al (2022), namely 1) Increased efficiency and productivity: AI can help speed up and simplify complex and time-consuming tasks. 2) Improved quality of life: AI can help address health and safety issues, such as assisting doctors in diagnosis and making roads safer. 3) Increased creativity and innovation: AI can help solve problems and come up with new solutions that are impossible for humans to find. In general, AI is a powerful technology and can help solve problems, but it is important to ensure that the development and implementation of AI is done wisely and with due regard for ethics and human rights.

ChatGPT

OpenAI released ChatGPT in 2018 as the first language generative deep learning model that can answer questions spontaneously (Paula & Teo, 2023). This model uses the Transformer architecture and is trained on millions of documents from the internet to understand human language and produce meaningful text. After its release, ChatGPT became very popular and is widely used in applications such as chatbots, content creation and even as an information search engine. In 2019, OpenAI released the latest version of this model, GPT-2, which is

trained on a much larger dataset and has a better ability to understand human language. Since then, OpenAI has continuously improved and updated ChatGPT, releasing a stronger and more accurate version every year. This model has assisted in many research and practical applications, proving its ability to understand human language and answer questions with excellent accuracy.

Since its release in June 2019, this application is the application most people use in the world and is the first application that is accessed by approximately one million people within 5 days and beats the Instagram and Spotify applications. Judging from the graphical comparison of chatGPT with other applications, there is a very big difference from other applications. Instagram is an image-based social media that provides online photo or video sharing services. Instagram comes from the understanding of the overall function of this application. The word "insta" comes from the word "instant", like a Polaroid camera which at that time was better known as "instant photo" (Hidayatullah et al., 2022). This application is an application that is in great demand by the current minnelnial generation, of course there are many other generations who use this application to share photos and videos with information in them. Spotify is also like that as an application that will produce popular songs for the digital generation, which is currently widely accessed. However, the presence of chatGPT is able to compete with the two applications, which only take approximately 5 days to reach as many as one million users.

Grafik Komparasi ChatGPT vs Aplikasi Lain

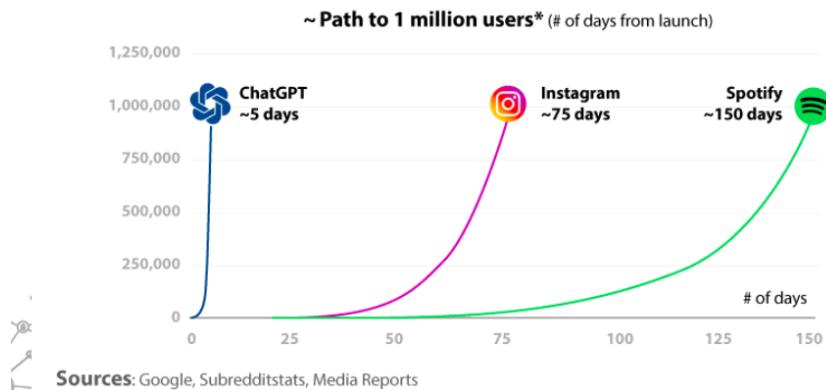


Figure 1. Graphical use of the ChatGPT application

Source: Webinar BRAIN Series #5 : Advanced Digital Technology

ChatGPT (Generative Pretrained Transformer) has several functions for researchers Lim et al (2023):

1. Support research: ChatGPT can be used by researchers to answer questions and provide research-relevant information, such as helping to find references or compare data.
2. Speed up the research process: ChatGPT can help researchers speed up research by helping them find relevant information and verify their hypotheses quickly and efficiently.
3. Reduce costs: ChatGPT can help researchers save on research costs by helping them find the information and data they need without having to spend a fortune buying books or visiting libraries.
4. Improve collaboration: ChatGPT can help researchers collaborate with other researchers easily and quickly by helping them find common information and communicate easily.

ChatGPT can be a useful tool for researchers to improve their research efficiency and results. However, it is important for researchers to evaluate and verify the information obtained from ChatGPT before using it in their research. According to the

informant, there is still something lacking in GPT chat, namely not being able to provide accurate references in accordance with the sentences quoted in GPT chat.

"After we got into the GPT chat, it turned out that we had a shortcoming, namely not being able to provide accurate references. In fact, there are still things wrong, especially in the volume and issue sections of the journal that chatGPT provides. Of course we will continue to find out the shortcomings of chatGPT so that we are not tricked by researchers who want to send their journals to us."

The problem with ChatGPT is that AI cannot yet provide accurate references with the same level of confidence as human sources who are specially trained in providing references (Aljanabi et al., 2023). Although ChatGPT has access to a great deal of information available on the internet, it cannot ensure the accuracy and legitimacy of that information. Therefore, it is recommended for users to always check and verify the information provided by ChatGPT with trusted sources such as scientific journals, textbooks and other official publications.

Journal reviewer

A journal reviewer is an expert appointed by a journal editor to evaluate manuscripts that have been submitted for publication in that journal (Triyanto, Nurkhalis, Saputra, Marefanda, et al., 2020). The task of a journal reviewer is to read and evaluate manuscripts carefully and provide recommendations to journal editors about whether the manuscript is suitable for publication or not (Laksono et al., 2021).

Journal reviewers must have expertise and experience appropriate to the topic of the manuscript to be assessed, and have a good reputation in the academic field. They must be able to provide an objective and critical review of the manuscript, and be able to provide useful suggestions for improving the quality of the manuscript. After reading the manuscript, a journal reviewer usually provides recommendations to the journal editor about whether the manuscript is suitable for publication, is rejected, or needs revision. This recommendation is based on criteria such as

originality, significance, methodology, clarity and correctness of data, and adequacy of references.

The role of a journal reviewer is very important in ensuring that manuscripts published in journals are of high quality and can be trusted. It also helps maintain the journal's integrity and reputation as a source of accurate and valuable information in academia. As someone appointed to evaluate and provide critical reviews of manuscripts submitted for publication in journals, a journal reviewer may face several obstacles, according to the informant as a reviewer, namely:

"Time: A journal reviewer is often given limited time to evaluate manuscripts and provide recommendations. This can be difficult if the text is very long or complex. Difficulty understanding texts: Some texts may be difficult to understand because the terminology or methods used are too technical or complicated. This can make it difficult for a reviewer to evaluate and provide a critical review of the manuscript. Conflict of interest: A journal reviewer must maintain integrity and independence in providing a critical review of manuscripts. However, sometimes a reviewer may have a conflict of interest that could influence their views and recommendations. Lack of experience: A new journal reviewer may have difficulty evaluating manuscripts properly due to a lack of experience in critically evaluating manuscripts. Heavy workload: A journal reviewer is often tasked with evaluating a large number of manuscripts in a short period of time. This can lead to a heavy workload and make them feel overwhelmed."

Even though they face several obstacles in evaluating manuscripts, a journal reviewer must still try to provide an objective and critical review to ensure the quality and trustworthiness of the published journal.

Journal submission process

A researcher is someone who is tasked with conducting research or developing a theory and making a theory (Ramdhani, 2021). A term for someone whose main task is to conduct research and/or development of science and technology. Most of the

research conducted aims to find solutions to various problems. Researchers are people who conduct research or exploration of a particular problem, topic, or area using systematic, structured, and objective methods and techniques. Research is conducted with the aim of obtaining new information, data, facts, or knowledge regarding a particular phenomenon or problem.

Researchers usually have a high educational background and have special expertise in a particular field or discipline. Researchers also usually work in institutions or organizations engaged in research, such as universities, research institutes, companies, or government agencies. The main task of researchers is to plan, carry out, and evaluate research, as well as preparing reports or publication of research results. Researchers must also be able to analyze data well, use appropriate statistical techniques and analytical methods to answer research questions (Ramdhan, 2021). In addition, researchers must be able to understand ethical aspects of research, such as maintaining data confidentiality, respecting intellectual property rights, and avoiding plagiarism.

OJS Editorial and Publishing Process

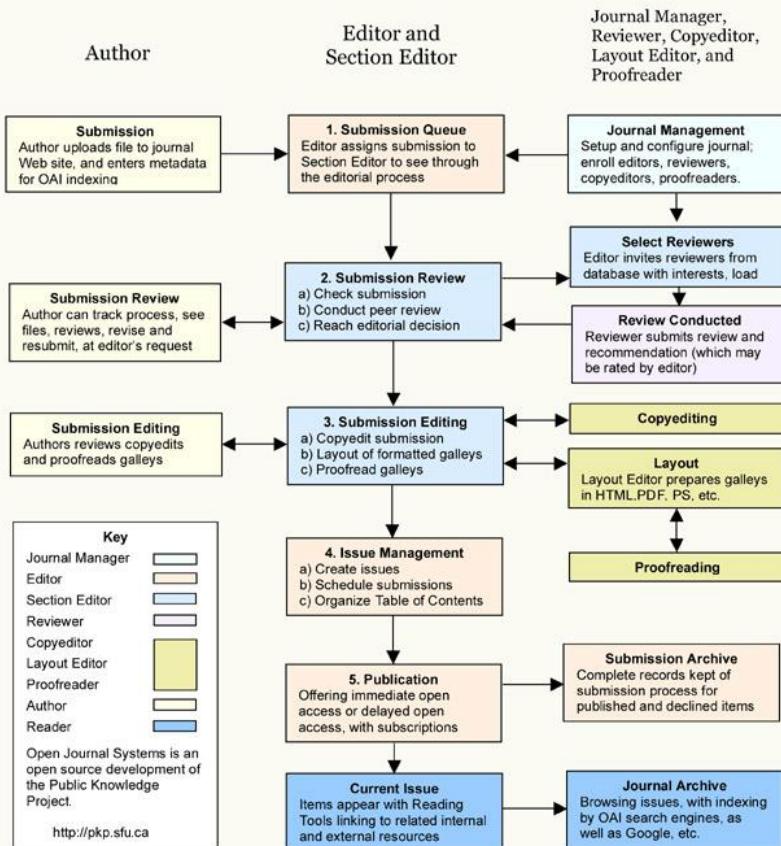


Figure 2. Journal publishing process

Source: <https://www.dkampus.com/2017/05/publikasi-artikel-jurnal-ilmiah-melalui-ojs/>

Submitting journals from researchers to reviewers consists of several stages consisting of major points, namely Submission, submission queue, submission review, issue management, and publication. The most important thing whether the journal is accepted or not is in the submission review section, because in this section the editor will check whether the journal sent by the researcher is appropriate or not to be forwarded to the journal reviewer. The quality of the journal editor is very important in this section because it checks the manuscripts sent from researchers, both the way of writing, the suitability of the template, the suitability of the theme, and checking for plagiarism. An editor

will use Turnitin to check whether the manuscript originating from the researcher is a manuscript written by himself or just copied from the internet (Suwondo et al., 2022). The problem that occurs at this time is that many journal editors do not know whether the writing written by researchers really comes from researchers or not. Because it is very difficult to find out if a researcher's manuscript is using AI assistance or not, it requires the skill and quality of the editor to read the manuscript from the researcher. From the interviews conducted, the editor of the journal stated that:

"It is very difficult for us to distinguish between manuscripts that are actually written by researchers sourced from the internet, AI assistance or not because researchers are currently very creative. The creativity that is meant is by copying writing from the internet and then phrasing it in such a way. There are also those who use AI which makes it difficult for us to distinguish this. But we will also be assisted by the reviewer team to cross-check the manuscripts that we think are appropriate to be forwarded to the reviewers."

In the development of technology and the advancement of science, research is becoming increasingly important in generating new knowledge and solving complex problems. Therefore, the role of researchers is increasingly crucial in increasing the quality and quantity of knowledge and innovation in various fields of life. The presence of chatGPT makes it easy for researchers to get the information and references needed. But from the references or words given, ChatGPT has not provided a source of reference for the information provided, so researchers must find references that match the sentence given from the ChatGPT.

"For chatGPT itself, many of us, as journal editors, do not know about this. What we rely on in checking manuscripts is Turnitin. Turnitin himself will check the researchers' manuscripts and it will be seen that researchers are copying sentences originating from this source. Now, Turnitin we haven't been able to find out whether the script or sentence written by the researcher came from chatGPT or not and that is also a problem for us. Even

though we have read a lot of texts, we also need AI assistance to check the scripts from the researchers."

There are still many journal editors and reviewers who don't know about ChatGPT, which is an application that helps in making a sentence. Periodic assistance and training is needed by journal editors so that they are not deceived by researchers who use AI applications in writing scientific papers. The problems faced by editors and reviewers also increase when faced with the onslaught of AI which is able to assist researchers in making journals as stated by the editor of the journal that:

"The problems we faced in the past were that researchers did not adjust the writing procedures to the templates we provided, there was a lot of plagiarism sourced from the internet, and there was the use of jockeys in writing scientific papers. That's what worries us, but now we have a problem, namely AI that can help researchers in making a journal. So that scientific work jockeys can be said to be decreasing because researchers are already able to make sentences and scripts with the help of AI. The steps we take are of course reading a lot because you will see sentences that were actually made by researchers or from AI. we also the editors take part in scientific work trainings so that researchers are not missed and find out the weak points of each AI that is able to help researchers make a manuscript and journal."

ChatGPT is able to provide all the information needed with an accuracy of 80%. However, there are several obstacles that researchers find in using the application, namely trouble, errors still occur and it takes some time for ChatGPT to provide answers. From the results of experiments conducted by researchers, by trying 1300 words obtained from discussions conducted by researchers with GPT chat, copied and then entered into the Turnitin application to check the validity and plagiarism of the words given, only 5% plagiarism was detected in the Turnitin application.

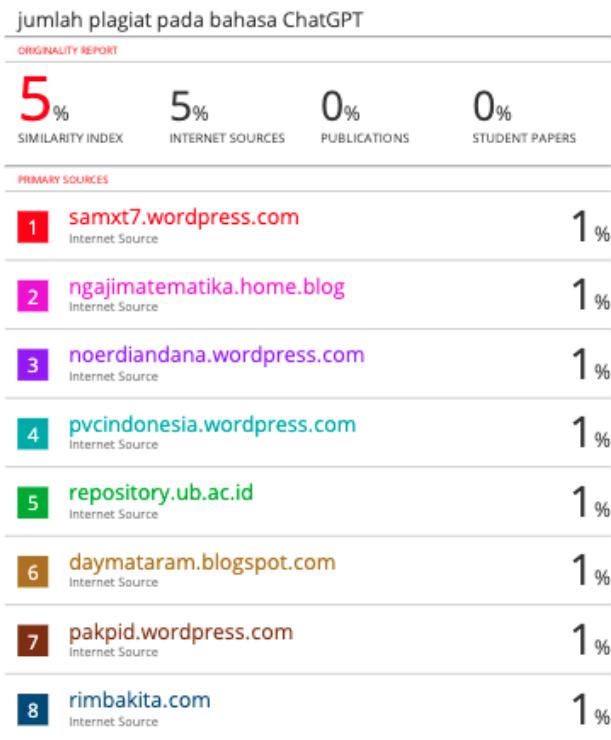


Figure 3. Turtinite results using ChatGPT assistance

Source: check turnitin

Although ChatGPT has many advantages in understanding and answering questions, some things that might be a drawback for researchers are accuracy and reliability, ChatGPT is made using deep learning and data from the internet, so there is a possibility that this model has errors or biases that might affect research results. . Generalizability, ChatGPT is very good at answering specific and limited questions, but may not be good at addressing more abstract and unstructured problems. Interpretation ability, Since ChatGPT has a lot of data it learns, it can be difficult to know how it reaches the answer and interprets its thought process. Context understanding skills, ChatGPT is very good at understanding context and generating appropriate answers, but may lack good at understanding complex contexts and misinterpreting context in some situations.

Conclusion

GPT Chat has been released and used since a few years ago. GPT-1 was launched in June 2018, followed by GPT-2 in February 2019, and GPT-3 in June 2020. Currently, many researchers are using this application to make it easier to get information, data and references. This is a threat to a reviewer because they have not been able to check in detail the manuscripts sent by researchers to journal editors and reviewers so that many manuscripts pass even though they use ChatGPT a lot. Several stages must be passed by researchers in publishing journals, namely submission, submission review, issue management, and publication. The obstacle faced by a reviewer is at the submission review stage, where this stage is the stage carried out to check whether or not the manuscript is published. At this stage the editor and reviewer will also check the authenticity of the manuscript written using Turnitin, the obstacle faced by the reviewer is that the Turnitin application has not been able to check in detail the sentences taken via chatGPT. So that a new obstacle was faced by editors and reviewers, namely not being able to detect sentences quoted by researchers via chatGPT. Even though ChatGPT has the ability to assist researchers in making sentences and getting information, ChatGPT also has a weakness, namely not being able to provide accurate references according to the sentences made.

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The Utilization of monitoring information system which is practically used to improve teacher performance and creativity in the entrepreneurial process at SMK

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ABSTRACT

This study aims to implement a practical system to facilitate teachers in operating and monitoring the learning process so that they can explore the potential and creativity of teachers in teaching and learning processes that are aligned with the curriculum. System development is carried out using the system development life cycle (SDLC) approach with the waterfall model method in order to provide precise analysis results in producing a learning media and monitoring the edupreneurship process that is practically used by teachers in SMK. Measuring the practicality of the media was carried out by giving questionnaires to the teachers of the case study, namely SMKN 8 Makassar, majoring in culinary arts. The results showed that the monitoring information system that was developed was practically used in the edupreneurship process based on the response values given by teachers to the assessment categories on related aspects through a questionnaire using a scala linkert of 96.15%, with a very practical category.

Keywords: Monitoring System, Practical, Edupreneurship, Teacher

Introduction

Education is all kinds of efforts made by humans to grow and develop various potentials and skills both physically and

spiritually in accordance with the cultural values of society. The development of education from an economic perspective also demands progress in the world of education in producing reliable human beings to become the driving subject of national economic development (Hasanah, 2015). Edupreneurship conditions in the school environment must be further developed (Endang, Sugiyono, & Purwanti, 2014) in order to produce graduates who are qualified, independent and master technology, and have adequate technical skills and life skills, so that they are able to compete in the midst of globalization and continuous technological innovation. Develop. Therefore, it must be supported by professional staff who have entrepreneurial abilities, which are one of the main pillars of national economic activity (Kemendikbud Strategic Plan, 2010-2014).

Vocational high schools (SMK) which are integral to economic sectors in driving national economic growth which will reflect the quality of the workforce through edupreneurship development to increase the competitive advantage of Indonesia's human resources. Ministry of Education and Culture in actualizing the capabilities of human resources and equipment so that they are aligned with Indonesia's economic growth (Renstra Dit. PSMK 2010-2014). Therefore, it is increasingly demanded that there be a higher quality learning system with good planning so as to create good, practical learning conditions and strategies as well as learning media, so that learning can be more meaningful and achieve goals. The success of a lesson cannot be separated from the teacher's role as a motivator, the teacher also acts as an educator, trainer, director, mentor, assessor and evaluates (Arfandi, 2020). The role of the teacher becomes very vital in the learning process teach (Sagala, 2009 :11-12). Very important for a teacher for own qualifications and competencies that aim to make the teacher can more quality. Quality a teacher can rated from competencies and qualifications in realize achievement objective from education national as has stipulated in RI Law no. 14 of 2005 that being a teacher must own qualifications and competencies, personality, pedagogic, social, and professional (Hafsah & Nurul , 2022).

Teacher competence is a qualitative description of the importance of teacher behavior. competence is defined and interpreted as a set of effective behaviors related to research and investigation, analysis and thinking, as well as attention and observation, which guide a person to take preventive actions to achieve certain goals effectively and efficiently (Jajaj, 2014). Through the pedagogic competencies that teachers have, they can make methodological and conceptual teachers able to apply learning strategies that can be realized in lesson planning and learning implementation, analysis and monitoring of the teaching process. One of the things that must be the main concern of a teacher is to be able to provide appropriate learning media and be able to realize this in a media and use it in the learning process.

Some of the obligations and prohibitions on effective and efficient learning media include: 1. The use of learning media must fulfill certain specified goals and if it can effectively support the achievement of these learning objectives, 2. the importance of media in relation to the content of the subjects used in the subject lessons, the implementation of the learning. activities are transmitted through the material used, so the use of media must of course be relevant 3. It is very important to ensure that the learning environment supports the subject in such a way that students can understand it well. 4. Teachers must be proficient in how to use media in their teaching and learning activities in class, using all the competencies they have in the teaching and learning process to be able to provide real experiences to students while at the same time reflecting advanced movements into natural movements as an effort to deepen learning.

The various descriptions that have been explained note how important the teacher's role is in success, especially edupreneurship learning so that learning objectives can be realized, and the importance of media support used so that teachers can explore all their competencies and creativity. then a monitoring information system is designed and implemented that can be used by teachers in teaching, analyzing, monitoring the implementation of learning so that it can ensure the suitability of the implementation of learning with the curriculum. This

system also produces information that can be used by teachers to analyze and measure performance personally, so that they can explore abilities and strategies as well as creativity so that teacher performance will be better in teaching.

Method

The method used for software development uses the systems development life cycle (SDLC) with the waterfall model method. The selection of the waterfall model in the development of this system is because this model is simple, easy to understand and apply. But it can work well and give proper results. As stated by Andrew P. Sage and James D. Palmer (1990) in Mitch Kramer (2018) who examines the biggest advantage of the waterfall model for SDLC is that it provides a structure for organizing and managing software development projects with the main methodological approach is identifying user needs Accurate. Information System (SI which is a series of organizational procedures which when implemented will provide information for decision making and or for controlling the organization (Ladjamudin, 2005:13).

This research is expected to be able to produce teaching media products based on information systems, as well as monitoring the ongoing process. This system is also expected to be able to meet the needs of edupreneurship learning. With the procedural approach, the system can be defined as a collection of procedures that have a specific purpose, whereas with the component approach, the system is defined as a collection of components that are interconnected with each other to form a single unit to achieve the goal. certain (Jogiyanto, 2005: 34). especially for teachers so that they can be used fully in assisting the teaching process. The steps for developing software using the waterfall method are as follows:

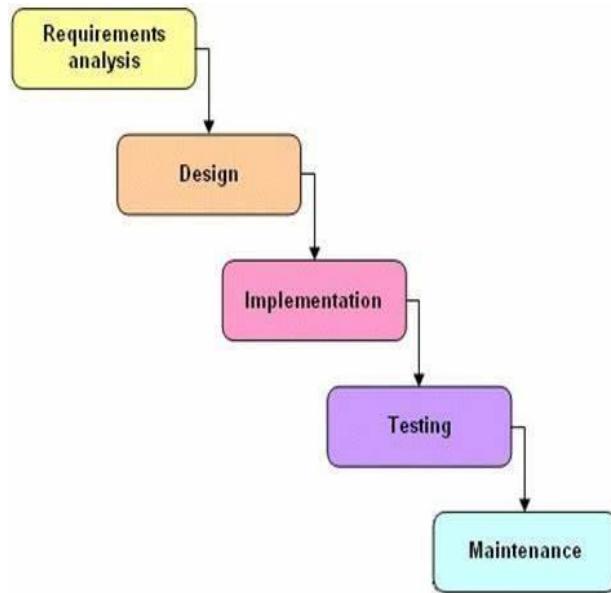


Figure 1. The steps of waterfall model

1. Requirements Analysis.

At this stage, researchers used data collection techniques using observation, interviews and literature study. Through this method the author obtains data related to needs with the following explanation: a) Observation

The author made observations on teachers at SMK Negeri 8 Makassar, especially in the culinary department with the intention that the writer could better understand the situation and teaching process that has been going on so far. b) Interview

Apart from observing, the researchers also conducted interviews to collect data by asking a number of questions to teachers and parties related to the system that the school would develop. c) Library Studies

Literature study is also a method that is applied so that researchers get data sources both from reference books and journals related to the system to be developed. the researcher collects complete requirements then analyzes and defines the requirements that must be met by the system to be built and the results can be seen in Table 1.

Table 1.
The Results Of Requirements Analysis

No	Need	Objective
1	Absence is done using the system	In order to make it easier for teachers, data is stored safely, avoiding scattered and lost.
2	Sharing (uploading) teaching materials using the system	Makes it easier for teachers to provide material to students
3	Giving quizzes, assignments, UTS, UAS using the system	Facilitate the teacher in giving assignments
4	Examination of assignments automatically uses a system of both theoretical and practical assignments	Facilitate teachers in checking students' assignments, automatic checks using the system
5	Can analyze the implementation of the edupreneurship process.	In order to find out and measure the teacher's performance on the edupreneurship process.
6	Can monitor the implementation of the edupreneurship learning process	To find out the obstacles or obstacles experienced in the learning process.

Analysis of non-functional requirements

- a) This analysis aims to measure whether the proposed new system can be implemented with hardware and software specifications. Analysis of the needs of the new system is as follows:
- b) The hardware needed to design an edupreneurship monitoring information system is a Laptop/PC with the following specifications: Intel core processor (2.30 GHz); RAM Memory 4GB; HDD 300GB
- c) Software Requirements The software needed to design a system is as follows: Windows Operating System; Sublime Text 3, used to code website applications; Xampp as database server; MySQL is used to design databases; Google Chrome / Microsoft Edge.

2. System design

At this stage, system and software design is carried out. Design is done after the needs are completely defined. System design is a system design that is carried out based on data that has been collected in the previous stage. The design of features in the developed media is designed to facilitate teachers in teaching more practically and to meet their needs in teaching and measuring their performance. An informative system that can simultaneously monitor the implementation of learning and can see the progress of good performance, which is formulated in measurable and observable operational work. After all the data related to feature requirements has been available, then the system design is carried out using UML, including user interface design, after the design stage is carried out, it is continued with the implementation stage.

3. Implementation

This stage is the stage where the programmer implements the system design that was approved in the previous stage. Software implementation is done by implementing software

design results into program codes that can be understood by computers. This system is built based on an information system using the PHP programming language with the Laravel framework and responsive web-based so that its use can be accessed by all devices with a display that adjusts the device used.

Implementation is done by making the features needed by the teacher based on their needs in teaching along with the explanation: a. Teacher Login Form before entering the main page the teacher logs in first by entering the email and pass. As shown in figure 2.



Figure 2. Teacher login form

b. Home page

The teacher's main page contains information related to product catalogs, transactions, and product requests.

A screenshot of the teacher's main dashboard. The header has a blue bar with the text "Selamat Datang di SIMO EDU" and "Hi, Guru SMK". On the left is a sidebar with a "DASHBOARD" section containing links: "Beranda" (selected), "Profil SMK", "Kurikulum", "Produk", "Promosi", and "Pemasaran". The main area has three cards: a red one showing "Total Katalog Tersedia Hari ini" with the number 4; an orange one showing "Transaksi" with the number 0; and a green one showing "Permintaan Produk Hari Ini" with the number 0.

Figure 3. Halaman Beranda Guru

c. SMK Profile Page

Profile page, intended to write a SMK profile and also a list of products produced by SMK.



d. Curriculum Menu

The curriculum menu consists of several sub-menus namely: learning planning menu, learning process, and monitoring the learning process

1) Sub Menu of the Learning Implementation Plan

This monitoring information system is equipped with a lesson plan making feature so that it can be accessed at any time.

A screenshot of a web application interface titled "SIMO EDU". The left sidebar has a "DASHBOARD" section with links for "Beranda", "Profil SMK", "Produk", "Promosi", and "Pemasaran". Under "Profil SMK", there is a dropdown menu with "Kurikulum" selected, which has sub-options: "Rencana Pelaksanaan Pembelajaran", "Pembelajaran", "Proses Pembelajaran", and "Monitoring". The main content area is titled "Rencana Pelaksanaan Pembelajaran". It contains sections for "Kurikulum" (with fields for "KI" and "KD"), "Indikator" (with a "Tujuan Pembelajaran" section), and "Materi Pembelajaran" (with fields for "Masukkan materi pembelajaran..." and "Masukkan sub materi pelajaran"). A blue button labeled "Simpan" is at the bottom right.

Figure 5. Learning Plan Form

- 2) The Learning Process Sub Menu, which is intended to input the learning process in-clock out. Input learning material, upload material (teaching materials), input type questions (UTS UAS quiz

Kurikulum Detail

Kurikulum Indikator	1.Pengrajinan Menjahit, merenovasi, menganalisis, dan menganalisa tentang pengrajinan faktual, kognitif, operasional, taktis, dan metakognitif secara matididikin sesuai dengan bidang dan tingkat kejepakatan lemah pada tingkat teknis, sederhana, dasar, dan kompleks, berkenaan dengan lama dan pendek, serta mengetahui teknologi dan teknologi dalam pengrajinan dan obat-obatan bagi diri sendiri, keluarga, sekitar, dunia kerja, serta mengetahui nasional, regional, dan internasional.
Kompetensi Dasar	3.0 Mengidentifikasi permasalahan produksi massa. 3.01 Mengidentifikasi permasalahan produksi massa. 3.11 Menentukan indikator keterhasilan tahapan produksi massa. 3.12 Membuat indikator keterhasilan tahapan produksi massa. 3.13 Melakukan produksi massa.
Kegiatan Pembelajaran	1.Memahami indikator keterhasilan tahapan produksi massa. 2.Menentukan indikator keterhasilan tahapan produksi massa. 3.Membuat produksi massa. 4.Melakukan produksi massa.
Waktu	5 x 15 IP

Input Proses Pembelajaran

Tanggal	mm/dd/yyyy	Pertemuan	Pertemuan 1
JAM MASUK	08:00	JAM KELUAR	10:00
Materi Pembelajaran	*Seluruh materi pembelajaran		
(Pilih Materi Pembelajaran)			
Keterangan	Hanya Tambahan		
Upload Materi	<input type="button" value="Choose File"/> No file chosen		

Input Soal

Jenis Soal	Tugas		
Masukkan Pertanyaan ...			
A	Jawaban A ...	B	Jawaban B ...
C	Jawaban C ...	D	Jawaban D ...
E	Jawaban E ...	Pilih Jawaban Yang Benar A	
Absensi	Pilih Kelas		
No	Nis	Nama	Status Hadiran

Figure 6. Implementation Form Learning

- 3) Monitoring sub-menu

Monitoring is intended to monitor absenteeism, student grades, monitoring material conformity with lesson plans, task monitoring

e. Product Menu

Intended for the manufacture of products produced in edupreneurship activities

#	Tanggal Dibuat	Pesanan	Kode Mitra	Nama Produk	Status	Action
1	2023-10-01	123456789	Mitra1	Produk A	Active	Edit
2	2023-10-02	987654321	Mitra2	Produk B	Active	Edit
3	2023-10-03	123456789	Mitra3	Produk C	Active	Edit

Figure 7. Product creation form

f. Promotion Menu

The promotional menu is intended to view and measure the success of the promotion with a graph that shows the number of product purchases and the location of the buyer.

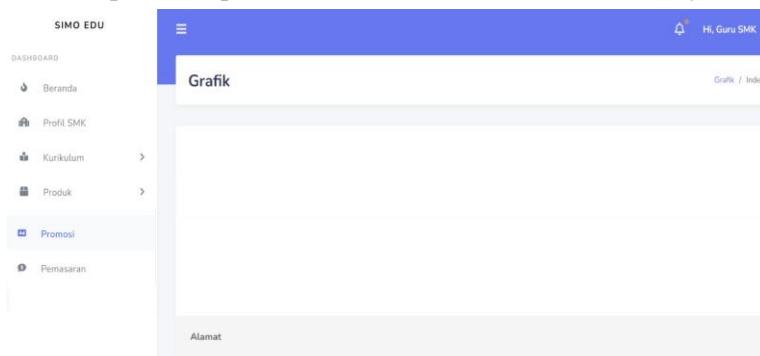
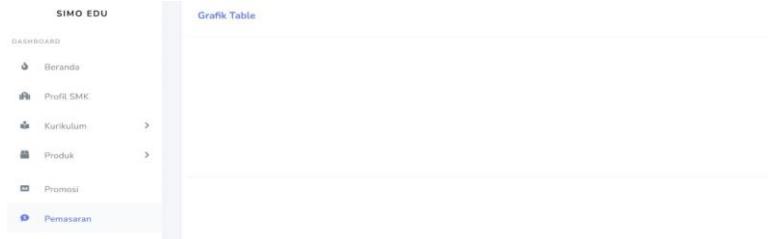


Figure 8 Promotion Menu page

g. Marketing Menu

The marketing menu is intended to see the marketing results of products from SMK which are displayed graphically.



2. Testing

In the next stage, then proceed to the module testing process to find out whether the software is in accordance with its design and functionality or not. System testing is the unification of program units and then tested as a whole. At this stage testing is also carried out. At this stage the researcher uses the black box method to test system functionality. The results of the SIMO-Edu PKK media black box test are as follows:Table results testing login page:

The login page explains the components on the page so that it can function as expected. As seen in Table 2.

Table 2.
Login Page Test

Test Scenario	Expected results	Results
Enter <i>username and password</i> with invalid or incorrect teacher data	The system denies access to the main menu	Succeed
Enter <i>username And password</i> with valid or correct teacher data	System displays the main menu page	Succeed
Click "Login"	1. Admin will enter the main menu (<i>dashboard</i>) 2. Teachers, students, partners and the community enter the	Succeed

	main menu (dashboard)	
--	---------------------------	--

a) Teacher Page Test

Table testing Teacher page explains about component on the page that so you can function as expected . As shown in table 3 *Table 3. Teacher Page Test*

Scenario Testing	Expected results	Results
Click the SMK <i>profile menu</i>	Showing page profile high school	Succeed
Click " <i>added catalog</i> "	Displays the added form catalog	Succeed
Input and upload images catalog , save <i>changes</i>	data successful stored and displayed page catalog	Succeed
Click on the <i>curriculum menu</i> "	Displays the design sub menu implementation learning , learning process , monitoring	Succeed
	Showing page design implementation learning	Succeed
Input KI KD indicators objective learning allocation time	data successful stored and displayed learning process page	Succeed
Click learning process	Showing learning process page	Succeed
Input the learning process form, date enter Meeting hours in hours out save , change , taught	data successful stored and displayed the results of the learning process on monitoring data	Succeed

material , upload material , input soa .		
Click attendance class ,	Showing page choose class and monitoring recapitulation meeting	Succeed
Click Value monitoring	Showing value monitoring page , work status , score, competence and value entrepreneurial character	Succeed
Click on the promotion menu	Showing page promotion	Succeed
Click on the marketing menu	Showing page marketing	Succeed

Based on the results of black box testing, it is known that all system components are functioning properly. After all the units or modules that have been developed and tested in the next implementation stage are integrated into the overall system. After the integration process is complete, further inspection and testing of the system as a whole is carried out to identify possible system failures and errors. And the result is no longer found system failures and errors.

3. Maintenance

At the maintenance stage it is carried out if in the process of utilization/use there are still features that need to be repaired. Because at this stage it will be done to fix errors when the application system is used by the target or user.

Results and Discussion

Based on the implementation results, it can be seen that this system provides several features that can facilitate teachers in measurable work operations so that teachers can further improve their performance while honing creativity so that learning can be more meaningful and achieve its goals. Some results of the implementation of each feature can be seen in the next explanation.

1. Dashboard page

This page is intended so that teachers can see the number of products available per day, can also see transactions from sales, and the number of requests for goods in real time.

Goals:

Through the information provided on this page the teacher can take action on the information presented. For example, in relation to product demand and product sales, if there are many requests, the teacher can immediately order students to make more products or if there are few requests, the teacher can explore creative abilities so that sales can increase. Other policies can also be carried out by teachers regarding this matter which are adapted to the conditions of each school as shown in Figure 9

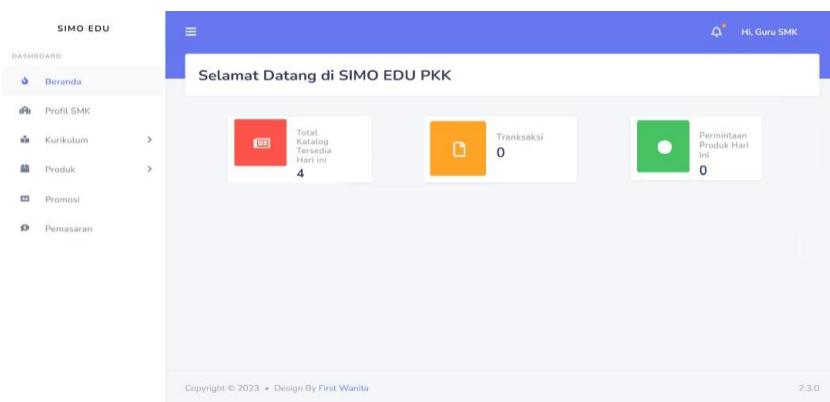


Figure 9. Home page

2. SMK Profile Page

On this page you can display SMK profiles in the form of school photos and information related to the school as a form of socialization as well as school promotion to the public. It also provides an added catalog feature to add to the types of products produced by schools. As seen in figure 10

SIMO EDU

DASHBOARD

- Beranda
- Profil SMK**
- Kurikulum
- Produk
- Promosi
- Pemasaran

Hi, Guru SMK

Katalog / Index

Katalog SMK 8

Profil SMK 8

SMKN 8 Makassar adalah Sekolah Mernengah Kejuruan (SMK) Negeri yang berlokasi di Propinsi Sulawesi Selatan Kabupaten Kota Makassar dengan alamat jl. Water Monginsidi No. 17. Baca selengkapnya...

Tabel Produk

#	Nama Produk	Harga	Gambar	Aksi
1	Coklat cake	75000		Hapus
2	Pisang Nugget	15000		Hapus
3	Rabokki	15000		Hapus
4	Snack Box 1	15000		Hapus
5	Tela-Tela	15000		Hapus
6	Aneka Kue Basah	15000		Hapus
7	Aneka Roti	15000		Hapus
8	Es Nutrigel	12000		Hapus

Show 10 entries

Search:

Showing 1 to 8 of 8 entries

Previous [1](#) Next

Figure 10. SMK Profile Page

3. Curriculum

In the curriculum menu there are 3 sub-menus namely:

- a. Learning planning menu, through this form the teacher can make lesson

plans online. This is done so that in implementing teacher learning, teachers are always guided by the lesson plans. Implementing KI KD so that you can further explore the teacher's ability to make interesting lesson plans with the material presented.

The goal:

In this form the teacher can input all the material and subject matter that will be taught for one semester. So that in the teaching process the teacher only has to choose material that has been made before in the lesson plan so that the synchronization of teaching material with the lesson plans can be realized properly. and systematic, so that it is easy and practical for teachers to use in the teaching process. The results of making RPP using the system can be seen in Figure 11.

SIMO EDU

DASHBOARD

Beranda

Profil SMK

Kurikulum

- Rencana Pelaksanaan Pembelajaran
- Pembelajaran
- Proses Pembelajaran
- Monitoring

Produk

Promosi

Pemasaran

Hi, Guru SMK

Rencana Pelaksanaan Pembelajaran

Kurikulum

IKI

1.Pengetahuan

KD

3.10. Menganalisis perencanaan produksi massal.

Instrumen

Indikator

Alokasi waktu

3.11. Melalui indikator keberhasilan tahapan produksi massal.

5 x 16 IP

Tujuan Pembelajaran

1.Memahami indikator keberhasilan tahapan produksi massal

Materi Pembelajaran

BAB 1 PRODUKSI MASSAL

1.Keberhasilan produksi massal 2.indikator keberhasilan

1.Pengertian produksi massal 2.klasifikasi produksi

Materi Pembelajaran

BAB 2 PERKITAN PRODUK

1.Pengertian metode perakitan produk barang(jasa 2.)

Materi Pembelajaran

BAB 3 PENGUJIAN DAN EVALUASI PRODUK

1.Pengertian prosedur pengujian fungsi produk barang

1.Pengertian prosedur pengujian fungsi produk barang

Materi Pembelajaran

BAB 4 MEDIA PROMOSI

1.Arti dan tujuan promosi 2.Segmentasi pasar 3.Jenis

Materi Pembelajaran

BAB 5 PEMASARAN

1.Market plan 2.Strategi pemasaran

Simpan

Figure 11. Plan Form teaching

b. Learning Process Form

The learning process sub menu will appear by clicking on the curriculum menu, on this page the lesson plan that was made before is realized, the learning process form is as shown in Figure 12.

The screenshot shows the SIMO EDU platform interface. On the left, there is a sidebar with various menu items: DASHBOARD, Beranda, Profil SMK, Kurikulum, Rencana Pelaksanaan Pembelajaran, Proses Pembelajaran, Monitoring, Produk, Promosi, and Pemasaran. The 'Proses Pembelajaran' menu item is highlighted. The main content area is titled 'Proses Pembelajaran'. It contains a table with four rows:

Kurikulum Detail	
Kurikulum Indikator	3.Pengembangan Menaksimi, menerapkan, menganalisis, dan mengevaluasi tentang pengetahuan faktual, konseptual, operasional lanjut, dan metakognitif secara multidisiplin sesuai dengan bidang dan lingkup kerja kompetensi keahlian pada tingkat teknis, spesifik, detil, dan kompleks, berkenaan dengan ilmu pengetahuan, teknologi, seni, budaya, dan humaniora dalam konteks pengembangan potensi diri sebagai bagian dari keluarga, sekolah, dunia kerja, warga masyarakat nasional, regional, dan internasional.
Kompetensi Dasar	3.10. Menganalisis karakteran produksi massal; 4.10. Menerapkan metode produksi massal; 3.11. Menentukan indikator keberhasilan tahapan produksi massal; 4.11. Membuat indikator keberhasilan tahapan produksi massal; 3.12. Menerapkan produksi massal; 4.12. Melakukan produksi massal;
Kegiatan Pembelajaran	1.Memahami indikator keberhasilan tahapan produksi massal. 2.Membuat indikator Keberhasilan tahapan produksi massal. 1.Membuat alur produksi massal 2.Merancang proses produksi massal 3.Membuat produksi massal yang berkelayutan 1.Memahami metode perakitan produk barang/jasa

At the bottom of the table, it says 'Fitur fitur . Proses 5 x 16 .jp'

Furthermore, on this page, the teacher will also input the learning implementation process by filling in the entry and exit times of learning, selecting material and sub-material, a description of the learning model, namely discussion, practice, lecture or inquiry, and uploading material based on the material to be taught. based on the meeting to be taught.

The goal:

In order to make it easier for teachers to teach because it is carried out in a systematic, planned and monitored and measurable manner, teachers can provide instruction to students regarding discipline by entering on time and leaving on time, also teaching exemplary related to systematic, structured, scheduled, planned and measurable learning models , in addition to inputting absences, this form also provides inputting questions based on the type of quiz, assignments, UTS, UAS. teacher, so that

later he can answer the questions well, it makes it easier for the teacher to share the material to be taught, the teaching form is as shown in Figure 13.

Figure 13. form Teaching Process

Furthermore, on this page the teacher can also measure the absorption of learning by providing feedback by giving students quizzes or assignments based on the material just taught, the form for making questions as shown in Figure 14

Figure 14. Form Input Soal

On the page this teacher should too do attendance to presence participant educate as in.

Absensi BOGA 1			
No	Nis	Nama	Status Kehadiran
1	-	NURUL FITRIANI	Hadir
2	-	NURUL SHIFRA UTAMI	Hadir
3	-	RESKIA DEWI RARA	Hadir
4	-	SALSABILA KARIM	Hadir
5	-	SALSABILA PUTRI KIRENA	Hadir
6	-	Adhyha	Hadir
7	-	Muh Raffy Syaputra	Hadir
8	-	Andika Rezi Putra	Hadir
9	-	Atika Agus	Hadir

Figure 15. absence Student

1. Display the Monitoring Menu Page

The display of the monitoring page can be seen by clicking the curriculum menu then clicking the monitoring sub menu, a monitoring page will appear, on this page you can monitor student attendance and recapitulation, monitor material suitability, monitor student assignment collection and check it,

Absence monitoring and recapitulation is intended to make it easier for teachers to monitor student absences so they can take preventive action when there are students who are often absent, based on this information teachers can also introspect themselves on how learning is related to student attendance, explore all skills to support the learning process can run well. absence monitoring is shown in Figure 16.

Nama Siswa	Pertemuan Ke								Rekap	
	1	2	3	4	5	6	7	8	Hadir	Izin
TIWI	Present	Present	Present	Present	Present	Present	Present	Present	8	0
LINA WI NTI	Present	Present	Present	Present	Present	Present	Present	Present	8	0
IMI IFA NDY JANA TRI	Present	Present	Present	Present	Present	Present	Present	Absent	7	0
Albar zani yah mo graini	Present	Present	Present	Present	Present	Present	Present	Present	8	0
i Ayu tari	Present	Present	Present	Present	Present	Present	Present	Present	8	0
alita imy zh. tana ik B iwa ifffa	Present	Present	Present	Present	Present	Present	Present	Present	8	0
Aulia eti niah vano yang uas andi	Present	Present	Present	Present	Present	Present	Present	Present	8	0

Figure 16. Monitoring and recapitulation absence

On the page teachers can too monitor assignments and grades students who can seen in figure 17.

Monitoring Nilai						Export Excel
Tanggal	Pertemuan	Kelas	Jam Masuk	Jam Keluar	Aksi	
2022-10-10	1	BOGA 2	07:30	14:45	<button>View</button> <button>Hapus</button>	
2022-10-17	2	BOGA 2	07:30	14:45	<button>View</button> <button>Hapus</button>	
2022-10-24	3	BOGA 2	07:30	14:45	<button>View</button> <button>Hapus</button>	
2022-10-31	4	BOGA 2	07:30	14:30	<button>View</button> <button>Hapus</button>	
2022-11-14	5	BOGA 2	07:30	14:45	<button>View</button> <button>Hapus</button>	
2023-01-28	6	BOGA 2	10:30	11:30	<button>View</button> <button>Hapus</button>	
2023-02-13	7	BOGA 2	07:30	14:45	<button>View</button> <button>Hapus</button>	
2023-02-16	8	BOGA 2	07:30	14:40	<button>View</button> <button>Hapus</button>	

Figure 17. Meeting Value Monitoring

The screenshot displays the SIMO EDU application interface. On the left, there is a sidebar with navigation options: Beranda, Profil SMK, Kurikulum (Rencana Pelaksanaan, Pembelajaran, Proses Pembelajaran, Monitoring), Produk, Promosi, and Pemasaran. The main content area has a blue header bar with the title "Penginputan nilai" and a user icon "H. Guru SMK". Below the header, there is a section titled "Detail Proses Pembelajaran" containing a table with the following data:

Tanggal	2022-10-10
Jam Keluar	14:45
Kelas	RODA 2
Jenis	quiz
Materi	BAB 1 PRODUKSI MASSAL
Sub Materi	1.Ketermasukan produksi massal 2.indicator ketertarikan produk massal

Below this, there is a table titled "Data" showing student attendance and scores for a meeting on 2022-10-20 at 21:30:16. The columns are: Nis, Name, Waktu Mengumpulkan, Status, Kehadiran, Score, Kreatifitas, and Mand. The data includes:

Nis	Name	Waktu Mengumpulkan	Status	Kehadiran	Score	Kreatifitas	Mand
-	PERTHWI	2022-12-20 21:30:16	Terhadap	Hadir	66.6666666666667	MT	MT
-	RETALINA DWI VANTI	2022-12-20 21:39:24	Terhadap	Hadir	66.6666666666667	MT	MT
-	URMI LATIFA	2022-12-20 21:40:42	Terhadap	Hadir	0	BT	BT
-	WENDY MELYUNA PUTRI	2022-12-20 21:41:47	Terhadap	Hadir	100	MT	BT
-	Muh Adhar Salsabila	2022-12-20 21:51:44	Terhadap	Hadir	100	MT	MT
-	Alyza Rini Anggraini	2022-12-20 21:50:47	Terhadap	Hadir	100	MT	MT
-	Dwi Ayu Lestari	2022-12-20 22:19:05	Terhadap	Hadir	100	MT	MT
-	Chaita Islamy	2022-12-20 21:41:59	Terhadap	Hadir	100	MT	MT
-	Muh. Maulana Malik B	2022-12-20 21:41:14	Terhadap	Hadir	100	MT	MT
-	Najwa Hanifah	2022-12-20 21:40:38	Terhadap	Hadir	33.33333333333333	BT	BT
-	Nur Aulia	2022-12-20 21:39:43	Terhadap	Hadir	66.6666666666667	BT	BT
-	Azul Isannah Gesyain Sitiqoh	2022-12-20 21:36:53	Terhadap	Hadir	100	MT	MT

Figure 18. Monitoring Value of each meeting

In the monitoring form, the teacher's score can measure the results of the teaching carried out by looking at the high and low scores of students. It also looks at the discipline of students from the time of collection, so that if the results are not in accordance with the teacher's expectations, they can further improve the performance of strategies and creativity in teaching.

On this page the system will also monitor the suitability of the material that has been taught with the lesson plans and also monitor the suitability of tasks with the material being taught. As in figure 19.

SIMO EDU	Tanggal	Pertemuan	Rencana Pembelajaran/Silabus	Materi yang diajarkan	Materi tambahan	Kesuaian
DASHBOARD	2022-10-10	1	BAB 1 PRODUKSI MASSAL 1.Kebenaran produksi massal. 2.Indicator keberhasilan produksi massal.	BAB 1 PRODUKSI MASSAL 1.Kebenaran produksi massal 2.Indicator keberhasilan produksi massal	-	✓
Beranda	2022-10-17	2	BAB 1 PRODUKSI MASSAL 1.Pengertian produksi massal 2.Klasifikasi produksi massal 3.Cara mempraktikkan proses produksi massal 4.Rancangan produksi massal 5.Tahapan produksi massal	BAB 1 PRODUKSI MASSAL 1.Pengertian produksi massal 2.Klasifikasi produksi massal 3.Cara mempraktikkan proses produksi massal 4.Rancangan produksi massal 5.Tahapan produksi massal	-	✓
Profil SMK	2022-10-24	3	BAB 2 PERKITAN PRODUK 1.Pengertian metode perkitan produk 2.Klasifikasi perkitan produk dan bahan-bahan utama dan bahan pendukung alat bantuan 3.Stander alat dan bahan yang digunakan	BAB 2 PERKITAN PRODUK 1.Pengertian metode perkitan produk 2.Klasifikasi perkitan produk dan bahan-bahan utama dan bahan pendukung alat bantuan 3.Stander alat dan bahan yang digunakan	-	✓
Kurikulum	2022-10-31	4	BAB 3 PENGUIAN DAN EVALUASI PRODUK 1.Pengertian prosedur pengujian fungsi produk barang jasa 2.Cara Penerapan prosedur pengujian kesiuaian fungsi produk barang jasa	BAB 3 PENGUIAN DAN EVALUASI PRODUK 1.Pengertian prosedur pengujian fungsi produk barang jasa 2.Cara Penerapan prosedur pengujian kesiuaian fungsi produk barang jasa	-	✓
Rencana Pelaksanaan Pembelajaran	2022-11-14	5	BAB 4 MEDIA PROMOSI 1.Airi dan tujuan promosi 2.Segmentasi pasar 3.Jenis media dan bentuk promosi 4.Strategi promosi 5.Media-media promosi	BAB 4 MEDIA PROMOSI 1.Airi dan tujuan promosi 2.Segmentasi pasar 3.Jenis media dan bentuk promosi 4.Strategi promosi 5.Media-media promosi	-	✓
Proses Pembelajaran						
Monitoring						
Produk						
Promosi						
Pemasaran						

Figure 19. Monitoring Synchronization of teaching materials with lesson plans (RPP)

4. Product Menu

The product menu page is intended to find out the various kinds of products that are produced every day until they are ready to be promoted and marketed.

Pembuatan Produk						
Tabel Rancangan Produk						
#	Tanggal Dibuat	Pesanan	Kode Mitra	Nama Produk	Status	Action
1	16 - 02 - 2023	masyarakat	-	Aneka Kue Basah	success	
2	16 - 02 - 2023	masyarakat	-	Aneka Roti	proses	
3	16 - 02 - 2023	masyarakat	-	Tela-Tela	success	
4	16 - 02 - 2023	masyarakat	-	Es Nutrigel	success	
5	16 - 02 - 2023	masyarakat	-	Snack Box 1	success	
6	16 - 02 - 2023	masyarakat	-	Pisang Nugete	success	
7	15 - 02 - 2023	masyarakat	-	Coklat cake	success	
8	15 - 02 - 2023	masyarakat	-	Coklat cake	proses	

Figure 20. Form Product making

Products whose status is already successful means that they can be promoted and marketed to the public.

5. Promotion Menu

On this page the teacher can monitor the progress of student promotion assignments, as well as see the progress of the promotion's impact on product purchases. As in the picture 21

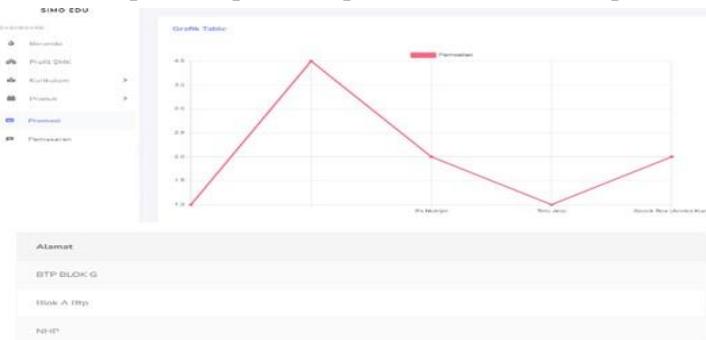


Figure 21 Menu Promosi

Based on the information from the graph it can be seen the sales figures and the area where the sales are made, based on the graphic information it makes it easier for the teacher to explain so that students are easier to understand. In addition, through the information provided by this system, it can help teachers make decisions regarding the next promotion target and measure the success of the promotion. so that the next promotion strategy can be developed.

6. Marketing Menu

On the marketing page the teacher can monitor the progress of student product marketing while at the same time seeing the development of sales results and product demand through the available graphs. Through this form it helps teachers teach knowledge as well as practice marketing and analysis of product sales results display marketing pages as shown in figure 22.

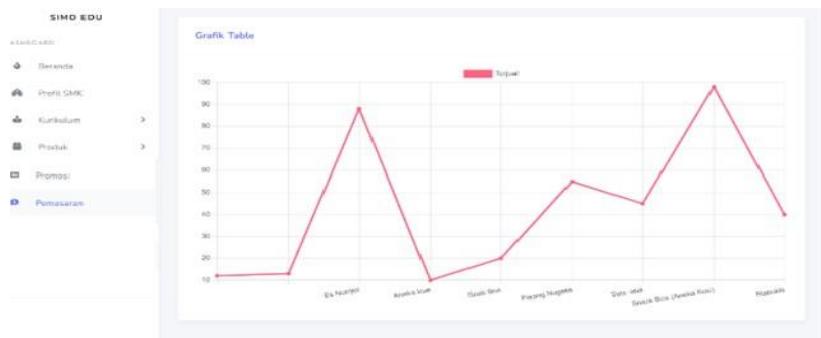


Figure 22. Marketing graph

From several explanations, it is known that the results of the implementation of the teachers are known that the monitoring information system developed is practical to use based on the results of the assessment of the response questionnaire for edupreneurship teachers in creative and entrepreneurial products subjects, catering majors at SMKN 8 Makassar. the results of the assessment of several aspects assessed include aspects of the User Interface and ease of use obtaining a score of 95.83 with Very Practical criteria, aspects of presentation clarity and aesthetics obtaining a value of 93.75 with Very Practical criteria, aspects of instructional quality obtaining a value of 97.5 with Very Practical criteria, aspects of expediency in learning obtained a value of 97.5 with Very Practical criteria. The overall results after being averaged from these four aspects obtain a value of 96.15 which is in the Very Practical category.

Conclusion

The monitoring information system developed is in the very practical category with the mean value of the 4 aspects of the assessment being 96.15. so that this system also greatly facilitates teachers in teaching edupreneurship operations which can help improve teacher performance and creativity in teaching and provide real experiences related to edupreneurship practices to students.

Acknowledgment

The author realizes that this research is not without flaws and errors. Therefore, the authors expect suggestions and criticisms for improvement in the future. The author expresses his deepest gratitude to Prof. Dr. Ir. Husain Syam, M.TP, IPU, ASEAN Eng. and Mrs. Prof.Dr.Ir. Hasanah Nur., M.T, for their guidance and input so far, the authors also thank the vocational school teachers and my father and son who are very understanding and always motivate me and those who have played a role and assisted in this research.

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The Effect of Budget Participation, Clarity of Budget Targets, Culture on the Performance of Government Apparatuses

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ABSTRACT

The purpose of this study was to examine the effect of budgetary participation, clarity of budget targets, culture, on the performance of government officials. This research method is quantitative. Using primary data. Primary data was obtained directly from the results of the questionnaire in the form of a google form which was filled in by respondents, namely local government officials in Manokwari. The questionnaire is in the form of a list of statements and the weight of the Likert scale questionnaire, namely scores from 1-5. The population in this study is the local government apparatus in Manokwari. The sample of this research is 65 local government officials in each field and city in Manokwari with certain criteria. The data analysis used is SPSS or Statistical Program for Social Science.

The results of this study indicate that the budget participation variable (X1) partially influences the performance of government officials (Y), where the tcount is $3.291 > \text{ttable } 1.987$ and the significance level is less than 0.05 ($\text{sig} = 0.000 < 0.05$). This shows that the budget participation variable (X1) has a significant effect on the government apparatus performance variable (Y). Furthermore, the variable clarity of budget targets (X2) partially affects the performance of government officials (Y), where the tcount value is $4.211 > \text{ttable } 1.851$ and the significance level is less than 0.05 ($\text{sig.} = 0.000 < 0.05$). This shows that the variable clarity of budget targets (X2) has a positive and significant effect on the performance variable of government officials (Y). The cultural variable (X3) partially affects the performance of government officials

(Y), where the tcount value is $3.082 >$ from the titable 1.767 and the significance level is less than 0.05 (sig. = 0.000 <0.05). This shows that the cultural variable (X2) has a positive and significant effect on the government apparatus performance variable (Y).

Keywords: budget participation, clarity of budget targets, culture, performance of government apparatus

Introduction

Local governments are required to provide services to the community by applying public service principles such as transparency, accountability, participation, equality of rights, and balance of rights and obligations, to carry out their rights and obligations and carry out the tasks assigned by the people (Sudirman I. N., (2021). Government must have a mature plan to achieve maximum results Performance measurement is considered an important and necessary element in the modernization of government entities (Sudirman, (2022).

Many local governments have not focused on determining priority programs, because all units receive funding allocations without clear priorities, resulting in the quality of each program being less than optimal (Mahdalena, (2022). several deviations resulted in the realization of the budget not following what had been programmed previously and ultimately had an impact on performance (Nanda, (2016).

The ability of local governments to manage finances can be seen from the regional income and expenditure budgets which reflect the ability of local governments to finance the implementation of government tasks, development, and services to the community (Harsonowati, (2013).

According to research results (Risdiana, (2018) higher participation in preparing the budget will produce effective information between superiors and subordinates so that communication between superiors and subordinates can run

smoothly. Furthermore, the results of Deftri's research (2017) explain that the clarity of budget targets affects the performance local government officials.

However, in contrast to the results of research conducted by (Wardani, (2015) Nurhalimah (2013), Huang. Cheng, Wang, and Wang (2021), research results show that the clarity of budget targets does not affect the performance of local government officials. Meanwhile, research on culture Organizations has been examined by Fauziah (2016) that organizational culture influences local government performance.

The importance of government performance functions is the reason for researchers to analyze the factors that influence performance. In local governments, services are provided by regional work units (SKPD), SKPD are responsible to the DPRD as supervisors and the public as users (Arfianti, (2011). One of the demands of the community on local government is to receive quality and responsive public services, because local government is a non-profit organization, the most important aspect of a service is the work ethic applied by managers/individuals within the organization. In government organizations a state apparatus has a role as a servant of the state, who voluntarily and sincerely provides services to the community regardless of differences in ethnicity, race, and religion, then ethics is important to be applied by state apparatus in providing services (Aira, (2017).

Formulation of the problem:

1. Does budget participation affect the performance of government officials?
2. Does the clarity of budget targets affect the performance of government officials?
3. Does organizational culture affect the performance of government officials?

The urgency of this study is budget participation, clarity of budget targets can be assessed as an approach of local government officials that can improve the performance of each member of the organization as an individual because, with participation, clarity in preparing the budget is expected each local government apparatus can improve its performance following the targets set previously set.

The purpose of this study is to examine budget participation, clarity of budget targets, and the culture of local government performance in Manokwari.

Review of Literature

Stewardship Theory

Stewardship theory is a theory that describes a situation where managers are not motivated by individual goals but rather aim at their main results for the benefit of the organization (Bunna, (2022)). In the public sector, this theory means describing a situation where apparatus are not motivated by goals - individual goals but more aimed at their main results for the public. In Stewardship Theory, the steward in this case is the government with the function of managing resources and the principal is the people as the owner of the resource. There is an agreement established between the government (stewards) and the people (principal) based on trust, collectively following the goals of the organization." experienced by the organization (Jatmiko, (2020)).

Public sector organizations have the goal of providing services to the public and being accountable to the public (public) so that stewardship theory can be applied in the case model of public sector organizations (Yuliani, (2021)). This is supported by research conducted by (Saffanah, (2022)) in his research that public sector organizations such as government and non-profit-oriented companies are following stewardship theory.

Government management acts more as a steward because it is influenced by the type of service provided, the level of public management capacity, the type of incentives and sanctions used, and the frequency of required information.

The performance of local government apparatus is directed at each work unit that has been given the authority to manage resources according to their respective fields, each work unit is a responsibility center that has its uniqueness, thus the formulation of performance indicators cannot be uniform to be applied to all existing work units. However, measuring the performance of each work unit must start by identifying the vision, mission, philosophy, policies, goals, objectives, programs, budgets, and tasks and functions that have been set by Mahsun (2006: 198) in Asrini (2017).

Budget participation is defined as the process of participation of managers of responsibility centers in preparing budgets and influencing budget targets as a major part of their responsibility (Wiwik Pratiwi, (2019). In public organizations, especially in regional government, the meaning of participation is the involvement of SKPD in preparing regional budgets (APBD) (Ermawati, (2017). SKPD Heads (Secretariat, agency, agency, office, inspectorate, and civil service police unit) are budget users or users of goods who are allowed to submit proposals related to the implementation of the Main Duties and Functions of SKPD he leads (Abdullah, et al. 2013). The key to effective performance is if the objectives of the budget are achieved and the participation of subordinates or staff plays an important role in achieving goals (Cantika, (2021). It is hoped that the performance of managers will increase by compiling participatory budgeting This is based on the premise that when a participatory designed objective or standard is agreed upon.

The clarity of budget targets is the extent to which the budget is set clearly and specifically with the aim that the budget

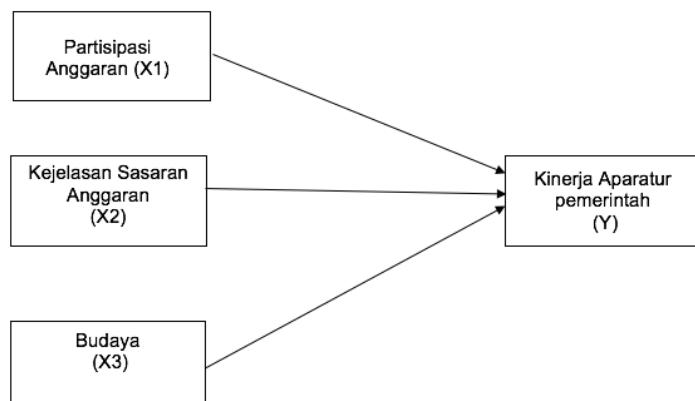
is understood by the person responsible for the budget (Ayuningtyas, (2020) In the context of local government, targets or also known as targets are the desired results of a program or the expected output of an activity (Pemendagri Number 13 of 2006 article paragraph 43). The problem of budgeting is a matter of studying the right budget targets because the clarity of budget targets as an approach in the social sciences is super disciplinary with a focus on each issue and policy involving the public interest both directly and indirectly (Norton and Elson, (2002); Donovan and Larkin, 2006). The role of budget targets in the planning process for public budgets has been a long debate. The clarity of budget objectives in the public budget planning process will always be closely related to a process of influence and decision-making. Political actions in the budget planning process can be seen as one of the goals of the political elite in achieving their goals.

Organizational culture is a system of values that is believed by all members of the organization and which is studied, applied, and developed on an ongoing basis, functions as an adhesive system and can be used as a reference for behavior in an organization to achieve organizational goals that have been set (Arifin, (2012). The cultural organization is important for an organization because organizational culture can provide implicitly owned assumptions and determine a group within the organization to be able to feel, think and react to its diverse environment. Organizational culture is something employees believe in and this belief can shape beliefs, values , and expectations (Agusti, (2012).

Organizational culture is important for an organization as a perception that can be embraced by members of the organization as a meaning or a shared system. Through organizational culture, groups within an organization can have better interactions between superiors and subordinates, either directly or indirectly

(Aulad, (2018). The process of forming organizational culture is related to group formation, namely in the distribution of thought patterns, beliefs, and values generated, sharing experiences individually or in groups. Organizational culture has a significant influence on how employees perceive their organization, for this reason, an organization needs to instill the same cultural values in each of its employees (Duvamindra, (2015). These values can form a sense of confidence, togetherness, and unity in each employee or group so that it can trigger a good and healthy performance environment that can encourage employees to work better and realize organizational or company goals.

Kerangka Konseptual



The hypothesis in this study are:

1. H1: Budget participation affects the performance of government officials
2. H2: The clarity of budget targets affects the performance of government officials
3. H3: Culture influences the performance of government officials

Method

This research uses quantitative description. The data source used is primary data. Primary data was obtained directly from the results of the questionnaire in the form of a Google form which was filled in by respondents, namely local government officials in Manokwari. The questionnaire is in the form of a list of statements and the weight of the Likert scale questionnaire, namely scores from 1-5.

The population in this study is the local government apparatus in Manokwari. The sample of this research is 65 local government officials in each field and city in Manokwari with certain criteria. The data analysis used is SPSS or Statistical Program for Social Science.

Results and Discussion

Validity test

Table 1
Validity Test
Source: Primary data processed in 2023

Variable	r	Significance counting	Information
Local government performance	0,789	0,001	Valid
Budget participation	0,554	0,000	Valid
Kejelasan sasaran anggaran	0,657	0,000	Valid
Culture	0,573	0,000	Valid

The results of the validity test on the four variables, namely budget participation (X_1), clarity of budget targets (X_2), culture (X_3), and government apparatus performance (Y) obtained the value of r for all items, namely above 0.361 and a significance value below 0.05. Therefore, it can be concluded that all items in these variables are valid or feasible to use for each variable.

Table 2
Reliability Test Source: Primary data processed in 2023

Variable	Cronbach's Alpha	Provision	Information
Government apparatus performance	0,875	0,60	Reliable
Budget participation	0,779	0,60	Reliable
Clarity of budget goals	0,765	0,60	Reliable
Culture	0,790	0,60	Reliable

Based on the results of the reliability test on each variable, it was found that the variable was reliable. This is evidenced by the value of the Cronbach's alpha value for each variable is above 0.60. It can be interpreted that the questionnaire used in research can be trusted as a data collection tool and can reveal actual information in the field.

Tabel 3
*Uji Parsial
 Coefficients^a*

Model	Unstandardized		Standardized		t	Sig.
	Coefficients	B	Coefficients	Beta		
(Constant)	.471	.307			1.236	.231

<i>Budget participation</i>	.425	.128	.401	3.291	.000
<i>Clarity of budget goals</i>	.405	.119	.414	4.211	.001
<i>Culture</i>	.417	.142	.423	3.082	.000

a. Dependent Variable: performance of local government officials

Table 4
Determination test results
Model Summary

Model	R	R Square	Adjusted R Square	Std. An error in the Estimate
	.758 ^a	.598	.447	1.683

a. Predictors: (Constant), budget participation, clarity of budget targets, culture

Discussion

The discussion of the results of the analysis test above is as follows:

1. The budget participation variable (X1) partially influences the performance of government apparatus (Y), where the t-count is $3.291 > t\text{-table } 1.987$ and the significance level is less than 0.05 ($\text{sig} = 0.000 < 0.05$). This shows that the budget participation variable (X1) has a significant effect on the government apparatus performance variable (Y). Budget participation is a joint decision-making process by two or more parties where the decision will have a future impact. In addition to participation in budgeting supports improving the performance of local governments in carrying out short-term planning and control within the organization.

2. The variable clarity of budget targets (X2) partially affects the performance of government officials (Y), where the t-count value is $4.211 >$ from the t-table 1.851 and the significance level is less than 0.05 ($\text{sig.} = 0.000 < 0.05$). This shows that the variable clarity of budget targets (X2) has a positive and significant effect on the performance variable of government officials (Y). This means that the clearer the clarity of budget targets in preparing the budget, the higher the performance of regional government officials in carrying out their duties and responsibilities. The clarity of budget targets causes local government officials to better understand the targets to be achieved in the future to improve performance.
3. The cultural variable (X3) partially influences the performance of government officials (Y), where the t-count value is $3.082 >$ from the t-table 1.767 and the significance level is less than 0.05 ($\text{sig.} = 0.000 < 0.05$). This shows that the cultural variable (X2) has a positive and significant effect on the performance variable of government officials (Y). This shows that organizational culture plays a very important role and greatly influences the performance of local governments. A strong culture will have a great influence on the behavior of its members because a high degree of togetherness and integrity creates an internal atmosphere in the form of high behavioral control. A strong culture will build cohesiveness and loyalty, these traits will lead to attitudes to advance government performance.
4. The results of the analysis above show that the value of RsSquare (R2) is 0.853 which means that the independent variables namely budget participation, clarity of budget targets, and culture can explain the dependent variable, namely the performance of government apparatus by 85.3% while the remaining is 14.7% explained by other factors not included in this research model.

Conclusion

Based on the results of the analysis that has been done, the following conclusions can be drawn:

1. H_1: accepted means that there is a significant influence between budget participation on the performance of government officials
2. H_2: accepted means that there is a significant influence on the clarity of budget targets on the performance of government officials
3. H_3: accepted means that there is a significant influence of culture on the performance of government officials

Suggestion

The suggestions for further research are as follows:

1. Future research needs to examine other factors that influence the performance of local government officials and examine or add independent variables and moderating variables that support this research.
2. Future research needs to use other data analysis methods besides multiple regression, for example, logistic regression so there is no need to eliminate outlier data.

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Reproduction and Cultivation of Abalone Shells in Indonesia

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ABSTRACT

Abalone is a marine gastropod that lives in coral reefs, has economic value (US\$ 5-6/kg). The potential and benefits of abalone are numerous, especially as a food with high nutritional value, distinctive taste, low cholesterol levels, and perceived benefits for increasing vitality. Sexes are separated between males and females. The female gonads are green and the male gonads are orange. Abalone begins to mature at 67.96 mm (male) and 67.15 mm (female), can spawn externally and throughout the year, the number of eggs is 10,000 – 11 million. Abalone prefer Gracillaria sp feed compared to Halimenia sp and Sargassum sp. Abalones can be given artificial feed with a combination of artificial feed and fresh feed Glacillaria sp. respectively 25% artificial feed + 75% fresh feed. The amount of feed is 20% of body weight. Maintenance time 6 – 12 months in seabed cages feeding once per day. Relative growth of 2.48%.

Keywords: abalone, Reproduction, artificial feed and cultivation

Introduction

Abalone (*Haliotis spp*) is a type of sea snail that lives in coral reef areas from a type of mollusk that has high economic value. Known as the seven-eye clam because it has 7 eye holes on the surface of the shell. Abalone is a favorite and prestigious food in Japan and Hong Kong. The price of tropical abalone in the Philippines in live condition is US\$ 5-6/kg, after the shell is removed the price is even more expensive, namely US\$ 10/kg and

Rp. 588,000/can of 425 ml volume and in dry form Rp. 1,877,000/200 gr on online media Tokopedia (2023), the price according to Kompas.com (2020) is Rp. 850,000 per head.

The potential and benefits of abalone are numerous, especially as a food with high nutritional value, distinctive taste, low cholesterol levels, and perceived benefits for increasing vitality (Taridala et. Al., 2021). Abalone contains 71.99% protein, 3.2% fat, 5.6% fiber, 11.11% ash, and 0.60% moisture content.

The spread of abalone in the tropics is from southern Japan to New South Wales, Andaman to New Caledonia, and tidal areas to a depth of 8 m in reef areas (Setyono, 2010). In Indonesia, these animals are found in West Nusa Tenggara, the waters of the Thousand Islands, Madura Island, the south coast of Java, Bali, Kalimantan, Sulawesi, East Lombok, West Sumbawa, and Maluku (Setyono, 2009; Agustina et.al., 2013; Ishak et al ., 2020). Hadijah, et al (2013) found the distribution of abalone in South Sulawesi, namely on Bonetambu Island, Spermonde Islands, Badi Island waters, Pangkajene Islands Regency, and Tana Keke Islands waters, Takalar Regency. The need for abalone on the world market is increasing, both in fresh and processed form. According to FAO 2016, world abalone production is 150,000 Metric Tonnes (MT). The main producers are China, South Korea, and South Africa. More than 53,500 tons of abalone were procured from Lianjiang County, Fujian Province. Seedlings are obtained through mass production which is carried out every year regularly. Seed production reaches 5 billion per year (South China Moring Post, 2022). In 2016 South Africa produced 15,000 MT of cultivated abalone. In 2022, South Korea will produce 16,772 MT of abalone with an economic value of 536.7 billion Won (Anonymous, 2023).

This high market demand has caused the abalone population to continue to be exploited so that it has decreased in several places of exploitation, even in certain areas which were previously easy to find and are now difficult to obtain and the fishing locations are also getting deeper (Omar et al 2006). In Indonesia, the decline in the abalone population is starting to be

seen in the small size of the catch and the decreasing number of catches.

To anticipate overfishing, efforts are needed to increase the number of tropical abalone populations in nature, namely using hatcheries which are then restocked into nature and cultivated. Since 2008 Hadijah, et al have conducted a series of studies starting from bioecological aspects, hatchery, and nutrition to abalone cultivation in sea bottom cages.

Method

This research method was carried out through literature studies on abalone. Libraries collected through Google Scholar, research gate in 2022. The research subjects on abalone include reproduction, seeding, and abalone enlargement techniques. Research data is limited to South Sulawesi waters, West Nusa Tenggara waters, and Bali waters.

Results and Discussion

Abalones are herbivorous marine gastropods of the genus *Haliotis*, shaped like shells, oval or pear-shaped, so they are called donkey ears. The shell is twice as long as it is wide and has 5-7 breathing holes. The basic color of the shell is brownish-green or greenish. The results of a study by Hadijah et al (2013) in the Tanakeke Islands showed that the shell size of male and female abalones ranged from 30.00 to 89.00 mm with body weights ranging from 2.90 to 123.53 g. The abalone has a pair of eyes, a mouth, and a large blowing tentacle. Inside the mouth, there is a scarred tongue (radula) that functions to scrape the algae into a size that can be digested.

The abalone life cycle starts with the egg. The eggs that have hatched and are microscopic life as floating larvae for about a week. Then the abalone larvae settle on the bottom of the water by attaching themselves to rocks or other objects using their swimming hairs (cilia) and begin to grow until their shell is formed. If it finds a suitable attachment site, the abalone will grow to maturity there. After 60 days it will become a juvenile and then

a young abalone. Abalones are kept for approximately 6-12 months for harvesting.

The sexes of abalone are separate between males and females (dioecious) and can already be distinguished in individuals whose gonads have begun to develop. The sexes can be distinguished by the color of the gonads. Female gonads are generally brown, green, or greenish, while male gonads are whitish orange (Rusdi et al, 2016). The results of the author's research in the Tanakeke Islands obtained that the ratio of male and female abalones was 1.29: 1.00. The percentage of the number of male abalones caught is always higher than the female abalone, except in April, June, and July of the same year. In general, abalone in the sub-tropics matures and spawns in the summer, whereas in the tropics abalone matures and spawns throughout the year (Nhan et. al. 2010). Factors that affect gonadal maturity can be distinguished into factors related to the endocrinology system or hormonal system that work in (endogenous) the abalone body and environmental factors that exist outside (exogenous) of the abalone body (Setyono, 2006, 2009).

Factors that affect gonadal maturity can be divided into factors related to the hormonal system that works inside the body and environmental factors that exist outside the abalone's body. The results of the study by Hadijah et al (2013) found that male abalones reached early gonadal maturity at a shell length of 67.96 mm, while female abalones reached a shell length of 67.15 mm. Based on my observations, the abalones in the Tanakeke Islands spawn throughout the year. Sperm or ovum is released through the pores associated with the respiratory apparatus. One individual abalone measuring 1.5 – 8 inches can produce 10,000 eggs to 11 million or more simultaneously. One abalone parent (shell length 5-7 cm) can produce 1,600,000 – 1,800,000 eggs (Rusdi, 2012)



Figure 1. Abalone *Haliotis asinina*

Sources: Hadijah, 2013

The abalone life cycle starts from the egg and then hatches into a larva, after which the larvae secrete veligers or swimming legs. Currently, the larvae have positive phototactic properties, abalone larvae can move (find food) by crawling, and after 60 days they will become juveniles and then become young abalones (Anonymous 2001). The abalone life cycle can be seen in Fig 2.

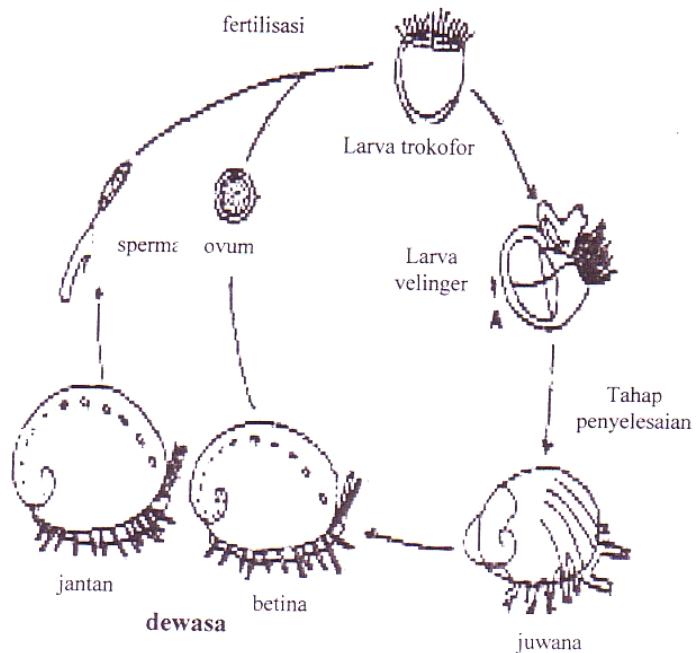


Figure 2. The life cycle of abalone (*Haliotis* sp) (Hutchins in Octaviani, 2007)

The eggs that have hatched and are microscopic life as floating larvae for about a week. Then the abalone larvae settle on the bottom of the water by attaching themselves to rocks or other objects using their swimming hairs (cilia) and begin to grow until their shell is formed (Anonymous, 2001; Octaviani, 2007). If it finds a suitable attachment site, the abalone will grow to maturity there. The possibility of the larvae surviving is very small. Most oysters and shellfish produce a lot of eggs every time they spawn or reproduce, but the mortality rate is high enough to reach 99% (Anonymous, 2001).

The sexes of abalone are separate between males and females (dioecious) and can already be distinguished in individuals whose gonads have begun to develop. The sexes can be distinguished by the color of the gonads. Female gonads are generally brown, green, or greenish (Figure 3) while male gonads are white or cream (Litaay, 2004; Anonymous, 2007b). Sperm or ovum is released through the pores associated with the

respiratory apparatus. One individual abalone measuring 1.5 – 8 inches can produce 10,000 eggs to 11 million or more simultaneously.

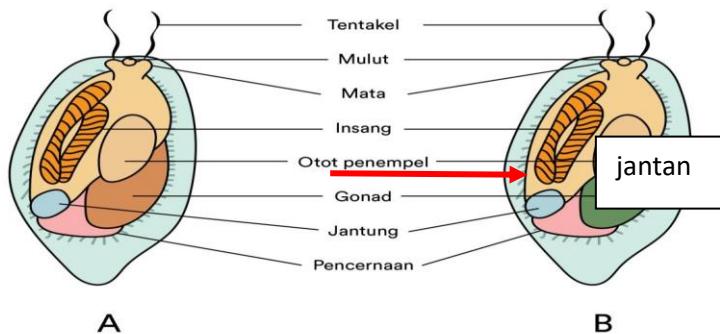


Figure 3. Male gonads are brownish orange (A) and female gonads are green (B) (Hadijah, 2023)

In general, abalone in the sub-tropics matures and spawns in the summer, whereas in the tropics abalone matures and spawns all year round. Factors that affect gonadal maturity can be divided into factors related to the hormonal system that works internally and environmental factors that exist outside (exogenous) of the abalone body (Setyono, 2006, 2009).

In general, abalones are herbivorous animals and eat many types of macroalgae, their way of eating is a grazer, namely gnawing food on the surface of rocks or where it is attached (Setyono, 2010; Hadijah et al., 2013).

The Role of Feed in Abalone Cultivation

One very important factor in abalone cultivation is the availability of feed. The challenge for abalone cultivation in the future is how to meet the need for efficient and quality abalone feed, in line with the development of increasingly dynamic cultivation from year to year (Soebjakto, 2021). Until now, the feed given to abalones reared in the sea is *Gracillaria* sp. However, even though it is easy to obtain and the price is cheap, its continuity in the sea does not last forever. Because it depends on

the results of cultivation which is usually done in ponds. Meanwhile, to cultivate abalone, it must be placed in seawater that is not exposed to fresh water (salinity 35 ppt).

Various types of macroalgae are the most preferred food for adult abalones in nature. Padua et al. (2004) classified algae into three groups based on color, namely green algae (*Chlorophyta*), brown algae (*Phaeophyta*), and red algae (*Rhodophyta*). Three factors influence the selection of algae species for abalone in nature, namely the presence of chemical metabolites present in algae, morphology, and nutritional value of algae (Shepherd & Steinberg, 1992; Giri et al, 2015). *Gracillaria* sp. generally reported for growth and gonadal maturation of *Haliotis* sp abalone (Singhagraiwan & Doi, 1992; Priyambodo et al., 2005; Setyono, 2006; Indarjo et al., 2007; Litaay et.al. 2005). According to the Ministry of Marine Affairs and Fisheries (2020), feed management is carried out according to the age of the abalone being kept. For the age of 1 month, they are given food in the form of diatom-type plankton at a dose of 1 million cells per ml. Then the feed in the form of seaweed types *ulva* and *gracilaria* is given at the age of 2 months to over 7 months with the ad libitum method (overfeeding). Hadijah et al (2015) previously used macroalgae as an ingredient in abalone feed but were constrained by the price and availability of macroalgae, which depended heavily on the season and transportation of its procurement. Further research was carried out by making artificial feed using algae flour as a source of carbohydrates and fish meal as a source of protein. The results showed that the growth of abalone was not as high as fresh macroalgae (Hadijah, 2017).

The research results of Hadijah et al (2015) showed that *Gracillaria* sp. is more preferred than *Halymenia* sp. and *Sargassum* sp. (Figure 4). Research by Hadijah et al (2014) showed that the use of feed doses of *Gracillaria* sp. 40% of body weight gives the best growth of abalone *Haliotis squamata* seeds.

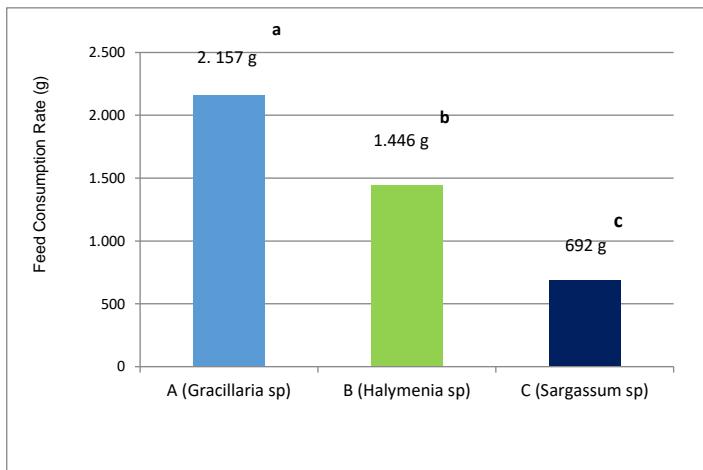


Figure 4. Graph of abalone feed consumption levels on different natural feeds

The success of abalone cultivation is highly dependent on the availability of feed, both natural feed and artificial feed. Research on artificial feeding of abalone has been done before (Fleeming et al, 1996; Garcia Esquivel et al, 2006; Effendy and Patadjai, 2009; Ansary et al, 2018). *H. discus hannai* fed formulations containing casein and soy flour showed higher growth rates, feed consumption, and FCR than those fed feed containing protein sources from fish meal alone (Uki et al., 1985; Sales et al., 2004). Hadijah et al.'s research results. (2015) showed that *Gracillaria* sp. natural feed provided the highest growth and survival for tropical abalone compared to other types of natural feed, namely *Halymenia* sp and *Sargassum* sp. This is because *Gracilaria* contains essential acids such as arginine, histidine, lysine, methionine, valine, and phenylalanine and non-essential amino acids such as alanine, aspartic acid, cystine, glutamic acid, glycine, and serine (Cajipe et al., 1978 & Teruel). et al., 2003). However, the use of natural feed in tropical abalone cultivation is not efficient because it has a high ratio of feed, besides that, it is not available continuously and is very dependent on the season.

Furthermore, research on the use of artificial feed in abalone cultivation has been carried out by Hadijah et al (2017) who used

feed with a protein content of 20, 25 and 30%. The results showed that feed with a protein content of 25% was better on the specific growth rate, feed efficiency, and survival of *H. squamata* abalone compared to a feed protein content of 20 and 30%. Currently, there are commercial feeds that can be found on the market with a protein content of 20-50%, carbohydrates of 30-60%, fat of 1.5-5.3%, and crude fiber of 0-3% (Lee et al. 2004).

Hadijah et al (2021) have studied a combination of artificial feed and fresh feed for *Gracillaria* sp seaweed which is good for the relative growth and survival of abalones reared in seafloor confinement. The results showed that the combination of artificial feed and fresh feed *Glacillaria* sp. respectively 25% artificial feed + 75% fresh feed is better than a combination of 50% artificial feed + 50% fresh feed and a combination of 75% artificial feed + 25% fresh feed. Research on various levels of *Gracillaria* sp in an artificial feed of 25%, 30%, and 35% have been studied by Hadijah et al (2020). The results of this study indicated that the level of *Gracillaria* sp in the feed had the same response to growth, survival rate, and body chemical composition of *H. squamata* abalone reared in sea bottom cages.

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Preliminary Study of Accretion Complexes of Mangilu Area, Pangkep Ragency South Sulawesi

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ABSTRACT

The exposure of Mesozoic rocks in the Mangilu area, both as a result of tectonic deformation in the form of mélange, low-high degree metamorphism and deep-sea sediments (flysch, radiolarian cherts and sediment flows in the form of olistostrome), which formed in the subduction zone indicates complex accretionary rocks. The purpose of this study is to identify and study the accretionary complex trace rocks of the Mesozoic era. The method used in this study was field observation including collection of geological data, tectonic deformation, rock groups and laboratory analysis (petrography). In general, the accretion complex is divided into 2 categories, namely a). oceanic volcanic groups and sediments of the oceanic crust; b). terigenous sediments from continents with sialic beds. The oceanic volcanic group consists of gabbro, diabase, dolerite, pillow and hyaloclastic lava, and oceanic sediments consist of radiolarian chert and mali limestone. The terigen sedimentary group consists of flysch type sandstones and olistostrome flow sediments with components in the form of granite, granodiorite, dacite and diabase. Other components found in autoclastic breccia rocks in the Mangilu area consist of metaperidotite, serpentinite, quartzite and metachert. Based on the Oceanic Plate Stratigraphy (OPS) arrangement, the autoclastic breccia rocks in the Mangilu area consist of

bottom up, namely ultramafic/serpentinite, gabbro, diabase, pillow basaltic lava, hyaloclastic, radiolarian chert, mali limestone and flysch sediments. The mixing of rocks originating from oceanic plates with continental plates in autoclastic breccias indicates that the Mesozoic accretion complex in the Mangilu area has experienced strong deformation in the form of thrust in the Tertiary era.

Keywords: accretion complex, autoclastic breccia, Mangilu

Introduction

The exposure of Mesozoic rocks in the Mangilu area is related to the imbrication of the Pangkajene thrust fault (Sukamto, 1982), both rocks resulting from tectonic deformation in the form of mélange, high-low degree metamorphism and deep-sea sediments such as flysch, radiolarian chert and olistostrome. The characteristics of these rock groups indicate their formation in subduction zones accompanied by the development of accretionary prisms.

When a mixture of autoclastic breccia components of various types and sources is examined, it can reveal the long history of the formation of the Mangilu accretion complex, starting from the expansion of the ocean floor, subduction on the continental margin accompanied by deformation, seamounts in the oceanic crust to the mixing of rock components in autoclastic breccias.

In general, according to Isozaki Y and Kimura G (1992) accretion complexes are grouped into 2 categories, namely a). oceanic volcanic groups and sediments from the oceanic crust in the form of gabbro, diabase, dolerite, pillow lava, hyaloclastic, radiolarian chert, metamorphic limestones; b). terrigenous sediments from continents with sialic beds such as flysch type sandstones, olistostrome granitic. Other components in the Mangilu accretion complex are deformed rock blocks such as metaperidotite, serpentinite, quartzite and metachert which complement the components of Oceanic Plate Stratigraphy (OPS).

The mixing of Mesozoic rock components in the Mangilu autoclastic breccia in the thrust zone can be interpreted as an

indication of the occurrence and exposure of autoclastic breccias by thrust faults in the post-Upper Cretaceous or Tertiary?.

Accretion Complexes (ACs), namely the accumulation of rock blocks in the subduction zone area from various rock types and sources with the main characteristics being the presence of OPS (Oceanic Plate Stratigraphy) and thrust imbrication structures, Isozaki Y and Kimura G (1992).

The study location is located in the Mangilu area, Pangkep Regency, South Sulawesi (Figure 1).

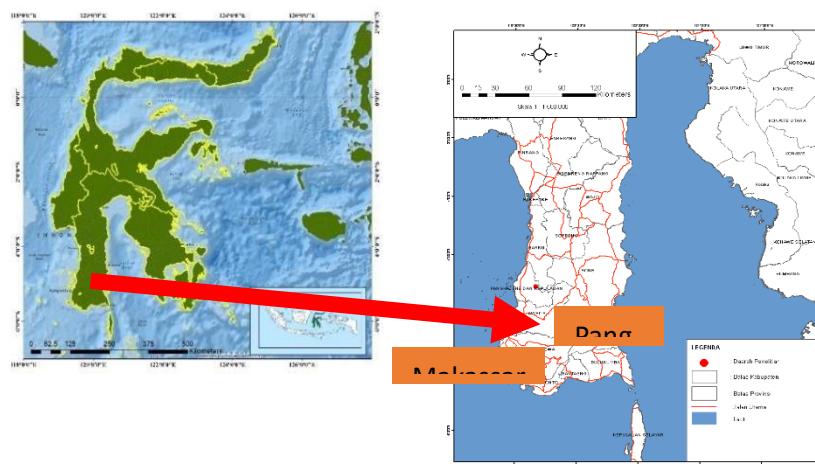


Figure 1. Map of the Research Location for the Mangilu area, Pangkep Regency, South Sulawesi

Methods

The research method used in this study is field observation including collection of geological data, tectonic deformation, rock sampling and laboratory analysis in the form of petrography. Petrographic analysis is emphasized on determining the name, the internal textural structure of the rock which is related to the degree of deformation and the type of rock.

Results and Discussion

The geological phenomena recorded by the outcrops of the Mesozoic and Cenozoic rock groups provide important information in the geological and tectonic settings of the Mangilu area which is part of the Bantimala complex.

Geological and Tectonic Framework

The lithology unit of the Mangilu area which consists of mélange, olistostrome, Rijang Radiolaria, Balangbaru Sandstone, autoclastic breccia, Mallawa Sandstone and Tonasa Limestone, can be described as follows (Kaharuddin et al, 2022, Hasanuddin, et al, 2022), Figure 2

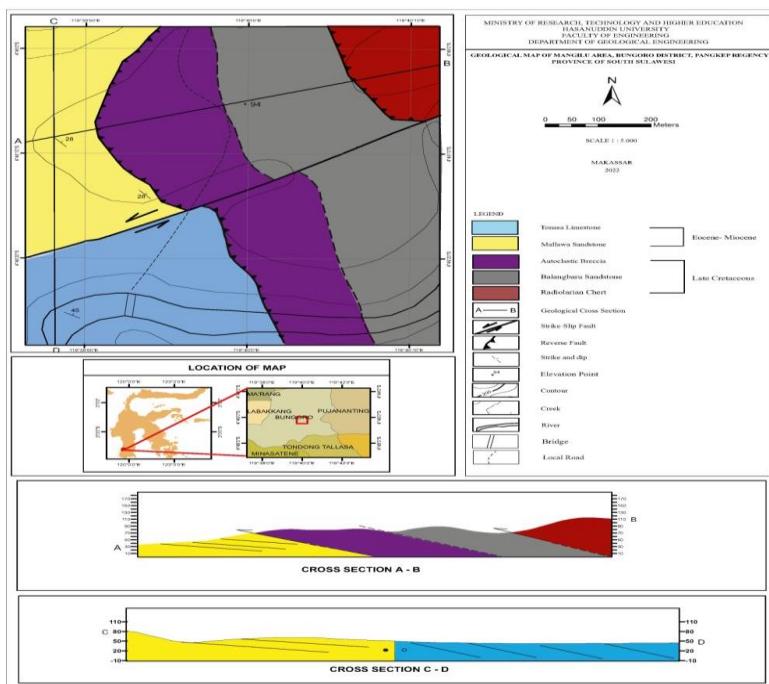


Figure 2. Geological map of the Mangilu area (Hasanuddin et al, 2022).

a. Melange

Mélange as the bedrock of this area consists of the Broken Formation and the Melange Autoclastic Formation. Broken formations are tears or joints in deformed rock with rock components/blocks without displacement (Festa et al, 2010, 2016)

occurring in green schist and metaperidotite (Figure 3). Mélange autoclastic is composed of blocks of blue schist, eclogite, green schist, granulite, amphibolite, quartzite, metachert and metaperidotite, boudin/lensis form with tectonic texture, measuring 30 cm - 1000 cm. The rock blocks are surrounded by green schist foliation and a matrix of flasers (Figure 4). In mélange there are associations of deformed, folded and altered diabase rocks. It is exposed at the junction of the Pangkajene River, Pateteyang River and Cempaga River.

b. Olistostrome

The olistostrome or mélange sedimentary is above and the tectonic slice contacts the mélange below it (Kaharuddin et al, 2022). In contrast to the olistostrome in the Bantimurung area in Tondongtallasa, where the olistolith is dominant in oceanic crust (Kaharuddin et al, 2017; Kaharuddin, 2020). the olistostrome of the Mangilu area is dominated by olistolith (Abbate et al, 1970) granite, granodiorite, followed by chert, claystone, metalimestone/marble with a tecttonite texture, covered by matrix and claystone, olistolith granite and granodiorite with augen deformation structures (Kaharuddin et al, 2022), (Fig. 5).



Gambar 3. Singkapan *Broken Formation* dari Melange di sungai Pangkajene



Gambar 4. Singkapan Melange Autoklastik tekstur tektonit di sungai Cempaga.

c. Radiolaria cherts

Upper Cretaceous radiolarian cherts exposed in the Pangkajene River, Cempaga River and Pateteyang River, have undergone strong deformation in the form of upright folds, joints and some boudin structures (Figure 6).



Gambar 5. Olistostrom (X) kontak tektonik selice dengan Melange Broken (Y) bawahnya di sungai Pangkajene (Kaharuddin, dkk, 2022).



Gambar 6. Singkapan Rijang Radiolaria (X) Kontak Olistostrome(Y) bagian bawah di sungai Cempaga

d. Balangbaru sandstone

The Upper Cretaceous Balangbaru sandstone is a flysch type sediment consisting of alternating sandstone, siltstone, conglomerate and shale and chert inserts (Sukamto, 1982). The position of the rock layers between N 340°E/45°-N 5°E/75° shows symptoms of deformation in the form of systematic joints, boudin, broken, scale structures and microfolds due to overpressure (Figure 7).

e. Mallawa sandstone

The Mallawa sandstone is a Paleocene-Eocene Tertiary rock (Sukamto, 1982) whose position is as an autotom block/foot wall by the Pangkajene thrust so that the condition has been deformed as well, there are even symptoms of position reversal where the base breccia is at the top in the contact zone of Mesozoic rocks (sandstones Balangbaru). Mallawa sandstone consists of quartz sandstone, claystone, marl and calcarenite containing foraminifera fossils, there are coal inserts and some are altered to form kaolin (Figure 8).



Gambar 7. Singkapan Batupasir Balangbaru menampakkan struktur sisik di sungai Pangkajene (Kaharuddin, dkk ,2022).



Gambar 8. Singkapan Batupasir Mallawa (X) kontak sesar naik dengan Breksi Autoklastik (Y) di daerah Mangilu

f. Tonasa Limestone

The Tonasa limestone has also been deformed by the Pangkajene thrust in the form of joints and boudin symptoms and fault breccias. Including Tertiary rocks of Early Eocene-Miocene age (Figure 9).

g. Autoclastic Breccia

Autoclastic breccia exposed in Mangilu was formed by tectonic and structural deformation processes, did not experience a transport medium but was formed by crushing or fragmentation of rock layers in the Pangkajene thrust fault zone during the pre-Upper Miocene. Shows a flasher structure with the alignment of rock blocks from southeast to northwest (N 325°oaE). The rock component consists of rock

blocks measuring around 0.1-10 meters consisting of schist, quartzite, marble, chert and metachert, greenstone, serpentinite, plagioclase peridotite, gabbro, diabase and dolerite, pillow lava, hyaloclastic, Balangbaru sandstone. and cataclastic breccias with fragments of sandstone, quartzite, marble and shale (Hasanuddin et al, 2022).

The rock blocks show a tecttonite texture, in the form of broken, slickenside, bending, crushing, lensing and flasher and some have been altered with the minerals chalcopyrite and calcite (Figure 10).



Gambar 9. Singkapan Batugamping Tonasa dengan struktur boudin di sungai Pangkajene (Hasanuddin, dkk. 2022)



Gambar 10. Singkapan Breskin Autoklastik menunjukkan struktur flaser dan blok serpentinite (X) di daerah Mangilu

Convergent tectonics that have occurred since the Mesozoic era formed the subduction of oceanic crust into the continental plate accompanied by tectonic deformation which will produce high-grade metamorphic rocks in the form of blue schist, eclogite, granulite, green schist, marble, quartzite and amphibolite (Zulkarnain, 1999). In line with the formation of these metamorphic rocks in the subduction zone under the accretionary prism, mélange, diabase and olistostrome were formed during the Jurassic period. Then in the Upper Cretaceous period followed the formation of Radiolaria Rijang, Balangbaru Sandstone.

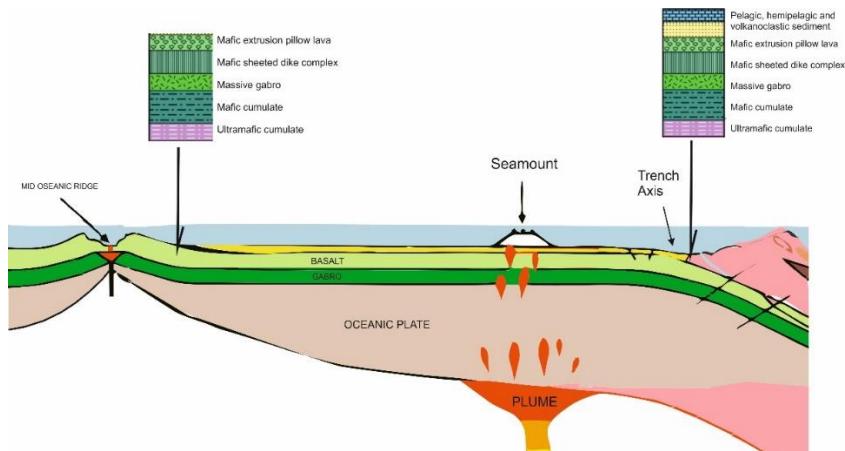
Outcrops of high-grade metamorphic rocks associated with low-grade, mélange, ultramafic, olistostrome granitic are the result of deformation of the oceanic crust subduction system into the continental margin plate during the Jurassic to Early Cretaceous, around 114-132 million years ago (Zulkarnain, 1999).

From thermobarometric calculations of garnet-glaukofan, it shows a temperature of 580o-640oC and a pressure of 18 -24 Kbar (Miyazaji et al, 1996) at a depth of 65 - 85 km. From the results of plotting the mélange block in the geotectonic diagram and spider diagram on trace elements and rare earths as well as petrographic observations, it shows that the mélange protolith was formed in the MORB, OIB tectonic environment (Kaharuddin, 2020) while from the Granite olistolith Mangilu is in the Active Continental Margins (ACM) of the toelite and calc-alkaline rock series (Kaharuddin et al, 2022).

Lithological Characteristics of the Mangilu Accretion Complex

The Mangilu Accretion Complex is composed of a mixture of rock groups resulting from convergent tectonic deformation in subduction zones (Kusky, 2013; Izosaki and Kimura, 1992), accretion occurs starting from the center of the ocean floor expansion with Mid-Oceanic Ridge Basalt (MORB), carbonate and chert , and Ocean Island Basalt (OIB) from seamounts and pelagic sediments, to the subduction

zone where metamorphic rocks, mélange and terigen sediments are formed in the form of flysch and gravity flow type sediments (Sukamto, 2011) in the form of sandstone and olistostrome (Figure 11).



Gambar 11. Penampang Stratigrafi Lempeng Oseanik,migrasi komponen batuan dari pusat Pemekaran (MOR) hingga zona subduksi tepian kontinen, adopsi dari Kusky. T.M, dkk. (Hasanuddin ,dkk. 2022).

Accretion from this rock group is arranged in a perfect oceanic plate stratigraphic order (OPS) in subduction zones on the continental margin. In general, accretion complexes according to Isozaki Y and Kimura G (1992) are grouped into 2 categories, namely:

- a. The oceanic crust group is an oceanic volcanic component consisting of greenstone, pillow lava (basal, diabase and dolerite) from the Ocean Island Basalt (OIB) seamount, and pelagic sedimentary components such as radiolarian chert which has partially metamorphosed into quartzite and limestone which turns into marble.
- b. A group of sediments of onshore origin or tertiogenous sediments consisting of the flysch type Balangbaru sandstones

and gravity flow type turbidite sequences in the form of olistostrome granitic (Kaharuddin, 2022).

The base component of the oceanic plate stratigraphy (OPS) is serpentinite, the cumulative peridotite is plagioclase and gabbro peridotite. The appearance of mélange with components of green schist, blue schist, quartzite and marble is related to the exclusion of Pangkajene imbricated thrusts from the interior of the subduction zone on the continental margin.

Based on the structure and occurrence, the accretion complex is divided into 3 types (Isozaki Y and Kimura G, 1992), namely:

- a. Coherent-type consists of sediment-dominant subtypes and oceanic volcanics-dominant (Oceanic Island Basalt)
- b. The olistostrome-type consists of a high pressure block-free subtype and a high pressure block-bearing subtype
- c. Serpentinite mélange-type; metamorphic high P/T serpentinite block chips

Based on the characteristics and structure of the Mangilu Accretion Complex including the type of olistostrome accretion with the composition of its components a mixture of sedimentary material from the Oceanic Plate Stratigraphy (OPS) component and the coherent type accretion component. Based on the type of component, the exposed olistostrome in Mangilu is divided into 4 types, namely:

- a. Olistostrome with high pressure (olistolite) fragments (serpentinite, silisified and quartzite) exposed in the Pateteyang River (Figure 12).
- b. Granik olistostrome with boudin or lensis granite olistolite, exposed in the Pangkajene River (Figure 13)



Gambar 12. Singkapan Olistostrome dengan olistolith tekanan tinggi serpentinite,silisified dan kuarsit (X) kontak dengan Riang Radiolaria (Y) di sungai Patteteyang.



Gambar 13. Singkapan Olistostrome Granitik di Sungai Pangkajene

- c. Granodioritic olistostrome with granodiorite, dacite and diabase olistolite exposed in the Cempaga and Pateteyang Rivers (Figure 14)
- d. Carbonatic olistostrome with olistolite of limestone, claystone, dacite and chert, bound to a scale claystone matrix, exposed in the Pateteyang River (Figure 15)



Gambar 14. Singkapan Olistostrome Granodioritic di sungai Cempaga



Gambar 15. Singkapan Olistostrome Karbonatik, olistolith batugamping (X) tertanam dalam batulempung sisik (Y) di sungai Cempaga.

The presence of Ocean Island Basalt (OIB) components and carbonate rock associations as a characteristic of olistostrome type accretion in the trench zone of ancient seamounts (Isozaki and Kimura, 1992).

In the Balangbaru terigen flysch rock formation there are conglomerate lenses (with basal, claystone and limestone fragments), limestone fragments, coral fossils and coal lenses as an indication of avalanche material from the shallow sea into the deep sea trench in the form of gravity sliding as part of the olistostrome.

The Mangilu Accretion Complex was exposed by the Pangkajene imbricated fault faulting as many as three faults so

that the stratigraphic setting is more complicated and complex (Sukamto, 1982). Even the Pangkajene fault, which passes through Mangilu in a southeast-northwest direction, forms and reveals the autoclastic Mangilu Breccia which ascends/rides in a thrusting manner over the Tertiary rocks of the Mallawa Sandstones and Tonasa Limestones in the Neogene or pre-Upper Miocene (Hasanuddin et al, 2022).

Tectonic and Structural Implications

The outcrops of rock groups in the Mangilu Accretion Complex are sourced from high-low degree metamorphic rocks, mélange, trough deposits, Rijang Radiolaria, olistostrome granitic gravity flow deposits and flysch type sediments, Balangbaru Sandstones can be interpreted as subduction of oceanic crust into the continental margin at the time of Early Jurassic-Cretaceous where the Mangilu Accretion Complex was built Wakita, et al 1994; 1996; Yamada et al, 2009 and Setiawan et al, 2014).

Autoclastic breccia rocks containing rock blocks components from Mid-Oceanic Ridge Basalt, Ocean Island Basalt from seamount components, pelagic sediments from radiolaria and metalimestone, and terigen sediments in the form of Balangbaru flysch type sediments can show an oceanic plate stratigraphic component (OPS) as rock. constituent of the Mangilu Accretion Complex which has undergone tectonic abrasion by the Pangkajene thrust.

Polylithic autoclastic breccias exposed in the Pangkajene thrust zone between Rijang Radiolaria and Balangbaru Sandstones as a hanging wall with Mallawa Sandstones and Tonasa Limestones as foot walls (Figure 2).

Mixing of rock components between Mesozoic rock groups in Autoclastic Breccia and deformation and brecciation occurs in the Tertiary rocks of Mallawa Sandstone and Tonasa Limestone as well as alteration in Autoclastic Breccia and Mallawa Sandstone from Upper Miocene hydrothermal tractite rocks (Sukamto, 1982), it can be interpreted that the containment fault or the Pangkajene thrust occurred during the pre-Upper Miocene which formed the Mangilu Autoclastic Breccia.

Conclusion

1. The block components of high-low grade metamorphic rocks mixed in melange consist of blue schist, green schist, eclogite, granulite, quartzite, marble and amphibolite, indicating traces/fossils of subduction in the Mesozoic Age
2. Presence of ultramafic rock groups (MORB), dyke Basalt, Ocean Island Basalt, metalimestone, Balangbaru Sandstone (Flysch), a group of Ocean Plate Stratigraphy (OPS) rocks formed at the center of the oceanic division (Mid-Oceanic Ridge)) migrate up to the trench where accretionary prisms form
3. Based on the characteristics and structure of the Mangilu Accretion Complex, it belongs to the olistostrome type of accretion with the composition of its components a mixture of sedimentary material from the Ocean Plate Stratigraphy (OPS) component and the coherent type accretion component. Based on the type of component, the exposed olistostrome in Mangilu is divided into 4 types, namely: olistostrome with high pressure fragments (olistolith), olistostrome grantik, olistostrome granodioritik and olistostrome carbonatic
4. The combination of outcrops of high-low and melange degree metamorphic rocks with Ocean Plate Stratigraphy (OPS) rock groups in autoclastic breccias in the Mangilu area, showing traces of the Mesozoic Accretion complex exposed by the Pangkajene thrust in the Neogene Age

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The Effect Of Professional Skepticism, Ethics, Whistleblower On Audit Opinion

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ABSTRACT

The purpose of this study is to determine the effect of professional skepticism, ethics, whistleblowers on audit opinions. This research uses quantitative methods. The data source used is primary data. Primary data was obtained directly from the results of the questionnaire in the form of a google form which was filled in by respondents, namely BPK auditors in Papua. The questionnaire is in the form of a list of statements and the weight of the Likert scale questionnaire, namely scores from 1-5. The data analysis used is SPSS or Statistical Program for Social Science. The sample used in this research is 80 BPK auditors in Papua.

The results of this study indicate that (1). The professional skepticism variable (X_1) partially influences audit opinion (Y), where the tcount is $3.578 > ttable 1.745$ and the significance level is less than 0.05 ($sig = 0.001 < 0.05$). This shows that the professional skepticism variable (X_1) has a significant effect on the audit opinion variable (Y). (2) The ethical variable (X_2) partially influences audit opinion (Y), where the tcount value is $4.432 >$ from the titable 2.216 and the significance level is less than 0.05 ($sig. = 0.001 < 0.05$). This shows that the ethical variable (X_2) has a positive and significant effect on the audit opinion variable (Y). (3). The whistleblower variable (X_3) partially influences audit opinion (Y), where the tcount value is $3.274 >$ from the titable 1.531 and the significance level is less than 0.05 ($sig. = 0.001 < 0.05$). This shows that the ethical variable (X_2) has a positive and significant effect on the audit opinion variable (Y).

Keyword : Audit Opinion, Professional Skepticism, Ethics, Whistleblower

Introduction

The auditor's opinion is an opinion issued by the auditor regarding the fairness of the audited financial statements in all material respects, based on the suitability of the preparation of financial statements with accounting principles (Abdullah, 2017). Giving an opinion is a form of appreciation from the auditor which is given through an official institution appointed by the government, namely the Supreme Audit Agency of the Republic of Indonesia (BPK RI) for the results of auditing financial statements, in addition to providing other recommendations. Financial reports prepared by ministries/agencies and local governments are financial accountability media presented in accordance with Government Accounting Standards (SAP) (Hidayah, (2019).

There are several cases of audit failures carried out by auditors which can lead to a crisis of public confidence regarding the inability of the accounting profession, especially auditors, to audit financial statements (Kunna, 2022). To avoid audit failure, auditor's skepticism is needed when conducting an audit. To anticipate the occurrence of fraud, auditor skepticism can be exercised if the auditor has the expertise, experience and independence in conducting the examination (Alfiati, (2017).

The results of the study (Handayani, (2015) professional skepticism have an influence on audit quality, research (Murniati, (2021) shows that audit professional skepticism and the expertise and integrity of auditors have a positive effect on audit quality, (Mat, (2021)) auditor skepticism plays an important role in influencing audit quality, Edy Firza (2014), as well as research by Ida Suraida (2005), Muhammad Rizal Saragih (2018), Yaser Mohd Hamshari (2021), Kadek Yulia Widiarini et al. (2017) skepticism is positively related to audit quality.

In contrast to research conducted by Ni Nengah Indah Wirasari, et.al (2019) Auditor Professional Skepticism has no effect on the accuracy of giving an opinion, Krishna Kamil et al (2019) Professional skepticism has no effect on the accuracy of giving an

opinion. Tri Agnesya Ramatopani Kala'tiku et al. (2018) professional skepticism has no effect on the ability to detect fraud.

The auditor's opinion is also closely related to the Whistleblower because in giving the opinion the auditor must have the courage to disclose all the facts that occur in the field, so that the results of the opinion are not misleading to users of the report. Whistleblower according to the National Committee on Governance Policy (2008) there are two keys related to the whistleblowing system, namely reporting and violations, in practice these two words are equated to reporting violations and are then called whistleblowers. A Whistleblower is a person who informs the public or someone in authority about alleged dishonest or illegal activities (mistakes) that have taken place in government, public organizations, or private companies/companies. (wikipedia, encyclopedia).

Near and Miceli (1996) say that the effectiveness of whistleblowing depends on two things, namely individual and situational factors. Near and Micheli (1985) define whistleblowing as the disclosure by members of an organization about illegal, immoral or illegitimate practices under the control of their superiors to people or organizations who may be able to take action. Based on the definition above, Whistleblowing can be categorized as prosocial behavior. Whistleblowing is a form of prosocial behavior.

Brewer and Selden (1998) assert that whistleblowing can cause substantial change and facilitate reform in government organizations. Jubb (1990, 2000) states that reporting or disclosure by internal and external auditors is a role (obligation) and should not be considered as an act of disclosure (whistleblowing). Individuals who because of their work so that they can reveal fraud can be considered as whistleblowers because there are unwritten norms for altruistic behavior that may have a greater influence than reporting policies in an organization.

The issue of this research refers to several conflicting previous studies as stated above. Researchers try to adopt from several previous studies according to the needs of the conditions

in the field, then the authors raise the research gap from the research contradictions. This issue is important because several cases in government agencies have received WTP predicates, but officials in these agencies have been caught up in corruption and bribery cases (Sudirman, (2023).

Formulation of the problem

Based on the description above, several problems were formulated in this study, including:

1. Does professional skepticism affect the audit opinion?
2. Does ethics affect the audit opinion?
3. Is the whistleblower against the audit opinion?

The urgency of this research is that there are many local governments whose financial reports receive unqualified or unqualified opinions, but in reality, there is corruption/fraud in these local governments. Thus this research is very important to be carried out, considering the impact of this situation which causes state losses to increase from year to year. This study aims to determine the effect of professional skepticism, whistleblowers, ethics on audit opinions.

Literature review

Agency Theory

Agency theory (agency theory) was developed as an effort to understand and solve problems that arise if there is incomplete information at the time of making a contract. The contract in question is an engagement between the principal (employer) and the agent (recipient of the order). According to Gudono (2009) predictive agency theory if the agent has an information advantage compared to the principal, and the interests of the agent and the principal are different, there will be a principal agent problem where the agent will take actions that benefit him but harm the principal.

According to (Jensen, (1976)) defines the agency relationship as a contract in which one more (principal) hires another person (agent) to perform some services for their benefit by delegating some decision making authority to the agent. Conflicts of interest will arise from the delegation of tasks given to agents, that is, agents are not in the interest of maximizing the owner's welfare, but have a tendency to pursue their own interests at the expense of the owner's interests. The auditor is one of the parties related to the agency relationship (between the agent and the principal).

An audit opinion according to the dictionary of accounting standards (Novatiani, (2016) is a report given by a registered public accountant as a result of his assessment of the fairness of the financial statements presented by the company. Meanwhile, according to the dictionary of accounting terms, an audit opinion is a report given by a registered auditor stating that the audit has been carried out in accordance with the norms or rules of auditing the accountant accompanied by an opinion regarding the fairness of the financial statements being examined (Sudirman I. N., (2021). Audit opinion is given by the auditor through several audit stages so that the auditor can provide conclusions on the opinion that must be given on the financial statements audited (Rusman, (2018)

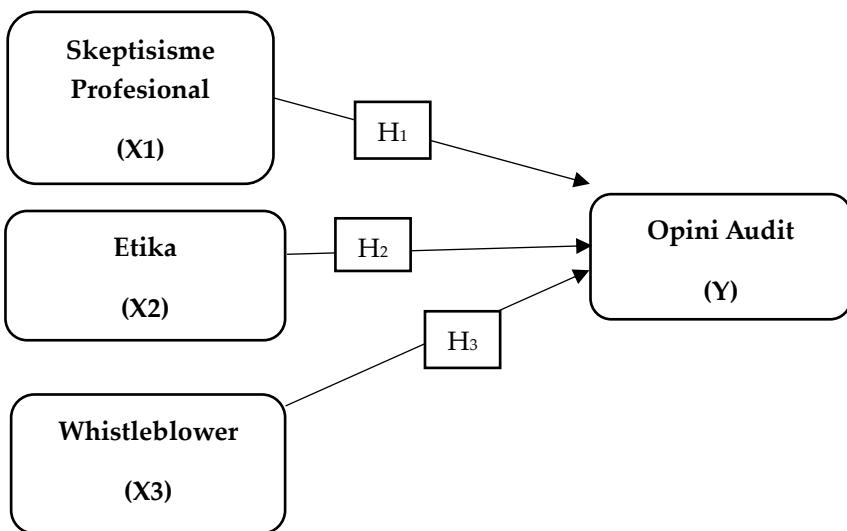
The auditor's professional skepticism is the attitude of the auditor in carrying out audit assignments where this attitude includes a mind that always questions and critically evaluates audit evidence (Noviyanti, (2014). Because audit evidence is collected and assessed during the audit process, professional skepticism must be used during the process (IAI, 2000, SA section 230; AICPA, 2002, AU 230). Louwers says that the auditor's professional skepticism leads to ask for any cues that indicate the possibility of fraud that always questions (questioning mind) about the validity of the audit evidence obtained .

Ethics can be defined as a set of moral principles or values (Rahayu, (2020) In terms of ethics, a profession must have a high moral commitment which is set forth in the form of special rules. These rules are the rules of the game in carrying out or carrying

out the profession, which is commonly referred to as a code of ethics, the IAPI Code of Ethics is a general standard of behavior for ideal behavior and specific regulatory provisions governing auditor behavior (DP, (2014)

The basic thing that must be considered by the auditor is ethics in the profession. The implementation of professional work cannot be separated from ethics because professional behavior is necessary for all professions so that the profession in which they live gains the trust of the community (Sudirman I., (2023). The American Heritage Directory in (Ramadhani, (2018) states ethics as a rule or standard that determine the behavior of members of a profession. With high ethical awareness, an auditor tends to be professional in his duties and carry out his duties in accordance with the professional code of ethics and auditing standards, so that the results of the audit conducted will more accurately reflect the actual situation.

Whistleblower is the act of an employee who decides to report to the media, internal or external authorities regarding illegal and unethical matters that occur in the work environment (Permana, (2020). Whistleblower is an employee or employee in an organization who reports , witnessed, knew of a crime or practice that deviated and threatened the public interest in the organization and decided to disclose the deviation to the public or the competent authority (Isnaini, (2018). For organizations that carry out their business activities ethically, Whistleblowing is part of the control system, but for organizations that do not carry out their business activities unethically, Whistleblowing can be a threat.



The hypothesis in this study is suspected that:

H1: Professional skepticism affects audit opinion

H2: Ethics has an effect on audit opinion

H3: Whistleblower influences audit opinion

Method

The method used in this research is a survey approach by taking a census and is non-experimental in nature. While the type of research conducted is explanatory research, because it is to explain the causal and correlational relationships between variables through hypothesis testing. This study uses a quantitative approach.

The population in this study were 80 BPK auditors or financial audit agencies in the Papua region. The sampling method used is census. At Representative BPK in Papua using purposive sampling.

The data source used is primary data. Primary data was obtained directly from the results of the questionnaire in the form of a google form which was filled in by respondents, namely BPK auditors in Papua. The questionnaire is in the form of a list of statements and the weight of the Likert scale questionnaire,

namely scores from 1-5. The data analysis used is SPSS or Statistical Program for Social Science.

Results and Discussion

Validity test

In the validity test, it can be compared between the r count and r table values by using the Pearson correlation. It can be seen if $r \text{ count} > r \text{ table}$ is stated to be valid, equal to a significance value score below 0.05, while $r \text{ count} < r \text{ table}$ is declared invalid, the same as if a significance score above 0.05 is declared invalid.

Table 1
Validity test

Variable	r Count	Significance	Information
Skepticism Professional	0.769	0.001	Valid
Ethics	0.674	0.000	Valid
Whistleblower	0.763	0.000	Valid
Audit Opinion	0.803	0.000	Valid

validity test on the fourth variable that is *Professional skepticism (X₁)*, *Ethics (X₂)* *Whistleblower (X₃)*, and *Audit opinion (Y)* were obtained r count value all items ie above 0.361 and value significance below 0.05. because that , can taken conclusion that all items in the variable is valid or worthy used for each variable .

Table 2
Reliability Test

Variable	Cronbach's Alpha	Provision	Information
Audit Opinion	0.823	0.60	Reliable

<i>Skepticism Professional</i>	0.764	0.60	Reliable
Ethics	0.877	0.60	Reliable
<i>Whistleblower</i>	0.789	0.60	Reliable

Based on the reliability test table above, it is found that the variable is reliable. This is evidenced by the value if the value of Cronbach's alpha on each variable professional skepticism, ethics, whistleblower and audit opinion above 0.60.

Table 3
Partial Test

Model	Coefficients ^a					
	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Error	std. Betas			
(Constant)	.423	.314			1,342	.214
<i>Skepticism professional</i>	.438	.143		.423	3,578	001
<i>Ethics</i>	.403	.133		.427	4,432	001
<i>Whistleblower</i>	.421	.114		.485	3,274	001

a. Dependent Variables:; Audit opinion

Table 4
Determination test results

Summary models

Model	R	R Square	Adjusted R	std. Error of the Estimate
			Square	
	.824 ^a	.671	.642	1,841

a. Predictors: (Constant), professional skepticism , ethics , whistleblower

Discussion

Professional skepticism variable (X1) partially influences audit opinion (Y), where the thcount is $3.578 > ttable 1.745$ and the significance level is less than 0.05 ($sig = 0.001 < 0.05$). This shows that the professional skepticism variable (X1) has a significant effect on the audit opinion variable (Y). Professional skepticism is the attitude of the auditor in carrying out audit assignments where this attitude includes a questioning mind and critical evaluation of audit evidence. Because audit evidence is gathered and assessed during the audit process, professional skepticism should be exercised throughout the process. The higher the professional skepticism the auditor has, the better the audit opinion will be.

The ethical variable (X2) partially influences audit opinion (Y), where the calculated value is $4.432 > 2.216$ and the significance level is less than 0.05 ($sig. = 0.001 < 0.05$). This shows that the ethical variable (X2) has a positive and significant effect on the audit opinion variable (Y). Ethics is a basic thing that must be considered by the auditor. With high ethical awareness, an auditor tends to be professional in his duties and carry out his duties in accordance with the professional code of ethics and auditing standards, so that the results of the audit conducted will better reflect the actual situation.

The whistleblower variable (X3) partially influences audit opinion (Y), where the tcount value is $3.274 > from the titable 1.531$ and the significance level is less than 0.05 ($sig. = 0.001 < 0.05$). This shows that the ethical variable (X2) has a positive and significant effect on the audit opinion variable (Y). This shows that the Whistleblower has a very important role and greatly influences the results of the audit opinion. Where a Whistleblower is an employee (employee) or employee in an organization who reports, witnesses deviant practices and threatens the public interest in his organization and who decides to disclose these irregularities to the public or authorized agencies. For organizations that carry out their business activities ethically, Whistleblowing is part of the control system, but for organizations that do not carry out their business activities unethically,

Whistleblowing can be a threat. So the existence of a whistleblower greatly influences the audit opinion.

The results of the analysis above show that the value of RsSquare (R²) is 0.671 which means that the independent variables, namely professional skepticism, ethics, whistleblowers, are able to explain the dependent variable, namely audit opinion of 67.1% while the remaining 32.9% is explained by factors which were not included in this research model.

Conclusion

Based on the results of the analysis that has been done, the following conclusions can be drawn:

H₁: Accepted means that there is a significant influence of professional skepticism on audit opinion

H₂: Accepted means that there is a significant influence of ethics on audit opinion

H₃: Accepted means that there is a significant influence of the whistleblower on the audit opinion

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Vertical Structure Profile in Patronage Association in Farmer Communities in Rural South Sulawesi

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ABSTRACT

The legacy of the feudal era in patronage ties in South Sulawesi that can still be seen today is a vertical hierarchical line or dyadic bond that binds rich and poor farmers based on unequal bonds of protection and exchange. With a qualitative approach and case study method, it is explained that this bond still continues today, in three social conditions, namely: (1) there is an inequality of exchange; (2) face to face character; and (3) the bonds in it are flexible and expand (diffuse flexibility). The findings also found that the direction of patron capital reaccumulation is in the form of business expansion, while the direction of reallocating client income sources is in the form of job expansion. The expansion of the patron business is related to the provision of basic subsistence clients, where the linkage is in the form of providing work and advising technical services to clients (or prospective clients) for various types of businesses. The role of the patron in Amparita and Bontorannu generally took the form of providing jobs around the agricultural and pond sectors (such as cultivating rice-pond fields, factory work, and farming-pond transportation businesses). As for the social exchange in the form of technical service advice, it is in the form of marketing services for agricultural and pond products.

Keywords: vertical; patronage; community; farmer; South Sulawesi.

Introduction

Harmonization of social relations between rich farmers and poor farmers in rural South Sulawesi is inseparable from the hierarchy that is built in patterns of patronage ties. Within the patronage bond, a specific hierarchy is built, which is called a

vertical or dyadic bond. This form, according to Scott (1972: 101), is "... a special case of the relationship between two people which mostly involves instrumental friendship, in which a person with a higher socioeconomic status (patron) uses his influence and resources to provide protection and benefits to someone of lower status (the client), who in turn reciprocates the gift with support and assistance, including personal services to the patron".

The concept of dyadic (vertical) is the relationship of inequality between the giver and the recipient which is instrumental in the difference in resources (Foster, 1961:12). This concept was first introduced by Mauss (1925) when he studied anthropologically the life of the Eksimo tribe in the Canadian North Pole, regarding their habit of exchanging gifts or The Gifts with other tribes. In the exchange process, according to Mauss (1925:98-106) that the Gift is able to foster the concept of indebtedness between the giver and recipient, also The Gift is able to become a symbol of expanding kinship through the exchange of citizens through marriage ties and clan mergers, as well as symbols that condition social phenomena, such as war and peace (in the form of rejection or acceptance of the Gift).

In the theory of patron-client ties, the vertical hierarchy of a person in a network of patron-client ties according to Scott (1972: 101) can be observed by three social processes, namely: (a) a marked imbalance in the ownership of resources, such as: wealth, social status and power; (b) there is no institution that guarantees individual security physically and socially; (c) the inability of kinship ties to function as a means of security protection and a means of self-advancement.

In rural South Sulawesi, findings of Minullah, 1992; Daming, 1984; and Effendi, 1981, stated that the three hierarchical requirements were shifted by three processes of change as stated by Scott's theory. Inequality of resources by traditional values, this increasingly corners the patrons who come from the nobility, by the emergence of new patrons who come from the middle class who are generally rich and hold power due to economic and educational achievements. So that even though the nobility remained at the top strata in the countryside, their social status

was no longer due to their nobility but by the wealth and power derived from inheritance and educational achievements. This phenomenon seems to shift the existing patronage hierarchical order, which is experiencing a differentiation of relationship patterns, where the bond that was previously in the form of an Aijoareng-Joa bond diversified into a Punggawa-Pajama bond.

Research Method

This study uses qualitative methods and a case study approach in uncovering vertical forms in patronage ties in rural South Sulawesi. The reason for using this approach is that the researcher wants to describe more deeply and concretely about the process of the flow of patronage ties in rural South Sulawesi. This type of case study research is usually used to reveal socio-cultural meanings by studying lifestyles and interactions between certain socio-cultural groups (culture sharing groups) in a specific space or context (Spradley 1980; Sugiyono 2010). The data collection technique used is in the form of in-depth interviews, observation and documentation. Furthermore, this analysis activity is carried out using the method of data categorization and data interpretation. While the research was carried out for 6 months (from January to July 2017) and the research sample used was a purposive sampling model with the research object being in Sidrap Regency and Jeneponto Regency which represent the Bugis and Makassar tribes in South Sulawesi Province.

Conceptual Framework

The relationship between a person in a network of patronage ties in rural areas has been stated by several experts before. Foster's (1988) findings inspired Scott (1972), Legg (1983), and Paine (1971) in explaining the existence of patrons and clients in vertical and horizontal settings, both in agrarian societies and in modern societies. Dyadic (vertically), Scott (1972a: 92) defines 3 conditions for the involvement of patrons, clients and brokers in a patron-client network, the three conditions are: (a) There is inequality of exchange, which describe differences in wealth, status, and power. The client is someone who enters into an

unequal exchange relationship, where he is unable to fully repay the provision of patronage, the debt of obligations binds him and depends on the patron; (b) There is a face-to-face character, although this relationship is instrumental (profit and loss factor) but the element of taste is still important because it is related to protection and compliance; (c) This bond is flexible that extends (diffuse flexibility). Its widespread nature can be seen in not only working relationships, but also neighborly relations, hereditary closeness or friendship in the past, besides that it can also be seen in the types of exchanges that are not only in money or goods but also in labor assistance and force support.

These three conditions according to Scott (1972) that, a person who is placed as a patron is because he controls the resource system (wealth, status, and power), then the resources are exchanged to clients, for the sake of the sustainability of the three elements of the resource system itself. Meanwhile, the client is an antagonist of the ownership of these resources (poor, comes from the lower classes, and has no access to power), where with manpower, expertise, and obedience, he offers himself to be a client and fosters a patronage relationship with the patron. in order to obtain protection from economic crises and security crises. The figure of a broker is a party that acts as a liaison between the interests of the patron and the client in a network of patron-client bonds.

In local studies, the three conditions have been practiced by Haerani (1996), Parakkasi (1992), and Salman (2002), in their various study perspectives. Haerani's findings (1996:102-129) concluded that these three conditions underlie the vertical patron-client bond, where the exchange inequality factor is the actual cause of face to face character and diffuse flexibility factors. Parakkasi's findings (1992: 85-110) concluded that these three conditions appear simultaneously in forming a patron-client bond vertically. Meanwhile, Salman's findings (2002:225-246) concluded that most of the three conditions were presented and a few others had shifted.

These three conditions, according to Scott (1972), are accessed into two flows of exchange (elements of exchange),

namely flows of patrons to clients and flows of clients to patrons. In the flow of patrons to clients, according to Scott (1972:9) what patrons exchange are: (a) Basic Means of Subsistence, namely providing basic subsistence to clients in the form of work or arable land, provision of seeds, equipment, marketing services, technical advice; (b) Subsistence Crisis Insurance, namely in the form of loans of money, goods and other assets if the client experiences a disaster and crop failure; (c) Protection, namely security protection from personal threats and general threats; (d) Brokerage and Influence, namely acting as a liaison or broker for various client interests with external or foreign parties; (e) Collective Patron Service, namely using their assets for the benefit of the wider community and hosting visiting officials or facilitating special celebrations in their area.

Meanwhile, according to Scott (1972:9-10) the elements of exchange that create the flow of relationships from client to patron, that what clients exchange is only labor, skills, and obedience. With these three capitals, according to Scott, the client practically does not have the slightest power (bargaining power) in the exchange process. This is what actualizes the three existing conditions, and becomes an instrumental element in the bond. With these three capitals, the client's position is also a polemic in the patron-client bond, because on the one hand he is categorized as an exploited party and on the other hand his position is collaborative (joins precisely because of a lack of resources). In this case Scott explicitly answered this polemic that the client's involvement is collaborative in nature, because nothing else can protect his life when experiencing a subsistence crisis and physical and social insecurity other than the generosity of the patron.

In this study, the compliance theory from Etzioni (1961) will be used as a basis in explaining the level of client compliance in the patron-client bond. According to Etzioni (1961:3), compliance is as "....a relation in which an actor behaves in accordance with a directive supported by another actor's power, and to the orientation of the subordinated actor to the applied power". According to Etzioni's view (1961:12-14) that the key concept of obedience is placing power and involvement in the process of

social organization. According to him, a person is in a social organization, it is motivated by three types of obedience-based social actions, namely: (1) based on the influence of coercion (coercive compliance); (2) based on moral norms (normative compliance); and (3) because it is based on rumeration or utilitarian compliance.

Scott's patronage tie theory has also received criticism from various other patronage tie experts, one of which is Popkin (1979). In his book entitled "The Rational Peasant" on agrarian societies in Southeast Asia, Popkin generally "attacks" the adherents of the moral economy (consisting of Polanyi, Wolf, Scott, Lande, etc.), which he deems unrealistic in seeing social change by modernization elements. According to him, adherents of moral economics are very extreme in associating the effects of modernization (such as social differentiation, commercialization, and state making) with poverty, whereas local people (especially farmers) are very rational and adaptive in accepting the effects of modernization. And in particular Popkin (1979:27-30) criticizes Scott about the placement of collaborative and exploitation in the flow of patronage relationships. According to him, this is exploitative, because exchange inequality is deliberately created by the patron so that the client becomes dependent. On the other hand, the assistance provided by the patron to the client is a social investment for the continuation of the client's socio-economic dependence and for the continuation of exploitation within the bond. patron-client.

Research Results

According to Scott (1972a:92; 2009), the conditions for a vertical patronage bond depend on three social conditions, namely: (1) there is an inequality of exchange; (2) face to face character; and (3) the bonds in it are flexible and expand (diffuse flexibility). In this study, the direction of patron capital reaccumulation is in the form of business expansion, while the direction of reallocating client income sources is in the form of job expansion. In order to see the extent of the vertical flow from

patron to client through the re-accumulation of patron capital in the two regions, the following is an explanation.

Secondary data shows that of 5,735 residents working in 17 types of work, traders in wholesale markets are dominant, namely 21.27%, and hoteliers are the lowest, only 0.6%. When referring to the job structure, the direction of occupational diversification is different from that in the two regions, due to the emergence of a middle class that mobilizes towards the process of business expansion. For this reason, the direction of permanent business expansion for patrons is the occupation of all lines of business work or as much as 5.37%, while occupations at 1, 9, 10, 11 and 12 or as much as 30.29% are a combination of business expansion and business expansion jobs, while those in the direction of job expansion are from 13 to 17 or as much as 64.34. On the other hand, of the 5735 people who work, it appears that only 493 people or 5.5% are unemployed and as many as 966 or 10.75% are unfit for work (parents and children under age), this indicates the dynamics of Occupational diversification runs in balance, marked by low unemployment and an unproductive population.

The occurrence of developmental differences in the process of occupational diversification according to Wiradi (1982); Husken and White (1989); Triyono and Nasikun (1992); and Young (1993) originate from differences in land tenure and land use, for areas with unequal land tenure, the direction of occupational diversification will stagnate, whereas for areas with a normal land tenure system occupational diversification will run dynamically. Meanwhile, according to Scott (1972) that as the basic structure of the patron-client bond, the direction of social differentiation on the one hand will weaken the power of the traditional patron which tends to be authoritarian and does not prosper the client, on the other hand the direction will dynamically the patron-client bond in the modernization order.

Based on this explanation, after asking 12 questions to informants in the two research areas, regarding the correlation between the existence of vertical ties and shifts in patterns of patronage bonds through occupational diversification intensity in the two streams of patronage relationships, the answers were

highly correlated. This high level of correlation means that, the intensity of occupational diversification roles creates patron business expansion and client job expansion in farming and outside farming, making vertical ties related to shifts in patterns of patronage ties. The shift that appears is that previously only took place in the agricultural sector (also only patterned between land owners and cultivators) but due to the intensity of modernization, this bond has also developed outside the agricultural sector.

a. Relationship From Patron To Client Through Flow Of Business Expansion as Being in Vertical Bonds

As an indicator of the role of occupational diversification in the flow of patron-client relations, the explanation of the expansion of the patron's business is related to the provision of basic subsistence clients, it also implied that the explanation is in the form of providing work and advising technical services to clients (or prospective clients) of various types. his efforts. So far, patrons in Amparita and Bontorannu have generally taken the form of providing jobs around the agricultural and pond sectors (such as cultivating rice-pond fields, factory work, and farming-pond transportation businesses). As for the exchange in the form of technical service advice, it is in the form of marketing services for agricultural and pond products. Particularly in the recruitment of workers, because the dominance of patron business management in the two regions is still in the form of kinship, the position of the workers is more towards the client than a laborer or employee. To find out more about this relationship, the first observations and interviews were conducted at Haji Jumadi in Amparita.

Haji Jumadi's business expansion pattern is more dominant in businesses in the agricultural sector (grain rice milling factories and their transportation) and in the livestock sector (free-range chicken and cattle). In these two sectors, he placed 43 pajama (clients) who were recruited under patronage patterns. The entire process of business expansion rests on land and farming, where some of the land is used as collateral for the Bank and part of it produces rice to be managed in factories and sent to the market

(to Perhutani and colleagues in Makassar), then the proceeds are channeled to finance its business in the agricultural sector, livestock and transportation. An interview with him regarding the two aspects of providing basic subsistence to several of his clients (as well as prospective clients) is described as follows.

"In terms of providing jobs, according to him, the attractiveness as a means of social exchange with clients is now getting higher in value after the socio-economic conditions of the farmers are getting more difficult and there are more and more unemployed, on the other hand many farmers' lands have been sold to cover their necessities of life. This condition makes them more likely to be visited by job seekers rather than looking for them, so that they are sometimes overwhelmed and feel sorry for their fate. With these various conditions, it is not difficult for him to set wages or other conditions for the successful re-accumulation of his capital, because whatever conditions are given to clients, he will definitely accept them. For wages, this depends on the work of the pajamas, in the field cultivation sector the system is the result divided by two and all pajama production activities are responsible, while the wages of factory and livestock workers are paid regularly (an average of 10,000 per day) some are paid only rice, and the wages for the transportation pajama depend on the deposits they receive and this does not include bonuses in the form of money or rice if the business is profitable. Regarding service advice to clients, it is generally related to the livestock business, because Jumadi is in charge of marketing and feed so that other farmers become clients and depend on him.

If Haji Jumadi's business expansion pattern is more concentrated in the agricultural sector, then Haji Arsyad's pattern combines it with the management of salt and fish ponds in Bontorannu. With 5 businesses outside the agricultural sector, he places 41 pajamas in each of these businesses. An interview with him regarding the two aspects of providing basic subsistence to clients (and potential clients), is explained as follows.

"For giving jobs as a means of exchange, according to him, this activity is still effective as a medium of exchange in patron-client bonds, even though currently it competes with migration

activities to the city of Makassar. However, in the process, the job offer is not necessarily just a job offer, but must be followed by certain tips to make it attractive and attractive for someone to be involved in a patron-client bond and become a client. One of the tips he means is to fulfill other basic subsistence needs of clients, such as: facilitating certain events, attending their important events, and bonuses in the form of money or rice. Such tips are still effective for winning exchanges in other sectors. He proved this effectiveness by the dominance of Haji Arsyad's workers, who were former migrants who returned to Bontorannu to work for him and with wages below what they earned in Makassar. As for the wages he charges all his clients, for the pond workers the pay system is two-pronged, workers in the rice and salt warehouse are paid regularly (an average of 10,000 per day) some are also paid with rice, and the wages for transport pajama depend on the deposit they make. thank you As for service advice to clients, it is generally related to pond and salt business, where he becomes an agent for outside buyers so that other farmers become clients and depend on him.

b. Patron's business expansion is related to giving Subsistence Crisis Assurance To Client

In the process of business expansion, the success of the various businesses of the patrons is inseparable from the role of their workers (clients) in carrying out this expansion mission. In its activities, to attract new clients or retain existing clients, the expectation behind this gift is to get clients who are tenacious, honest and obedient. For this purpose, the patron's concrete effort is to provide subsistence crisis guarantees to clients, namely in the form of providing loans (in the form of money, goods, vehicles, and certain other facilities) as well as providing incidental assistance free of charge if the client is in certain conditions.

In another section, it has been explicitly mentioned about the pattern of exchange made by patrons in providing guarantees for the subsistence crisis. In lending, patrons generally provide loans to clients in the form of money and goods in case of illness

or disaster, crop failure, childbirth, and a family member who dies. Whereas in the provision of incidental assistance, patrons generally provide donations to clients in the form of money or goods for marriage needs (financing the marriage), donations for home repairs, and funerals or celebrations.

As one of the triggering factors for the flow of patronage relationships from patrons to clients, the development of subsistence crisis coverage in the business expansion of patrons is also inseparable from the existence of two aspects of basic subsistence provision. If in these two aspects the development is colored by differences in the motives of patrons in the three regions in providing subsistence guarantees, where as patron motives are differentiated by background patterns in carrying out business diversification and intentions in carrying out social exchanges with clients. This background is also closely related to the ups and downs of the problem of social inequality in the three regions. To find out more about these differences, the description again observed and interviewed each of the patron respondents (three people), key informants, and information from trusted people of the three patrons. For this purpose, the first interview was conducted at Haji Jumadi in Amparita.

Before interviewing Haji Jumadi, observations were made with close people and informants. According to Darwis (44 years old, a client and confidante of Haji Jumadi for 6 years in a rice warehouse) that his patron was very calculating when it came to borrowing and borrowing money or goods with all his pajamanya, generally he gave loans when it was directly related to his business, and even then through a long process and you have to be sure of the reason for the pajamas borrowing money or goods, because if not then don't expect him to give it. This calculating attitude also applies to donations. According to him, his patron is very stingy to spend his money on useless things, including giving donations. But for certain cases, such as: a client's family has died, has had an accident, and is sick, he will give enough money and give permission to his pajama not to come to work and finish the business within a certain time. However, if to a certain extent he still does not enter, Haji Jumadi will give a

warning or come to a decision to terminate, and then enter a new client again.

According to the informant, Haji Jumadi's indifference to his pajama is indeed the case, and these attitudes have become a common thing in Amparita, because most of the patrons tend to have the same attitude towards his pajama. Whereas in the past this was not the case, where the courtiers still had generous and considerate attitudes to understand and help their pajama when they were experiencing a disaster or in such an incidental condition. This shift seems to have an impact on other socio-economic situations, where it is increasingly intense that loan sharks or loan sharks become the target of the pajamas to borrow and pawn their goods when they experience a disaster or other sudden need. According to him, this phenomenon makes the pajamas increasingly disloyal and easily decide to stop working for their masters, on the other hand the masters feel they don't care about the termination because soon other job seekers will fill the vacancy. This development is the cause of the weakening of patronage relations in Amparita.

The second description regarding the provision of subsistence crisis guarantees from patrons is towards Haji Arsyad in Bontorannu. As with efforts to disclose Haji Jumadi, disclosure of the pattern of giving Haji Arsyad also begins with gathering information from his confidants and informants. As for confidants, observations are directed to Basir (39 years), this man is a trusted client of Haji Arsyad who for 5 years takes care of client needs and as a cashier in various ponggawa businesses. According to Basir, that in matters of giving loans to pajamas, Haji Arsyad is usually disciplined enough to take care of them where the giving is seen from how much the pajama wages are, if their wages exceed the amount of the debt requested then Haji Arsyad delays giving, even though the pajamas are for sick people or for other important purposes. As for giving donations, Haji Arsyad usually only gives goods, both for marriages and home repairs to his clients. For a wedding, for example, he only needs to donate a car, party equipment, and his presence at the pajama event. However, for the local community, giving

donations and attending client parties are considered the greatest honors for the pajama family.

Meanwhile, according to the informant, the two forms of providing subsistence crisis guarantees carried out by Haji Arsyad and most of the patrons in Bontorannu have shifted from the existing pattern, where this pattern tends to not care anymore about the fate of the pajamanya, even though they work very hard with low wages. very low. According to him, previously the size of a patron's generosity was evident from his flexibility in providing guarantees for a subsistence crisis to his clients. Haji Arsyad's father, for example, used to have more pajama than Arsyad now, but all of them live peacefully and rarely owe, because problems of subsistence crises (such as the need for rice in case of crop failure, medical expenses, and marriage) are fully borne by Arsyad's father, he is even ashamed and offended when he finds out that his pajamas are borrowing from other people, especially from moneylenders and loan sharks. But now the situation is reversed, most of Haji Arsyad's pajamas have debt ties with loan sharks, and this patron doesn't care about that problem. This phenomenon indicates the weakening of the patron-client bond behind the shift in providing subsistence crisis guarantees.

If the shift in patron motives in the two areas of modernization theory appears identical to the pattern variable from Parsons (1951), namely the shift from the pattern of affectivity to the pattern of affective neutrality. In fact, the recruitment pattern and work system are still very affective and family-oriented. This indicates that the pattern of the patron is not completely modernized. Frank (1976) accused this phenomenon of the effect of the application of diffusionism from modernization, where dualism of socio-economic forms occurred in satellite areas, resulting in widespread poverty and marginalization in the community. Associated with the theory of patronage this phenomenon is relevant, according to Scott (1972) that commercialism in many ways weakens exchanges of patrons in response to subsistence crisis guarantees, even though client resources are not ready to accept this shift in attitude, so that the

weaker the exchange of patrons, the more widespread poverty and unemployment in rural.

The shift in the provision of subsistence crisis guarantees by patrons at Sidodadi is in accordance with the outlines of cultural theory (acculturation). According to Redfield (1959), defining cultural change begins with the contact of two cultures (modern and traditional) but each is autonomous. If this theory is related to the pattern of patrons in providing subsistence crisis guarantees, then modern culture is the re-accumulation of capital of patrons, while traditional culture is patron-client ties. Holistically these two aspects are united in a social gathering system. Related to Scott's theory (1972) this system is another form of process of differentiation of exchange patterns in the flow of patronage bonds, on the other hand its function also further strengthens these bonds.

C. Patron's business expansion Related to Provision of Security Protection to Clients

As one of the conditions for the flow of patron-client relationships and the existence of patron business expansion, the provision of security protection which is used as a tool for social exchange is divided into physical protection and social protection. In providing physical protection, it seems that only a few patrons are able to play this function, because it is related to one's charisma and power pattern. Meanwhile, in the provision of social protection, it seems that most of them are able to play this function or at least have access to other parties (institutions or individuals) in order to carry out the function of providing this protection.

In another discussion it has been explained that the development of the provision of protection takes place differently in the two regions, where the provision of protection on the physical aspect is more dominant in Amparita than in Bontorannu. The difference in the direction of providing this protection is inseparable from the background of the social conditions of the people. The more dominant provision of protection from the physical aspect in the two regions is due to

the strong traditional leadership pattern which raises one's charisma as a protector. Meanwhile, the dominance of providing protection from the social aspect in Bontorannu is due to the weakening of traditional leadership by the heterogeneous social system of the community, and on the other hand, the fulfillment of physical insecurity protection can be fulfilled by various institutions that manage this protection. To find out the differences in the provision of protection, the description goes back to observing and interviewing three patron respondents who represent their area, they are We' Pitu, Daeng Sikota, and Andi Ambran.

The figure of We' Pitu as the physical security protector of tens of clients, is a person who properly represents the protector of his clients in this modern era. This man is not only known as sacred to the people of Amparita, but also has an education, wealth (owns 6.5 hectares of rice fields), a chicken farming business, and a mountain stone craftsman business with dozens of pajama people. As a protector, he is always asked for advice and other advice to mediate when members of the community have disputes or conflicts over land, fights, and SARA issues. His response regarding the motive for providing protection and the process of capital re-accumulation, is broken down as the result of the following interview.

".... According to him, being a holy person is an inheritance from his father. However, supernatural powers are not his profession, because in social strata, he is also educated and his family is still descended from Uwe who owns large rice fields and other assets. After widespread modernization in Amparita, he was also involved in various farming businesses and expanded his business beyond the agricultural sector. His motive for protecting the Tolotang people was not because they had magical knowledge, but because they felt sorry for the majority of their ethnic group, who were often deceived and oppressed by certain parties because they were dominantly uneducated and lived in poverty. As a protector of his clients, he sometimes becomes a partner of the security forces and other officers who have an interest in the Tolotang people."

We'Pitu's response can be interpreted that the motive for providing protection in the foreground is to protect other people because of the oppression behind the socio-economic conditions of the poor and backward Tolotang residents. The extent to which the motive according to the other party. According to the informant, what We' Pitu explained is the true fact, because so far that person is no longer looking for popularity just by protecting other people, only because certain people's treatment of their community makes their heart move to protect and defend it. However, in the process of protecting them, people close to We' Pitu sometimes became the instigator of SARA conflicts between Tolotang and non-Tolotang people. This conflict seems to have escalated after the firefighters were involved in political activities in the countryside. This phenomenon indicates that behind the provision of physical protection the problem of conflict dissolves in it.

To what extent does this phenomenon take place in Bontorannu, for the following description the patron who is the focus is Daeng Sikota. Like We' Pitu, Daeng Sikota actually acts as a patron because the form of protection given is more about physical insecurity. Observation of his patronage background has been described in another point where the point is that he becomes a patron because he is charismatic in protecting the citizens and their pajamas from feeling physically safe. Personally, this man is not only famous for his supernatural powers but also has a background in various types of entrepreneurs (in the agricultural sector, ponds, and the transportation business).

The results of the interview with him can be used as a reference for his motives for protecting clients. The motive is basically that with the charisma that is owned, the clients feel protected by their physical and social security. According to the informant, Daeng Sikota has many clients because he dares to risk his charisma to defend pajamas and other residents when facing vertical conflicts (fights, land disputes, and brawls between villages). Not only that, he is also sometimes involved to mediate

the internal problems of local residents or residents from other villages when a family member runs away or elopes (Silariang). These cases of elopement generally end in murder, but because the case involves extended families of both parties, it sometimes ends in hostility by the entire family network. This network is the propagator of vertical conflict in the Bontorannu community. From this case of elopement emerged people who were positioned like Daeng Sikota, namely as protectors or patrons who were the godfathers of feuding families. This phenomenon indicates that the higher the conflict pressure, the more the role of patrons who are able to provide protection is needed.

To what extent does the phenomenon of conflict which raises the patron behind the provision of protection take place in Sidodadi. For the following description, the patron that is the focus is Andi Ambran. His role as a protector appears to be different from that of We' Pitu and Daeng Sikota, because the form of protection given is more about social insecurity or with all his charisma he acts as an intermediary for clients and residents in social protection. Observations on his patronage background have also been described in another section where the point is that he became a patron because he was charismatic and respected by both clients and officials and people in certain other institutions.

Like Daeng Sikota, the results of interviews with him can also be used as a reference for his motives for protecting clients. The motive is basically that with the charisma that is owned, the clients become protected from their physical and social security needs. According to the informant, so far Andi Ambran has been considered a community figure by pajamas and members of the community because he is able to resolve various disputes or conflicts through his popularity and extensive association with formal figures or institutions in Sidodadi. As a popular protector, the ability to resolve inter-ethnic conflict problems through closeness to people who play a very important role in these ethnicities places himself as an inter-ethnic figure. This figure can be seen in his business activities, where his pajama consists of various ethnic groups and social groups. Those closest to his popularity are officials, elitists, businessmen, and leaders of

various informal institutions who have become his friends and colleagues. And it is this popularity that places itself as a protector that connects the interests of citizens and institutions.

From these three focuses it appears that the basic motives of a patron to become a protector behind the process of expanding his business are supernatural powers, charisma, and popularity. The three forms of this motive make the provision of protection take place differently in the three regions and the three are motivated by the phenomenon of vertical and horizontal conflict. For patrons in Amparita, the background of poverty and ignorance that underlies We' Pitu becomes a patron. This phenomenon is in accordance with Wolf's (1965) findings regarding the presence of spiritual figures in South China who become patrons because their citizens are oppressed by tyrannical rulers. For patrons in Bontorannu, the revenge tradition that underlies Daeng Sikota appears as a patron. This is also in accordance with the findings of Boissevain (1966) regarding the tradition of the Sicilian people in the city of Leon, Italy, which gave rise to the charisma of the patron as a protector by mutual revenge. As for the patron in Sidodadi, the background of the condition of a pluralistic society that underlies Andi Ambran appears as a patron. Powell's findings (1970) regarding the existence of businessmen in Mexico who become patrons because of their business role. These three findings together raise the theme of conflict which actualizes the role of the patron as a provider of protection.

Conclusion

The flow of relationships from patron to client vertically is in the mode of providing work and providing loans to pajama (clients), this becomes the lure of the punggawa (patron) to invite clients in a patron-client bond. As for security assistance of a social nature (becoming a protector in matters of school, work, and business continuity) provided by punggawa to pajama correlates with the actualization of patron-client relationships. This perspective suggests that only three exchange aspects are

performed by the patron in creating a patronage bond with the client. This also implies that what underlies the aspects of patron exchange in patronage ties with clients is for the sake of the continuity of their capital reaccumulation activities.

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Digital Language Learning (DLL) at Higher Education: A Critical Literature Review on Teachers' and Students' Challenges.

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ABSTRACT

Digital Language Learning (DLL) is increasingly being used in learning in higher education. Teachers and students are accustomed to the use of digital learning. We have several examples of digital learning. However, teachers and students continue to face challenges in implementing digital learning, such as determining how to use it. The method of this study is a review of previous references from the last five years that outline the use of digital learning in higher education. The researchers conducted a literature review that examined challenges in the use of digital learning in higher education to find out the challenges faced by both lecturers and students in teaching and learning in higher education. The findings show that teachers and students face challenges such as teacher and student readiness to use them. The various barriers to accessing technology in various regions are also a source of difficulty for both teachers and students and therefore to be thoroughly discussed.

Keywords: Digital Language Learning, challenges, Technologies, Higher Education

Introduction

DLL has undeniably become a popular trend in higher education since the advent of online learning. As a result, both teachers and students must be prepared to deal with the current technological learning trends. Digital Language Learning (DLL) any technology-based or embedded language learning platform or tool, as well as the practice of learning with such a platform or tool, is referred to as a platform or tool.

The study of language learning has become a highly interdisciplinary endeavor due to its interaction with various fields such as engineering, education, medicine, and many others that are popular with using digital in higher education learning.

The goal of this study is to identify teachers' challenges with using digital when delivering material to students. There are several examples of DLLs used by teachers, such as the use of Google Classroom to distribute materials or assign assignments; there are also those who use LMS (Learning Management System) in their classrooms. In this instance, higher education creates a learning application. Students, on the other hand, can study anywhere by using digital learning. However, some of the difficulties encountered in language learning in higher education.

The purpose of this paper is to identify the DLL challenges that teachers and students face in higher education. The situation of online teaching and learning to improve and strengthen the E-learning system. The key issues for current information technology-integrated education are designing teaching activities for digital learning and applying technology tools flexibly (Lin et al., 2017). This paper outlines the challenges that teachers and students face in tertiary institutions when it comes to digital learning. This issue can be found in higher education in learning language. Thus, digital learning can be a driver for skills development to potentiate an organization's digital transformation. When organizations embrace the potential of social learning in the design and delivery of content, including social elements embedded within digital content, informal problem-solving, knowledge sharing, communities of practice,

and user-generated content, digital transformation will occur (Warschauer, 2007).

The researchers use DLL broadly to reflect new developments through technology-based methodologies, with language learning in higher education serving as the author's case study to identify teacher and student digital use challenges. For example, several research studies have been conducted to investigate the effectiveness of mobile use in ELT for various levels of students, ranging from young to adult learners in various English as a foreign language (EFL) context.

Review of Literature

Digital learning is a complex phenomenon with numerous interpretations in the literature. Definition as a foundation for this research. Digital learning is an unplanned and implicit process with unpredictable outcomes that involve the use of various technological devices such as smartphones, tablets, computers, and others and the learning process is self-evident in the workplaces daily (Warschauer, 2007).

The definition of digital learning is followed by the potential benefits to language learners and educators, as well as digital learning methods and theories. Taking a comprehensive approach, Carrier, et.al (2017) defines digital learning as "the application of technology to the learning and teaching process"(pp. 1–2). In looking at the affordances of technology, Carrier, et.al (2017) lists different categories of digital technology, namely, input technologies such as interactive whiteboards, projectors, and virtual reality headsets; interactive technologies such as online quizzes, videoconferencing; and portable technologies such as tablets, voting devices, and head-mounted displays.

Digital Learning is a digital learning resource that includes many elements to assist teachers and students in applying digital learning styles. There are instructional videos, explanatory texts, simulation videos, and practice questions in each subject.

Considering that, the evolution and use of systems and technologies favored the development and expansion of educational opportunities (Zare, et.al, 2016), many researchers became interested in the use of E-learning in higher education and students' perceptions of the usefulness of this type of learning. Several previous studies conducted digital learning research. This has a significant impact on how a teacher prepares teaching materials and the platforms used in digital learning. What difficulties do teachers and students face in digital learning? DLL pedagogy that seeks to avoid explicit instruction in favor of implicit learning via comprehensible input may well impede full language development.

Curricula that encourage students to use technology to research, curate, annotate, create, innovate, problem-solve, collaborate, campaign, reform, and think critically can benefit teachers. Autonomous learners can learn wherever they want. People of all ages can learn in out-of-school settings like never before, thanks to digital media, by accessing online information, using educational or edutainment software, participating in online communities, or playing individual or multiplayer games (Warschauer, 2007).

Advantages for students, as perceived by students, although there are some drawbacks, it attempts to emphasize a certain number of advantages, for example, an opportunity for distance learning, which undoubtedly increases the quality of education and goes beyond traditional ways of teaching and learning, and thus extends further possibilities of learning (Yuyun, 2014). Moreover, regarding the benefits of e-learning for universities, university level educations try to implement an e-learning system to improve the effectiveness of the teaching-learning process. This process can be more effective because of its flexibility in terms of cost, location, time, and learning speed.

To keep students engaged, teachers can supplement traditional teaching methods with apps or reliable online resources. Teachers can save a significant amount of time by using virtual lesson plans, grading software, and online assessments. DLL examples, Digital Language Learning focuses on more recent

tools and platforms enabled by recent advances in digital technologies such as mobile computing, virtual reality (from desktop 3D to augmented/mixed reality), and digital games to investigate the potential of technologies for cultivating self-directed, exploratory, and autonomous learning.

Method

This research is research sourced from library data. Data sources are from databases such as electronic journals, Elsevier, ERIC, and ProQuest. Sources of library data are taken from the 2020-2023 research year. The criteria for selecting articles are literature reviews related to learning with digital learning in tertiary institutions. An online journal that provides research results on teacher and student challenges to learning through digital learning in tertiary institutions. A review of the results of previous research emphasizes the challenges of teachers and students in digital learning.

Result and Discussion

Digital media undoubtedly provides greater opportunities for youth to learn autonomously. Elementary school students with laptop computers and high-speed Internet connections have greater information and communication resources at their disposal than any scholar in the world a half-century ago (Warschauer, 2007). Content that integrates digital technologies in the English language classroom allows for individualization in large classes; facilitates multimodal practice; encourages collaboration; and increases the “fun” factor for learners (Brown, 2001). His view that teachers’ lack of experience could potentially negate the benefits of digital learning tools is a familiar one in the literature; in addition, his concerns about technical problems and the expense of computer equipment mirror the drawbacks delineated by Al-Kahtani and Al-Haider (2010) concerning inadequate technical support and lack of funding for digital resources (Çelik & Aytin, 2014)

This section contains the interpretation and explanation of the data. Outcomes are interpreted within the context of the research questions that were posed at the beginning of this paper.

To begin with, a few preliminary theoretical observations offered a devastating critique of network science practices. Three main trends were identified. First, students tended to upload data to the Internet without even bothering to download others' data. Secondly, when they did download data, they often had no idea about how to analyze or interpret them in any meaningful way. And third, although the students reported that they enjoyed communicating with other students online, it was found that this interaction was usually about personal and social issues and had very little to do with science. Some network science projects were successful, but only in cases where strong (Warschauer, 2007).

Inside the classroom, teachers were mentoring and instructing students. Readings and instructions provided online were shown to be ineffective in teaching students how to do science on their own. Classrooms that relied solely on these online resources provided little benefit. However, in classrooms with a strong in-class component, with students learning how to collect, analyze, interpret, and discuss data before going online, Internet-based communication and resources added value. In other words, a strong local teacher working closely with students in face-to-face communication was the central feature enabling the effective use of Internet-based materials and distance communication (Warschauer, 2007)

Carrier, et.al (2017) argued students' attitudes toward using digital technologies such as Moodle, PowerPoint, and LINE outside the EFL classroom applications and programs. The results show that flipped classrooms can make students more active in the learning process by creating a more flexible language-learning environment

Another example, there is a good body of literature about digital-game-based language learning, this research has mainly focused on students as game players rather than as future educators. This result reports on research conducted among 154

teacher candidates at a higher-education institution in Spain regarding the adoption of digital games in education. It analyzes the participants' knowledge of and attitudes toward digital games in foreign language learning. Quantitative and qualitative data were gathered through pre/post-test, digital game presentations, and student blog posts. The research comprised five stages associated with critical thinking skills (definition, selection, demonstration, discussion, and reflection), including a game-learning module. In the first two stages, preservice teachers completed the module activities and selected different games aimed at teaching English to children in preschool and elementary education. In the last two, they illustrated, discussed, and evaluated the digital games in class following a rubric and reflected on their perception in blog posts. In this four-week research based on a mixed method and convenience sampling, quantitative and qualitative data were gathered through a pre- and post-test survey about student perceptions toward the use of video games in the classroom, class discussion, and blog posts, and it showed a significant difference after the treatment in two of the five dimensions in the survey about teacher candidates' attitudes toward game usage in education.

Research findings revealed preservice teachers' positive attitudes but lack of practical knowledge about the use of digital games in foreign-language learning. With a language that is easier to understand for the general public than that commonly found in certain research papers. It provides plenty of data and examples to illustrate innovative ways of using ICTs in language learning, which is a very useful feature.

Those three skills include technical skills, organizational skills, and conceptual skills. Teachers need to acquire enough computer skills to be able to troubleshoot arising problems. Then, the teacher needs to "build and sustain language communities" which he/she dismantles "when they have exhausted their function". Moreover, teachers should consider substituting "the well-tried, controllable" educational media, e.g. the textbook, for the more open web-based resources where their students can outperform them (Yuyun, 2014)

According to Carrier, et al., (2017) a group of teacher educators (TEs) limited interactive whiteboards (IWB) use behaviors by focusing on the possible reasons behind such ill practices. The results of this case study show that TE's lack of knowledge, issues pertinent to the effective use of IWB, and peer and administrator pressure are among the most frequent reasons for avoiding digital tools in a learning environment.

Teachers' lack of experience could potentially negate the benefits of digital learning tools is a familiar one in the literature; in addition, his concerns about technical problems and the expense of computer equipment mirror the drawbacks delineated by Al-Kahtani and Al-Haider (2010) concerning inadequate technical support and lack of funding for digital resources.

(Çelik & Aytin, 2014) argued that the teachers generally felt that their school administrators encouraged technology use, and the majority of them expressed confidence that technical support was available in the event of problems related to equipment or connectivity. Furthermore, while most of the participants agreed that they were offered little in the way of training, they did not see this as an important problem, as they were able to acquire the necessary skills through their efforts.

Furthermore, in terms of their general perceptions concerning the role of digital technologies in language instruction, the teachers were enthusiastic and expressed that digital tool could motivate students, enhance their learning and improve their long-term retention. Although the participants felt that training for the use of computing resources was limited, they did not see this as an important problem, believing that they could learn the necessary skills on their own. On the other hand, lack of access to computers and the Internet was cited as posing a significant obstacle, and in instances where these resources were available, the participants reported that governmental restrictions on Internet resources tended to limit their use as teaching tools(Çelik & Aytin, 2014).

Another challenge for students in digital learning got some challenges, such as (Al-Kahtani, S., & Al-Haider, 2010) delineate

numerous extrinsic obstacles to implementing digital educational resources namely Lack of onsite technical and administrative support; lack of assistance in supervising students while using technology; lack of specialists available to assist students in developing the necessary computer skills; Lack of computer availability; lack of time required to successfully integrate technology into the curriculum; High cost of equipment and rapid changes in technology.

Education and learning have been significantly impacted by ICT. The purpose is to create a new model and conduct confirmatory factor analysis to better understand how students utilize ICT in the classroom. An additional aim is to study, based on students' attitudes and aspirations to utilize ICT for digital learning, their fundamental computer abilities, media-related skills, and adoption of digital learning technologies, by surveying students at Bisha University and King Faisal University. Students' comments were divided into seven categories and analyzed to identify their attitudes toward and intentions for using ICT in learning environments. This study was successful in describing students' attitudes and intentions about using ICT for digital learning (Sayaf et al., 2022)

Technical issues are still the issues most difficult to solve, due to the capacity of the servers owned by universities. Surely, universities have made efforts to solve these problems and improve the way the E-learning platforms work. Still, students' technical problems remain poor internet connections, signal loss, and lack of adequate digital devices, especially for students living in rural areas or students from families with low incomes. Universities could create programs to meet these types of needs and thus facilitate the learning process for students who find themselves in these situations.

In the 21st century, the advancement of technology has altered how people communicate and socialize with one another, as well as how they learn, acquire, and process information. Therefore, the advancement of technology aims to explore the impact of the employment of digital game-based learning in Arabic classes at the tertiary level. This study is a qualitative study

and data was obtained through semi-structured interview sessions with 16 students at the tertiary level, who were exposed to the mobile digital game in learning the Arabic language. The students were chosen purposively based on several determining characteristics. The major findings indicated that the mobile digital game produces a significant effect on their learning achievement and enhances their Arabic vocabulary acquisition. Besides, digital game-based learning also promotes student-centered and interactive learning, while additionally creating an enjoyable environment for learning that could encourage student participation in class activities, sustain their learning engagement, and improve their motivation. This study explored opportunities for Arabic language lecturers to practice digital game-based learning as it promotes student-centered learning, which would enhance students' participation in language activities and provide them with a joyful, fun, and active learning environment (Ghani et al., 2022). The development of technology affects the teachers and students in digital learning by creating class activities. However, the challenges for students are how they are improving their skills in participation in digital learning.

The integration of digital technologies in HEIs is fundamental for the development of students' technological skills and for their professional future and consequently and simultaneously, for the increase of their quality of life.

In personal, social, academic/professional, and teaching/learning life, examples of digital learning include the use of a smartphone and a portable computer, as well as applications or software such as a text editor, learning platforms, presentations, WhatsApp, and Instagram. "Search engine navigation and searches," "send messages and/or use email," "perform academic work," and "use social networks" were the most developed digital technology activities.

Over the last two decades, technological advancements have expanded the possibilities for teaching and learning, particularly for the Arabic language. The mobile digital game is

an effective tool with great potential for assisting digital natives in their learning (Ghani et al., 2022). The emergence of digital learning has reshaped English language teaching and learning. Thus, technology-based language learning gained extensive attention due to its benefits. However, the trends of using these digital platforms in English language learning in the EFL context have not been sufficiently scrutinized. Also, the study examines the correlation between students' digital literacy skills, attitudes, and using digital platforms for learning purposes. The study used a quantitative research design by collecting data from 80 EFL who were selected randomly to answer a survey questionnaire. Data were analyzed using SPSS 23.0 software. The results revealed that students showed a high level of attitudes, a moderate level of digital literacy skills, and a moderate level of using digital platforms for learning purposes.

The findings showed a negative non-significant relationship between students' use of digital platforms in learning the English language, digital literacy skills, and attitudes. Based on the results, attitude, and digital literacy do not predict the use of digital platforms for learning English. This study contributes significantly to the limited studies that examine the use of the digital platform for pedagogical purposes. The results recommend further investigation in addressing factors that hinder the use of digital platforms in EFL classrooms (Alakrash et al., 2022)

It also argues that DLL pedagogy that seeks to avoid explicit instruction in favor of implicit learning through comprehensible input may well hinder the full development of a new language (Lantolf & Xi, 2023). DLL is a consideration for the teachers and the students in Digital learning.

Conclusion

Technological developments affect the learning process that can be done digitally. Currently, digital learning is becoming popular in learning. Teachers develop various learning methods using digital learning. For example, learning via Google Meet,

Zoom, and sending assignments via email or other applications. Meanwhile, students need to adapt to technological developments, especially learning through digital learning. Students can study anywhere and anytime. Students can study independently. However, in digital learning, both teachers and students face challenges in implementing digital learning. Teachers need to consider interesting material so students do not get bored with learning. The use of digital technology that must be studied starts from hardware to software or applications so learning is not optimal. One of the main problems faced by many students is a slow internet network. Online learning requires a fairly strong internet network considering the media used are Zoom, Google Meet, Skype, and other applications to attend video conferences. This research provides an overview of teachers' challenges to digital learning because it is recommended that teachers use various digital teaching platforms in language learning. Additionally, it is a recommendation for the next future research to consider research on digital learning that is more detailed in terms of influencing teachers and students in digital learning. It is a recommendation for students to be updated with technological developments.

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Application of the Mind Mapping Method to Increase Students' ability in Writing Descriptive Paragraphs of Class VIII.A SMP Negeri 45 Makassar

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Abstract

The research aims to improve the ability to write descriptive paragraphs for class VIII A students of SMP Negeri 45 Makassar, using the Mind Mapping learning method. This type of research is action research or classroom action research carried out in class VIII A students of SMP Negeri 45 Makassar. This research took place in two cycles. Each cycle is held in two meetings. Each cycle consists of (1) planning, (2) implementation, (3) observation, and (4) reflection. The subjects in the study were 30 students in class VII A of SMP Negeri 45 Makassar. The results of this study indicate that the application of the Mind Mapping learning method can improve the ability to write descriptive paragraphs for class VIII A students of SMP Negeri 45 Makassar. In cycle I, 9 students scored 80 and above, or 3%. While students who scored below 80 were 21 people or 97%. In cycle II, 29 students scored 80 and above, or 97%, while students who scored below 80 were only 1 person, or 3%. From the results of this study, it can be concluded that using the Mind Mapping learning method can improve Indonesian language learning outcomes, especially in writing descriptive paragraphs for class VIII-A students of SMP Negeri 45 Makassar.

Keywords: Application of the Mind Mapping method, writing descriptive paragraphs

A. Background

Educational institutions in Indonesia are a forum for forming Indonesian people who are responsible for the progress of the nation, increasing piety to God Almighty, intelligence, skills, enhancing character, strengthening personality, growing developmental people who can build themselves, and together equally responsible for the development of the nation.

Speaking Indonesian is one of the media for interacting among human beings in conveying ideas, thoughts, or messages to others. Through language, something is expressed that the speaker wants to convey to the listener, the writer to the reader, and the greeter to the greeting. Language skills consist of four aspects, namely listening, speaking, reading, and writing.

One aspect of language skills that plays a very important role in efforts to shape intelligent, critical, and creative future generations is writing skills. By mastering writing skills, students will be able to express their thoughts and feelings intelligently according to the context and situation when they are writing. Writing skills will be able to form creative and critical future generations because they can express ideas, thoughts, or feelings to others in a coherent manner.

Student's writing skills are very limited, especially writing descriptive paragraphs, students have difficulty arranging words coherently and developing them into descriptive paragraphs that are appropriate to the existing context so students need to be encouraged with interesting learning methods. With an interesting learning model, students are expected to better understand writing descriptive paragraphs.

Teaching and learning activities are influenced by several factors, one of which is the learning method. The method is a way of implementing activities in achieving goals, namely learning objectives. One of the learning methods that has been proven to

be able to optimize learning outcomes is the Mind Mapping method. DePotter in Shoimin (2014) reveals that Mind Mapping is a creative, effective, and literal way of taking notes that will map thoughts. Mind Mapping is a creative note-taking method that makes it easier for us to remember a lot of information. Darusman in Heny (2020) argues the mind mapping learning method is a method designed to develop creatively arranging the main ideas of a concept into mind maps that are easily understood by students.

Mind Mapping is a way to put information into the brain and take it back out of the brain. The form of Mind Mapping is like a map of a street in a city that has many branches. Like a road map, we can make an overall view of the subject matter in a very broad area. Mind Mapping can be called a route map that uses memory, enabling us to arrange facts and thoughts in such a way that our natural brain workings will be involved from the start so that remembering information will be easier and more reliable than using ordinary note-taking techniques.

A. Writing Skills

Writing is an activity of expressing one's thoughts, ideas, and feelings expressed in written language. In another sense, writing is an activity to express thoughts and feelings in written form which is expected to be understood by readers and serves as an indirect means of communication.

Dalman (2014) writing is an activity of conveying messages and information that involves thought and language as a medium for expressing ideas. states that writing has two meanings. First, writing means changing audible sounds into visible signs. The changed sounds are the sounds of language (sounds originating from the human speech organ). Second, the word writing means the activity of expressing ideas in writing. Ak Gift (1988:2) says that writing ability is a complex ability, which requires some knowledge and skills. To write a simple essay,

technically someone is required to meet basic requirements such as writing a complex essay.

Dalman (2014) defines writing as an activity of conveying messages (communication) using written language as a tool or medium. In written communication there are at least four elements involved: the writer as the messenger (writer), the message or content of the writing, the channel or media in the form of writing, and the reader as the recipient of the message.

Observing the description above, it can be concluded that writing is one of the language skills used to express thoughts or ideas and to convey messages (communication) through written language as a tool or medium so that it is easy for readers to understand.

B. Elements of Writing

Writing as a written language activity includes four elements, which Dalaman (2014) describes as follows;

- a. Ideas concerning ideas are ideas, opinions, experiences, or knowledge expressed by the author.
- b. Expression is the expression of ideas in such a way that the reader can understand them using exposure, description, storytelling, and discussion.
- c. Order is a rule or procedure for the development and preparation of ideas that are usually guided by the author.
- d. Means is a tool for conveying ideas, namely written language which mainly concerns vocabulary, grammar, how to use language efficiently and effectively, and spelling. To be competent in conveying ideas in writing, one must be able to apply spelling rules, have an adequate vocabulary, be able to apply language rules, be able to write effective sentences, be able to develop good paragraphs, and have reasoning skills.

C. Description Paragraph

A descriptive paragraph is a paragraph that explains to the reader something such as an object, idea, place, or event through details and details. The author uses illustrations to explain this through the circumstances, colors, feelings, or impressions that exist in it. In other words, description is painting or photographing objects or situations with words. Purwanti (2017) explains the purpose of the description paragraph is to describe an object so that the reader can see, hear, feel, or experience the objects and events described by the author.

Description Paragraph Type

In general, description paragraphs are divided into three types according to Dalman (2014), namely: 1) Spatial description paragraphs are paragraphs that describe the space or place where an event takes place; 2) An objective description paragraph is a paragraph that describes a thing or person by expressing its identity as it is so that the reader can imagine the situation; 3) The subjective description paragraph of this paragraph describes objects such as interpretations or impressions of the author's feelings.

Characteristics of Description Paragraphs

1. The characteristics of descriptive paragraphs include:
2. Describe or describe something.
3. The description is done as clearly as possible by involving sensory impressions.
4. Make readers or listeners feel themselves or experience themselves.

D. Mind Mapping Method

The learning method is the method taken by the teacher to create a pleasant and supportive teaching situation for a smooth learning process and the achievement of satisfying children's learning achievements. In learning to write well, a method is needed. One method that can be used is Mind Mapping which can

make children happy to learn. The concept of Mind Mapping was originally introduced by Tony Buzan in the 1970s.

Mind Mapping is a diagram that is used to present words, ideas (thoughts), tasks, or other things connected from the main idea of the brain. According to Hernowo, mind mapping puts you in touch with your subconscious mind before writing; your writing becomes more emotional, more colorful, and more rhythmic. Your writing, in turn, reflects your characteristics more accurately.

From the description above, a definition can be taken that Mind Mapping is a way of mapping information that is described in the form of branches of the mind with various creative imaginations.

1. Steps to Make Mind Mapping

De Potter in Shoimin (2014) suggests there are seven steps to create a Mind Map as follows:

- a. Starting from the center of the blank paper where the long side is placed horizontally (landscape). Starting from the center gives freedom to the brain to spread in all directions and to express itself more freely and naturally.
- b. Use a picture or photo for a centerpiece. A picture or photo will have a thousand words that help the brain use the imagination to be expressed. A central image is more interesting, keeps the brain focused, helps the brain concentrate, and activates the brain.
- c. Use attractive colors. To the brain, colors are as attractive as pictures. Color makes Mind Maps livelier, adds energy to creative thinking, and is fun.
- d. Connect the main branches to the central image. Connect second-level branches, third-level to first- and second-level branches, and so on. Because the brain works by association. The brain likes to associate two (or three or four) things at

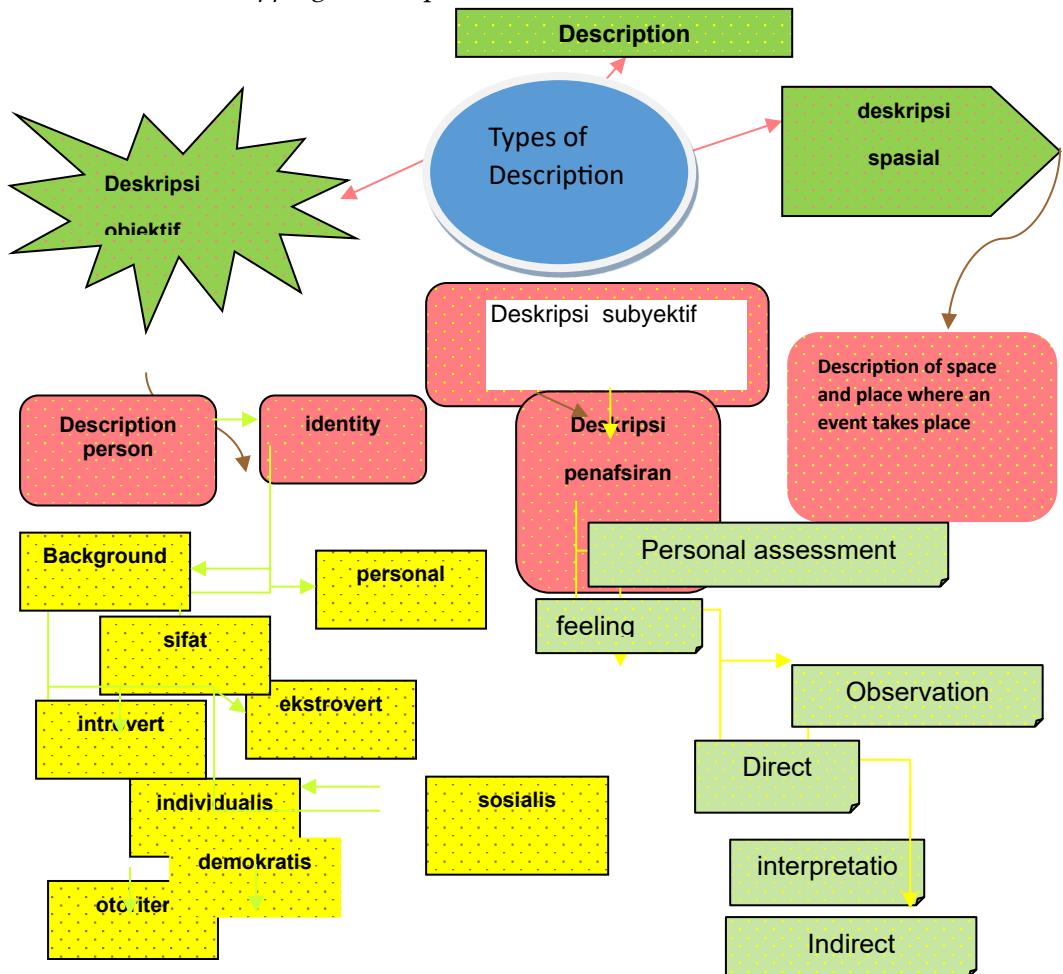
- once. If the branches are connected it will be easier to understand and remember.
- e. Make curved lines, not straight lines. With straight lines, it will bore the brain. The curved and organic branches like tree branches are much more appealing to the eye.
 - f. Use one keyword for each line. Single keywords can give Mind Maps more power and flexibility
 - g. Using images as central images, each image is worth a thousand words.

2. Implementation of the Mind Mapping Method

The Mind Mapping method will certainly help students utilize the potential of both sides of the brain. Once students are used to using and developing the potential of their two brains, improvements in several aspects will be achieved, namely concentration, creativity, memory, and understanding so that students can make the right quality decisions.

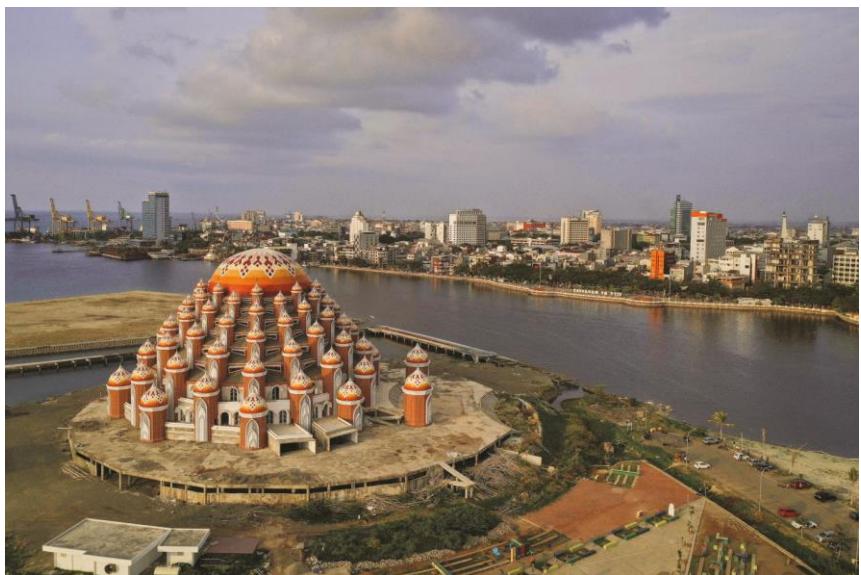
The implementation of the Mind Mapping method is as follows, students and the teacher choose a theme and then write it down on a blank sheet of paper. Writing in the form of keywords from the selected idea accompanied by symbols or colored pictures. After students make plans in the form of mind maps, then students are assigned to write descriptive paragraphs.

Gambar : Mind Mapping deskripsi



Dusk at Losari Beach

- Define keywords
- Define a concept map



B.J. Habibie

The third president of the Republic of Indonesia, son of Sulawesi

a. Define keywords

b. Determine the concept map!

RESEARCH METHOD

1. Type of Research

This type of research is class action research (classroom action research) is research that aims to improve the quality of processes and learning outcomes in class or solve learning problems in class.

2. Research Design

The design carried out by researchers in classroom action research is research that is carried out in cycles.

Cycle 1

Stage 1: The planning Phase includes; a) Observation of student learning outcomes at the last meeting. b) Identifying the factors that influence student learning activities..c) Planning the actions to be implemented.d) Preparing the tools to be used.

Stage 2: Implementation of Action, implementation or application of the contents of the design, namely holding actions in class that are adjusted to the Learning Implementation Plan (RPP) that has been prepared.

Stage 3: Observation, Observation is in the form of teacher activities with the status of observers who observe the learning process that is being carried out.

Stage 4: Reflexes and actions reflect on the mistakes that have occurred and correct them in the next lesson. Reflection is carried out until learning is successful as desired.

RESULT AND DISCUSSION

Based on the activities that have been carried out in each cycle, as many as two cycles in this classroom action research to improve the ability to write descriptive paragraphs using the Mind

Mapping method are illustrated in the discussion results report which is described as follows:

1. Implementation of Cycle I

Cycle I is divided into planning, action, observation, and reflection stages.

a. Planning

At the cycle I level it is carried out in two meetings with a time of 2 X 40 minutes. Competency standard: Understanding descriptive paragraph. Basic competency: writing descriptive paragraphs with the aim: students can write examples of descriptive paragraphs using the mind mapping method

b. Action Implementation

Implementation of learning refers to (RPP) learning which has been compiled as follows:

- 1) The teacher explains the subject matter being studied
- 2) The teacher forms 5 discussion groups, each group consisting of 6 students.
- 3) The teacher conveys how to carry out group discussions to students, and arranges student seats.
- 4) The teacher determines the purpose of the group discussion for students.
- 5) The teacher allows students to ask questions
- 6) The teacher presents the problem to be implemented.
- 7) The teacher guides students in group discussions with student worksheets.
- 8) Students share the results of their work in front of the class in turn,
- 9) The teacher provides space for questioning and answering the material that has been presented.

After the debriefing was completed, a conclusion was drawn from the results of the group discussion.

c. Observation

At this stage, the researcher observed the results of the increase in the ability to write interrogative sentences using the Mind Mapping method based on observations made during the implementation of a cycle I. Cycle I data becomes a basis for concluding that something expected is not following the reality that has taken place. The results of student observations in the first cycle of student attendance were 100%, activeness in asking 22%, activeness in answering 27%, and activeness in responding 19%.

d. Reflection

After the teaching and learning activities are completed, the researcher examines the implementation of learning, and the deficiencies found in Cycle I will be corrected in Cycle II. The results obtained in cycle I have not shown the expected results, this is a deficiency that must be addressed in the next cycle. The improvements made are as follows:

- 1) The implementation of the teaching and learning process must be maximized to try to increase student activity.
- 2) Use of time allocation following the prepared scenario.
- 3) Improving classroom management to be more orderly and conducive so as not to disturb the teaching and learning process.
- 4) Guidance to students is further improved so that students can understand the learning material and can provide opinions in problem-solving efforts. Delivery of material is more contextual following the initial knowledge of students, namely by starting from new concrete things to the abstract or the problem being solved

The number of students who took part in this study was 30 people. In cycle I, writing descriptive paragraphs using the Mind Mapping method was not perfect. The average score for writing descriptive paraphrases using the Mind Mapping method for class VIII A students of SMP Negeri 45 Makassar is 77%. This shows that the percentage level of acceptance and knowledge of students is not very adequate.

Mastery learning cycle I

Category	Score	Frequency	Percentage (%)
Very Good	90-100	9	22%
Good	80-89	0	0%
Enough	70-79	14	58%
Fair	60-69	4	10%
Poor	50-59	3	9%
Total		30	100%

The number of students who scored 80 and above was 9 people or 3% and the number of students who scored below 80 was 21 people or 97%. Classically it can be concluded that this criterion has not increased because it has not yet reached the classical completeness standard of 85% and above. To find out the increase in student learning outcomes, this research is continued to cycle II.

a. Implementation of Cycle II

In Cycle II, the competency standards being taught are still the same as the competency standards from Cycle I, namely: Understanding the types of paragraphs. The basic competency is writing descriptive paragraphs with the aim: students can write descriptive paragraphs using the mind mapping method.

The implementation of cycle II learning was carried out in two meetings. The learning implementation plan is structured as follows: Learning activities include initial activities, namely checking student readiness, giving apperception questions, and motivation, as in cycle I. Repeating material that has been taught in cycle I. The core activity is explaining again explaining writing lessons description paragraph with. Mind Mapping method

Implementation of Action II

The implementation of learning activities in the second cycle is following the learning implementation plan that has been prepared previously. The implementation process is as follows:

In the initial activity the teacher checks the readiness and preparation of students to take part in the learning process, provides information on SK/KD indicators to be achieved, and proposes material to be taught. This is done to determine the knowledge students have about the material being taught.

The core activity is the activity of explaining again about the material that has been taught. Next, submit the assessment criteria when writing descriptive paragraphs with Mind Mapping.

b. Observation Results of Cycle II

Based on the observations that have been carried out in the second cycle of learning, students have been able to achieve the research objectives that have been carried out. The deficiencies that occur in cycle I will not affect the achievement of the expected goals. The observations made in cycle II are as follows:

- 1) Increase student activity in class.
- 2) With the guidance of researchers, students can create interactive learning.
- 3) Individual student motivation begins to increase

c. Cycle II reflection

The successes obtained during this second cycle are:

- 1) Student activity in the teaching and learning process has increased. Students can build cooperation to understand the tasks given by researchers. Students begin to participate in activities and are on time in implementing them.
- 2) Increasing student learning outcomes in the teaching and learning process is supported by increased activity in research activities in improving a conducive learning atmosphere.

Furthermore, intensive coaching is carried out when students experience difficulties and this can be seen from the results of observations and evaluations of students' acquisition score which has increased.

In cycle II, writing interrogative sentences using the Mind Mapping method experienced an increase. The average score for student learning outcomes in cycle II was 89.52% of the ideal score of 100. The highest score was 98 and the lowest score was 70, which means that the ability to write descriptive paragraphs using the Mind Mapping method for class VIII A students at SMP Negeri 45 Makassar increased.

Table of completeness learning cycle II

Category	Score	Frequency	Percentage (%)
Very Good	90-100	26	87%
Good	80-89	3	10%
Enough	70-79	1	3%
Fair	60-69	0	0%
Poor	50-59	0	0%
Total		30	100%

The table shows that of the 30 students in class VIII A of SMP Negeri 45 Makassar, there is 1 student who does not complete his studies with a percentage (3%), and there are 29 students who are in the complete learning category with a percentage (97%).

The number of students who scored 80 and above was 29 people or 97% and students who scored below 80 were 1 person or 3%. Lexically, it can be concluded that this criterion has increased because it has reached the classical completeness standard of 85% and above.

a. Cycle II Reflection Phase

The successes obtained during this second cycle are:

- 1) Student activities in the teaching and learning process have led to student learning. Students can build cooperation to understand the tasks given and begin to participate in activities in and timely implementing them.
- 2) Increasing student learning outcomes in the teaching and learning process is supported by increased activity in improving the learning atmosphere in writing interrogative sentences using the Mind Mapping method. For this, intensive guidance is carried out when students experience difficulties and it can be seen from the results of observations and evaluations of students who have experienced an increase.
- 3) The evaluation results in the second cycle achieved an average score of 89.52%.

1. Qualitative Analysis

Events that need to be noted related to the learning process cycle I and cycle II are as follows.

- a. In the implementation of teaching and learning activities in cycle I and cycle II, class VIII A students of SMP Negeri 45 Makassar, totaling 30 people, were all present.
- b. The attention of students in the learning process in cycle I was still not good, in general, they were still not enthusiastic about the presence of researchers, while in cycle II students generally began to be enthusiastic about the presence of researchers.
- c. Students who were noisy in cycle I were dominated by male students whose seats were at the back so they easily influenced other students, while in cycle II, students who were always noisy began to be aware and active in participating in the teaching and learning process.

d. In cycle I, only a small number of students could answer short questions from the researcher, and a small number dared to ask and respond to what the researcher explained, whereas, in cycle II, students generally asked, answered, and responded to what the researcher explained so that the learning atmosphere was very enjoyable.

Discussion

Improving the ability to write tanta sentences using the Mind Mapping method for class VIII A students of SMP Negeri 45 Makassar in cycle I and cycle II can be seen in the following table.

Table of Circles I

Score	Category	Frequency	Percentage(%)
80-100	Tuntas	9	3%
0-79	Tidak Tuntas	21	97%
Total		30	100%

The table describes the results of student acquisition tests in cycle I. After the tests were carried out in cycle I, 29 students did not achieve a completeness score of about 97%, and students who achieved a completeness score of 9 people or about 3%.

Tabel Siklus II

Skor	Kategori	Frekuensi	Persentase(%)
80-100	Tuntas	29	97%
0-79	Tidak Tuntas	1	3%
Jumlah		30	100%

The cycle II table describes the results of the student acquisition test in cycle II. after being tested in cycle II some students did not achieve a completeness score of 29 people out of a total of 30

people, the total number of students in class VII A or around 97%, and students who did not reach a completeness score.

Thus, it appears that the increase in student learning completeness increased after the action was held for two cycles, namely Cycles I and II. In Cycle I there were 21 people or 97% of students who were in the incomplete category. Whereas in Cycle II there was a change, namely, there was 1 person or 3% of students whose learning outcomes were incomplete. For the complete category in Cycle I there were 9 students or 3%, while in Cycle II there was an increase where there were 29 students or 97% of students in the complete category.

Furthermore, based on the results of observations of students' attitudes in class during teaching and learning activities, it turns out to be able to change students' attitudes and can increase creativity and learning activities and foster participatory attitudes among students. It can be seen that in the implementation of Cycle I students have started to be enthusiastic and motivated to participate in teaching and learning activities.

In Cycle II students were more enthusiastic about participating in learning which was indicated by the number of students paying attention to the subject matter, asking questions about material that they did not understand, and answering the teacher's verbal questions.

In this study, the improvement of the ability to write descriptive paragraphs was applied using the Mind Mapping method which consisted of two cycles. This study found significant results, namely increasing the ability to write sentences using the Mind Mapping method for class VIII A students at SMP Negeri 45 Makassar. The increase in student learning outcomes in each cycle can be seen through a comparison of the test results from cycle I and cycle II as shown in the following table:

Comparison of learning outcomes Cycle I and Cycle II

No	Siklus	Siswa yang Tuntas	Persentase Ketuntasan	Nilai rata-rata	Kategori
1.	Siklus I	9	3%	70%	Sangat Kurang
2.	Siklus II	29	97%	97%	Sangat baik
Jumlah			100%	167%	

The previous table shows that after carrying out 2 tests. In cycle I there were 9 or 3% of students who achieved KKM scores with an average score of 70% and in cycle II increased learning outcomes from 29 students out of 30 the total number of students in class VII A or 97% of students who achieved KKM scores with an average score average 87%. In cycle II this shows that the process of applying media images in cycle II has increased learning outcomes.

Conclusion

Based on the results of the study it can be concluded that in the teaching and learning process for class VIII A students of SMP Negeri 45 Makassar in cycle I there were 9 or 3% of students who achieved KKM scores with an average score of 73.6% and in cycle II increased learning outcomes by achieving completeness to 29 or 97% of students who achieve KKM scores with an average score of 89.52%. In cycle II it shows that writing interrogative sentences using the Mind Mapping method has increased the ability of class VIII A students of SMP Negeri 45 Makassar.

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MANAGEMENT IMPLEMENTATION IN SEAWEED (Eucheuma) PRODUCTION, FOR SEAWEED FARMERS IN PUNDAWA BAJI SUB-DISTRICT, PANGKEP DISTRICT, SULAWESI SELATAN PROVINCE.

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Abstract.

Management of seaweed production (eucheuma), aims to determine the management of seaweed production. Research in Pundata Baji Village, Pangkep Regency, South Sulawesi. This research was conducted for three months from January to March 2022. The analytical method used is quantitative analysis. The results of the research show that the production management system has been well implemented by the respondent farmers.

Keywords: Management, production, seaweed.

Introduction

Coastal fisheries in Indonesia are an important source of food, income and cultural heritage for its people. As many as 60 percent of Indonesian fishermen, or 1.6 million people, are small-scale fishermen, and 85 percent of their catch is used for human consumption. In addition, Indonesia has the second longest coastline in the world, and 40 percent of the population (about 100 million people) live near the coast. Therefore, coastal fisheries play

an important role in national food security and nutritional health in Indonesia.

South Sulawesi has potential marine resources, both biological and non-biological, which are quite promising to be managed. This potential is not only a local but also a national asset if it is managed and utilized wisely and prudently. One of the maritime commodities that is being developed and is one of the coastal economic development programs in South Sulawesi today is seaweed. South Sulawesi is the largest contributing province to national seaweed production. The increase in production was achieved due to the large area of land for seaweed development in this area, which is 250 thousand hectares. The prospect of seaweed is very bright because the world market demand for seaweed reaches 300 thousand tons per year [1]

Based on a report from the South Sulawesi Maritime and Fisheries Service [2], national seaweed production reached 1,728,475 wet tons in 2007, or the equivalent of 172,847.5 dry tons. Meanwhile, South Sulawesi seaweed production has reached 670,740 wet tons, or equivalent to 63,074 dry tons (36.5%). Efforts to increase seaweed production are very likely to be achieved, because the South Sulawesi region is considered to have considerable potential for coastal fisheries resources, cultivation, and post-harvest technologies are easy to implement and do not require large capital [3].

Pangkep Regency is one of the districts in South Sulawesi Province which has the potential for seaweed development. The sea area reaches 17,000 km², and the potential land for seaweed cultivation is 26,700 ha (Nur, 2007). In 2006 Pangkep Regency was able to produce 19,920 tons of seaweed with an economic value of 29.8 billion [4]

Indonesian waters are around 8.6% of the total marine biota [5]. The area of seaweed habitat in Indonesia reaches 1.2 million hectares or the largest in the world. Seaweed potential needs to be continuously explored, given the high diversity of seaweed in Indonesian waters.

The economical utilization of seaweed has been carried out by several countries. China and Japan have started since 1670 as

ingredients for medicines, food additives, cosmetics, animal feed, and organic fertilizers. Seaweed has been used as a daily food for the people of Japan, China, and Korea, and even in 2005 the consumption value of seaweed reached 2 billion US\$. Ironically, in Indonesia, seaweed is only left as marine debris, floating, drifting, or washing up on the beach [7,8].

In the early 1980s, the development of demand for seaweed in the world increased along with the increase in the use of seaweed for various purposes, including in the fields of industry, food, textiles, paper, paint, cosmetics, and pharmaceuticals (medicines). In Indonesia, the use of seaweed for industry begins for the agar industry (*Gelidium* and *Gracilaria*) then for the craft industry (*Eucheuma*), and the alginate industry (*Sargassum*), [9,10].

Indonesia is a country with enormous natural wealth. Indonesia's sea area is two-thirds of its land area. Indonesia's total sea area is 3.544 million km² (Fisheries and marine affairs in Figures, 2010). Indonesia also has the second longest coastline in the world after Canada with a length of 104 thousand km [11].

The area of Indonesian sea waters and the diversity of types of seaweed are a reflection of the potential of Indonesian seaweed. Of the 782 species of seaweed in Indonesian waters, only 18 species from 5 genera have been traded. Of the five genera, only the genera *Eucheuma* and *Gracillaria* have been cultivated. The distribution area of the *Eucheuma* genus is found in almost all waters in Indonesia, [12,13].

Indonesia is one of the main producers of seaweed and can meet around 60-70% of the world's market demand. This high economic value trade continues to be developed intensively with the target of being able to produce 1.9 million tonnes in 2009. Indonesia has the potential for seaweed development covering an area of 1,110,900 hectares, to date, only 222,180 hectares or around 20% have been utilized [14].

Seaweed in Indonesia is sold as an export commodity and for the needs of the domestic seaweed processing industry. The highest percentage of Indonesia's exports is to China, followed by Korea, the Philippines, Spain, Chile, and several other countries.

Seaweed is mostly exported or for domestic industrial purposes in dry form.

Seaweed is a type of algae, in general, algae can be classified namely: green algae (chlorophyceae), blue green algae (cyanophyceae), brown algae (pheaceophyceae), and red algae (rhodophyceae). Many green algae and blue-green algae live and breed in freshwater, while brown algae and red algae have marine habitats which are usually better known as seaweed.

Brown algae, better known as coral grass or rockweed, is often used for the alginate industry, while red algae is a source of raw materials for the agar, carrageenan, and fulcellaran industries and other products. Seaweed or seaweed is the largest part of seaweed that grows tightly attached to the substrate in the ocean such as rocks, coral, and dead coral shells.

Materials and methods

The research was conducted in the Pundata Baji Village, Pangkep Regency, South Sulawesi. This research was conducted for three months from January to March 2022. Respondents were taken at simple random sampling as much as 20% of the total population of 133 farmers. So the number of respondents was as many as 26 people.

Data Types and Sources

Types and sources of data consist of primary data, namely data collected by conducting field surveys and interviews with the help of questionnaires to complete the data needed, and secondary data, namely data in the form of reports from the Village Office, District Office, and agencies related to this research.

Analysis methods

Survey and observation methods are used in this study. The information collected includes primary data and secondary data. Direct interviews and questionnaires were used to collect primary data from the respondent farmers. Secondary data is obtained from organizations or agencies related to research. The

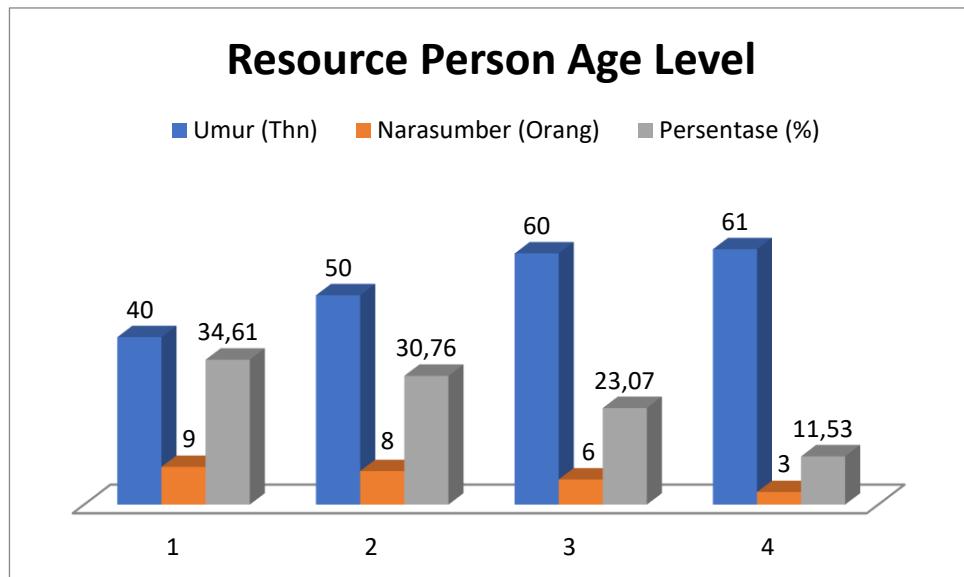
data were analyzed qualitatively, emphasizing the aspect of an in-depth understanding of a problem rather than looking at the problem for generalist research.

Results and discussion

3.1. Characteristics of respondents

The age of seaweed farmers varies greatly from one seaweed farmer to another other seaweed farmers, some are young and some are old. For more details regarding the age of seaweed farmers in Pundata Baji Village, you can see graph 1:

Graph 1. Age Level of Seaweed Farmers in Pundata Baji Village, Pangkep Regency, South Sulawesi Province 2021.



Sumber : Data Primer setelah Diolah, 2018

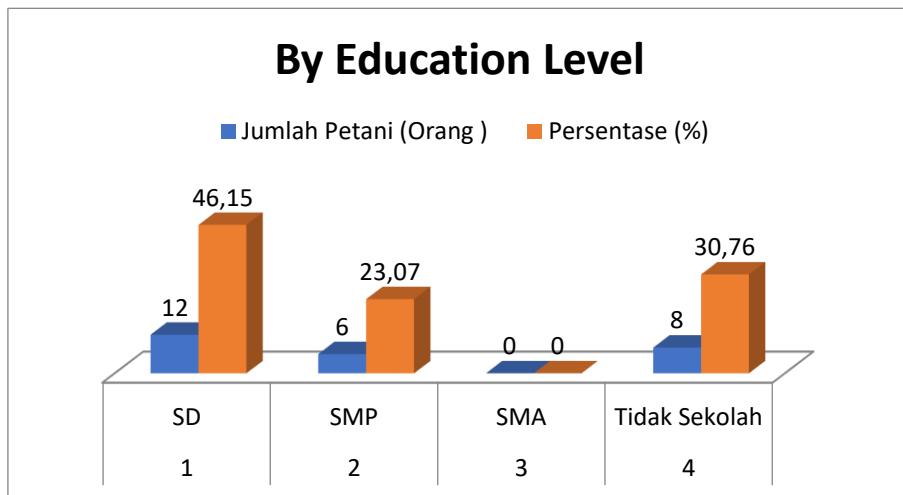
Based on Graph 1 it can be seen that the number of seaweed farmers is dominated by the 40-year-old age group. Meanwhile, the least number of seaweed farmers was found in the age group >61 years with a percentage of 11.53. Thus it can be concluded that seaweed farmers in the research area are in productive areas.

3.2 Level of education

The education level of seaweed farmers influences their way of thinking, especially in terms of absorbing new technology. The higher the level of education, both formal and non-formal, the more rational the thinking will be in making decisions related to the seaweed business. For more details, the education level of the respondents' seaweed farmers can be seen in Graph 3.

Graph 2. Education Level of Seaweed Farmers in Pundata Baji Village,

Pangkep Regency, South Sulawesi Province 2021.



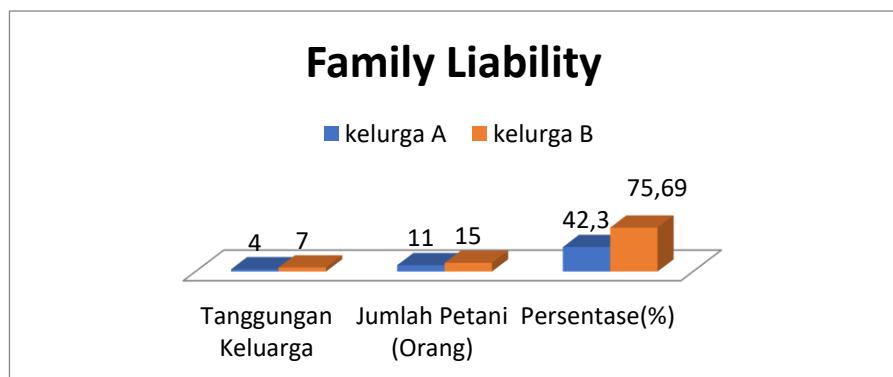
Source: Primary Data After Processing, 2021

In graph 2 it can be seen that the education level of seaweed farmers is mostly elementary schools, namely 12 with a percentage of 46.15%, 6 junior high schools with a percentage of 23.07%, no high school, and seaweed farmers who do not have schools 8 people with a percentage of 30.76%. Based on the table above it appears that the education level of the seaweed farmers has some difficulties in accepting new technology, it is necessary to provide training activities and courses that must also be attended by the respondent farmers so that they can improve the quality and quantity of their seaweed business so that they are not only based on experience. just do the seaweed farming.

Family Liability

The number of family dependents affects the income received by seaweed farmers. If the responsibility of the seaweed farmer is large, the household expenses incurred will also be greater, thus the income received by the farmer will decrease. With the addition of family members, there will be additional labor if the household members are of working age and are not at school. For more details regarding the number of dependents of seaweed farming families in the Pundata Baji Village, it can be seen in Graph 3.

Graph 3. Number of Dependents of Seaweed Farming Families in Pundata Baji Village, Pangkep Regency, South Sulawesi Province 2021.



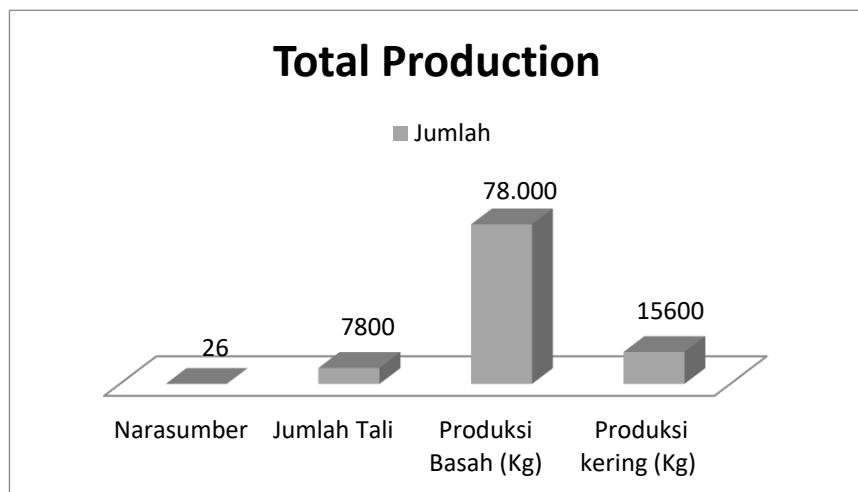
Source: Primary Data After Processing, 2021

Graph 3 shows that the number of dependents in a family of 4 people is less than that of a family of 7 people.

3.4 Seaweed Production

The production income of seaweed farming by 26 informants was based on data taken directly from the field, namely by asking seaweed farmers directly about the amount of seaweed production for 1 time of production. The total seaweed production received by farmers from seaweed farming in one production is presented in Graph 4.

Graph 4. Total production at harvest, seaweed farmers according to the number of ropes and sources in Pundata Baji Village, Pangkep Regency, South Sulawesi Province 2021.



Source: Primary Data After Processing, 2021 Based on Graph 4 above, it can be seen that the total amount of seaweed produced in one production by 26 informants was 78,000 kg of wet seaweed, and the total seaweed after going through the drying process was 15,600 kg in total.

By looking at a series of process activities carried out during seaweed production, more details can be seen in the

following scheme: (1) Planning, (2) Provision of Tools (3) Procurement of Seeds, (4) Planting, (5) Drying

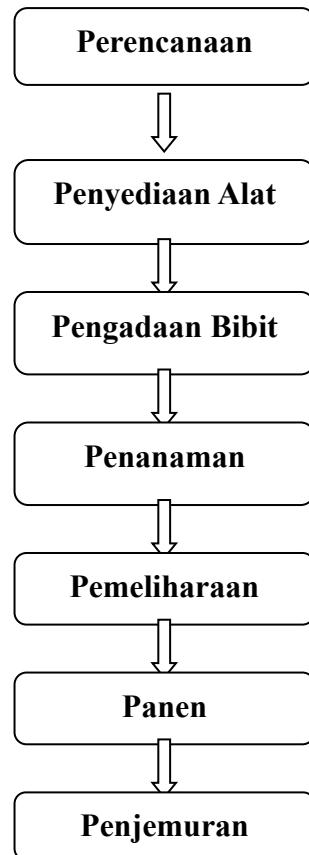


Figure 1. Seaweed business production process in the Pundata Baji sub-district, 2021.

Conclusion

Process management functions by seaweed farmers in Pundata Baji Village, namely planning, supervision, transportation, direction, and control, have been implemented properly.

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Digital Illustration - Defense Mechanisms in Poe's Short Story *The Tell-Tale Heart*

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ABSTRACT

In technology, graphic design can be helped the teacher for more understanding the story with illustrating. Defense mechanism is strategies the ego uses to defend itself against the anxiety provoked by conflicts. The aim of the research is to describe the types of defense mechanism in Poe's selected short stories, *The Tell-Tale Heart* & to reveal the implementation of characters' mechanism in solving the conflicts. The research employed a descriptive qualitative method with a psychoanalysis approach Sigmund Freud's theory of defense mechanism. The data constitute both primary & supporting data. The primary data derived from Poe's Selected Short Stories *The Tell-Tale Heart*, while the supporting data were taken by means of library research mainly from books, theses, dissertation, electronic articles & journals. The results show that the characters have performed a range of defense mechanisms in Poe's selected short stories. The *Tell-Tale Heart* stories, the characters are mainly concerned with repression, denial, reaction formation, rationalization, displacement of self-defense. These characters performed a range of defense mechanism in order to resolve the conflicts.

Keywords: *The Tell-Tale Heart, psychoanalysis; defense mechanism*

1. Introduction

Literature is the creation of man as processed in thoughts, feelings & use of language as a medium. Literature is not just imagination, but it is a result of the author's mind putting into reality with language. Therefore, it is worthy to reflect on literature as a result of human creativity that can be used as a social documentation. Wellek & Warren (1949), state that literature is a social institution, using as its medium language, a social creation. Such traditional literary devices as symbolism & meter are social in their very nature. They are conventions & norm which could have arisen only in society. But, furthermore, literature represent 'life' & 'life' is in large measure, a social reality, even though the natural world & the inner or subjective world of the individual have also been objects of literary 'imitation'.

Similarly, Fouzia (2014), defines literature as the mirror of society's views & believes that reflects social, political & cultural value of any society & also reflects people's views, convictions & dreams in a very creative & imaginary way to show certain phenomena or to find out a solution to a specific dilemma. Besides, literature as permanent expressions in words (written or spoken), specially arranged in pleasing accepted patterns or forms. Literature expresses thoughts, feelings, ideas or other special aspects of human experiences.

As Endraswara (2008), stated that studying psychology literature is similar with studying actual human being from the inside. Studying psychology literature is very beautiful, can understand & the depth of the human soul, clearly very broad & very deep. Interpretive meaning is widely opened.

Psychoanalysis literature is to explain the unconscious conflicts of authors such as what is revealed in the lives of their childhood. Not all the works of literature could be analyzed through the psychoanalysis approach. It could only be functioned in types of literature that have the psychological elements in it. *The Tell-Tale Heart* is short stories by Edgar Allan Poe that present the characters similarities with the author's own life. *The Tell-Tale Heart* is the examples of literary works with the psychological

components dwelling in its contents. Both short stories have similar themes & the plot of the stories are almost the same. The story using unreliable narrators as the main character, *The Tell-Tale Heart* tell stories about assassination.

Besides, the researcher intends to analyze *The Tell-Tale Heart* by Edgar Allan Poe by using psychoanalysis approach to examine what occurred to the character psyche which were appeared as phenomena portrayed in the short stories. Based on above, these showed that there are some studies that have been previously conducted namely, Stroud (2004), conducted a study entitled *Poe's Guinea Pigs: Narrators & Perversity in Selected Tales*. He emphasized on revealing a pattern of though the selected tales as if they are in a series.

Besides, Winastri (2014), conducted a study entitled *Psychoanalysis on Edgar Allan Poe's William Wilson, Tell-Tale Heart*. It shed light on the characterization & psychoanalysis of three main characters based on their appearances into the short stories. The main characters in these stories were impulsive, imaginative, solicitous, unmanagable, & a heavy drinker. These stories indicated love & hate relationship which turned into tragedy.

Similarly, Adhikari (2014), conducted a study entitled *Psychology in Crime & Confession: A Critical Study into Poe's Short Stories The Tell-Tale Heart* which was merely focused on finding these fundamental issues of psychology, crime & confession in the story as a critical approach to carry out.

Furthermore, Farida (2013), conducted a study entitled *Mystery & Oddity in Edgar Allan Poe's The Tell-Tale Heart*. This dissertation studied about the gothic elements; mystery & oddity in *The Tell Tale Heart*. In this research, the researcher has applied mystery & oddity with the influence of psychoanalysis theory that has taken an important part in this story. The researcher can find these gothic elements & reach the appearance of Freud's theory.

In addition, Hastriyawati (2016), entitled *Self-Defense Mechanisms in Eugene O'Neill's Long Day's Journey Into Night*. She made an absolute detailed analysis on the types of self-defense mechanisms in drama *Long's Day's Journey into Night* & reveal the implementation of characters' mechanisms in solving the conflict.

The result of psychoanalysis showed that there were several types of self-defense mechanisms used by the characters in the drama.

Besides, In Freudian psychology, there are three levels of mental life namely the conscious, the preconscious and the unconscious Alwisol (2009), Feist & Gregory (2008), tried to begin the explanations of the ego. the researcher will focus on analyzing the defense mechanism in Poe's selected short stories by using Sigmund Freud's theory in Bertens (2006), in which structural theory of personality that is divided into three concepts; *id*, *ego* & *superego*. Moreover, the researcher will emphasize on the use of defense mechanisms that is also derived from Freud's theory in Schultz & Schultz (2005), in which this concept covers wide areas of defense mechanisms (repression, denial, reaction formation, *rationalization*, displacement, sublimation). This research aims to describe of defense mechanisms & to reveal the implementation of characters' mechanism in solving the conflicts.

2. Method

The researcher will use descriptive qualitative method. According to Bogdan & Biklenin Moleong (1998), the descriptive qualitative method is a research procedure that produces descriptive data in written word or spoken of people & behaviors that can be observed.

In this research, this method is used to find out defense mechanisms used by the characters in E. A. Poe's Selected Short Stories *The Tell-Tale Heart*.

2.1. Source of Data

In collecting data, library research will be used or literature as the main working methods, namely by reading a number of passages that support the object of research & data analysis to classify two types of data resource namely primary data & supporting data. This research, the primary data are collected from the texts of the short stories *The Tell-Tale Heart* by Edgar Allan Poe. The supporting data will be used by the researcher are some references that have correlation to the topic of the research, collected from the other sources, such as books, thesis,

dissertation, electronic articles, encyclopedia, videos, journals & dictionaries.

2.2. Data Collection

This research is classified as a literary research. Therefore, the correct method used in gathering the data are to search for supporting references through relevant books & also reliable information from the Internet. A close reading the selected short stories itself, the note-taking method & highlighting the materials that involves psychology.

2.3. Data Analysis

In analyzing the short stories, the researcher will use Freud's psychoanalysis namely personality structure, anxiety & defense mechanisms. Psychoanalysis is a system or method of psychological theory to analyze a person's psychological condition.

3. Findings

Based on the result of the research, In this part, the researcher analyzes the personality structure of character & defense mechanisms of the character in Poe's work.

3.1. Personality Structure of Character in The Tell-Tale Heart

In analyzing the character in the short story, the researcher explains how the structure of the personality of character in Poe's selected short stories *The Tell-Tale Heart*.

The id in The Tell-Tale Heart

In the presence of the narrator's illness, instead of eliminating one senses even sharpened his senses. This excerpt, *I heard all things in the heaven & in the earth. I heard many things in hell (Quinn, 1984).*

The ego in The Tell-Tale Heart

TRUE! --nervous --very, very dreadfully nervous I had been & am; but why will you say that I am mad? The disease had sharpened my senses --not destroyed --not dulled them. Above all was the sense of hearing acute (Quinn, 1984).

The narrator indicates tremendous anxiety, fear & also anger. The narrator notices any repetition of the word *mad* shows having the power of emotion of contradictionexperienced.

The superego in The Tell-Tale Heart

I loved the old man. He had never wronged me. He had never given me insult. ...I think it was his eye! Yes, it was this ! one of his eyes resembled that of a vulture---a pale blue eye ... "Villains!" I shrieked, "dissemble no more! I admit the deed!--tear up the planks! (Quinn, 1984).

After reading all the text in *The Tell-Tale Heart* the researcher concludes that these sentences are included as part of the superego, the narrator feels guilty for his behavior that had killed the old man.

3.2. Personality Structure of Character in The Tell-Tale Heart

In analyzing the characters in those short stories, the researcher explains how the structure of the personality of characters in two of E. A. Poe's selected short stories *The Tell-Tale Heart*.

The id in The Tell-Tale Heart

In the presence of the narrator's illness, instead of eliminating one senses even sharpened his senses. This excerpt, *I heard all things in the heaven & in the earth. I heard many things in hell (Quinn, 1984).*

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Rationalization in The Tell-Tale Heart

& now have I not told you that what you mistake for madness is but over acuteness of the sense?--- now, I say, there came to my ears a low, dull, quick sound, such as a watch makes when enveloped in cotton. I knew that sound well, too. It was the beating of a drum stimulates the soldier into courage (Quinn, 1984).

This reveals that rationalization does not merely occur to define whose behavior is unacceptable but it may also be utilized by the narrator to define things that he himself could not define plausibly & in which he himself is convinced by his rationalization.

Displacement in The Tell-Tale Heart

In The Tell-Tale Heart, there is a male who is not labeled on his name in this story. The proof of the narrator's utilization of displacement is the narrator's loathing to the old man's eye.

It is impossible to say how first the idea entered my brain; but once conceived, it haunted me day& night. ... I think it was his eye! Yes, it was this ! one of his eyes resembled that of a vulture--a pale blue eye, with a film over it. Whenever it fell upon me, my blood ran cold; & so by degrees--- very gradually---I made up my mind to take the life of the old man, & thus rid myself of the eye for ever.
(Quinn, 1984).

4. Discussion

The result shows that the researcher describes about the character' defense mechanisms in Poe's short story& the character's mechanisms in solving the conflicts.

In the acts of *The Tell-Tale Heart*, the character used repression, denial, reaction formation, rationalization, displacement, & sublimation to defend themselves against anxiety & suspense. Additionally, the characters never used regression.

The researcher thinks that every conflict in *The Tell-Tale Heart* do not answer until the end of the stories because the characters are capable to set their consciousness & their defense against every conflict. They tend to avoid talking about the problem & use defense mechanisms to solve their conflicts. The researcher had identified the conflict in every scene of the story. In *The Tell-Tale Heart*, this conflict occurred when the emergence such a strange feeling of discomfort while viewing one of the old man eyes. The narrator describes that hehad adored the old man. But the narrator id impulses was unbearable in his mind that the emergence of a deep hatred when viewing one of the old man's eyes. The narrator employs displacement for solving the conflict. The eye only committed as the substitute mark for the old man. Displacement utilized by the narrator was probably caused the

narrator was slightly linked towards the old man. Here is one of digital illustrations of the Tell-Tale Heart.



Conclusion

Based on the existing research results, the researcher can sum up that the types of defense mechanisms of the characters that are found in *The Tell-Tale Heart*. There are six types of defense mechanisms. The defense mechanisms are manageable at every level of characters' unconsciousness, covering: repression, denial, reaction formation, rationalization, displacement & sublimation. Moreover, there are many types of defense mechanisms for the next researcher to analyze in further studies.

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THE IMPACT OF PRICES, SERVICES AND FACILITIES ON CUSTOMER SATISFACTION AT DRUG STORES IN THAILAND

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Abstract

This quantitative study investigated the impact of determinant factors (prices, facilities, and services) on consumer satisfaction at drug stores in Thailand. Three hundred eighty-five (385) respondents completed closed-ended questionnaires (Likert's Rating Scale) as part of an online survey. Convenience sampling was employed, and the data was collected from Thai pharmacy customers. SPSS Version 29 was used for descriptive statistical analysis of the respondents' demographic variables (frequency and percentage). The mean and standard deviation were used to compute the values for each variable and questionnaire item. Multiple regression analysis was used to test the hypotheses. The findings found a significant relationship between determinant factors. It shows that services are the most influential factor in customer satisfaction, followed by prices and facilities. These factors help drug store managers and strategic planners make the appropriate marketing plan. The recommendation is to conduct a qualitative study, such as interviews or focus groups, to learn more about the relationship for future research.

Keywords: prices, services, facilities, customer satisfaction, drug-stores

Introduction

Pharmaceuticals are a source of health recommendations and guidance, and this business is highly competitive, complex, and dependent on considerable investments in research, development, manufacture, and marketing (Holland and Bátiz-Lazo, 2004; Dias-Souza, 2017). The network of primary healthcare systems has grown steadily from the past to the present. As a result,

Thailand has set pharmacy standards to raise drugstore quality to levels that align with the rest of the globe. Establishing a pharmacy as one of the service units is a crucial objective. (Chaeypong, 2017). Many factors could be influencing factors of customer satisfaction at drug stores. The cost of drugstore products, previous consumer experiences, and pharmacy influencers like friends, family, and family members could all be valuable factors for pharmacy marketing when strategizing (Pujari et al., 2016; Temechewu and Gebremedhin, 2020). However, some studies supported that prices, services, and facilities were the significant predictors of customer satisfaction in healthcare and other service sectors, but not explained in the pharmacy sector (Siripipatthanakul and Nyen Vui, 2021 a and b; Siripipattanakul et al. 2022). Thus, this study's purpose is to fill this gap.

Satisfaction occurs when a person's pleasure or displeasure after comparing the perceived outcome of a product or service to their expectations. It is also an overall assessment of a company's performance based on all previous interactions. Unsatisfactory is the outcome if the performance falls short of expectations. In contrast, a customer is pleased or satisfied if the performance meets or exceeds their expectations (Jones et al., 2000; Prasilowati et al., 2021; (Sitthipon et al., 2022). Customer satisfaction is essential to a company's long-term success because it could maintain or increase market share. Organizations must outperform competitors by delivering products or services of superior quality that satisfy customers. Customer satisfaction management is becoming increasingly important in numerous industries, especially the service industry, as it is a critical factor in determining a company's success (Hanif et al., 2010; Angelova and Zekiri, 2011; Eckert et al., 2022; Limna et al., 2022). Few studies support these determinant factors (prices, facilities, and services) influencing customer satisfaction at drug stores in Thailand. Therefore, this study could identify the relationship phenomenon, and the new findings could be applied to other service companies to improve customer satisfaction for long-term success.

Research Objectives (ROs)

1. RO1. To identify the impact of prices on customer satisfaction at drug stores in Thailand
2. RO2. To identify the impact of facilities on customer satisfaction at drug stores in Thailand
3. RO3. To identify the impact of services on customer satisfaction at drug stores in Thailand

Research Questions (RQs)

1. RQ1. How does the impact of prices on customer satisfaction at drug stores in Thailand?
2. RQ2. How does the impact of facilities on customer satisfaction at drug stores in Thailand?
3. RQ3. How does the impact of services on customer satisfaction at drug stores in Thailand?

Literature Review

Drug Stores in Thailand

There are more than 15,000 community pharmacies in Thailand, which employ more than 80,000 people and are a big part of the healthcare industry. There were times when the medicines in Thailand were handed over to the consumers without any prescription; hence, the consumers did not demand any special services. However, it is the story of past consumers who required extra assistance and advice from their pharmacists (Lertsinudom et al., 2018). The shift has been observed because of more informed customers and the entrance of discounted pharmacies with exceptional services. Drug stores have lost considerable profits due to a lack of different services. Also, consumers have become more aware of prices, don't want to pay more for the same thing, and enjoy extra benefits (Hermansyah et al., 2018). Assessment of customer satisfaction may aid in recognizing consumer demands and service failure, encouraging pharmaceutical suppliers to be accountable and provide quality service. Most customer satisfaction with drug store services in Thailand was assessed as satisfactory. Dissatisfaction was observed in areas such as adequate

parking, health screening services and private counselling space, the explanation of pharmaceutical side effects, the maintenance of prescription history records, and drug allergies. Geography is the most significant element positively correlated with total satisfaction. Except for gender and location of origin, few consumer variables were associated with satisfaction level. There were opportunities to enhance pharmacy service quality to raise client satisfaction and distinguish themselves from competitors (Sriratanavit, 2015). However, the determinant factors in explaining customer satisfaction at drug stores in Thailand for this study are prices, facilities, and services.

Prices (Determinant Factor I)

Consumers use prices to judge how well a product fits their needs. It is called "suitability." It is for each person to decide if a product is expensive, cheap, or in the middle different because it depends on how well the person fits into the environment and how they are doing. Consumers' assessment of a product's price depends not only on the product's nominal value but also on its suitability. Companies must set prices appropriately to market goods or services (Hsee et al., 2008). Price is the total amount the client pays to obtain the product or service. In the hotel sector, pricing substantially affects customers' perceptions of quality, as paying guests demand a higher standard of service (Siripipattanakul et al., 2022). Prices in this study relate to the product and service costs at drug stores in Thailand.

Services (Determinant Factor II)

The market attempts to meet the customer's needs by providing the best service for what is needed. With good services, customers will get good services to meet their needs. Measuring freight customer satisfaction is essential to determine how well services meet freight forwarder service expectations. Good services are an ability to adjust between the desires or demands of the customers (Jiang and Rosenbloom, 2005). Services related to the perceived amount of service attribute to the outcome obtained.

Services include performing the primary services for a comfortable and dependable reservation system and an efficient and effective service encounter. Equally vital are efficient service, extra care, and addressing consumer needs (Siripattanakul et al., 2022). Thus, services at drug stores refer to the drug store services from pharmacists and employees in Thailand.

Facilities (Determinant Factor III)

The facility refers to facilitating the execution of functions. The facility is an individual component of the offering that is easily added or reduced without changing the quality or model of services. Facilities are also a way to set one organizer apart from another. Based on the above theory, the authors have concluded that the facility affects customer satisfaction (Lupiyoadi and Hamdani, 2008). In metropolitan cities with extensive lodging facilities, service industry competition is intense. Thus, the administration of the facilities is crucial for preserving their high efficiency, competitiveness, and excellent reputation in the services market (Siripattanakul et al., 2022). Thus, the facilities in this study are about the environment and physical evidence in the drug stores in Thailand.

Customer Satisfaction (Outcome Variable)

Customer satisfaction is the most crucial factor and, in most cases, is considered a precursor to loyalty behaviour (Bowen & Ostroff, 2004; Angelova and Zekiri, 2011). Satisfaction is happiness or sadness when comparing how a product or service turned out to how they thought it would (Bastos and Gallego, 2008; Bahari and Ling, 2010). Consumer satisfaction is both an objective and a marketing strategy (Siripatthanakul and Sixl-Daniell, 2021; Eckert et al., 2022). In this study, customer satisfaction at drug stores in Thailand depends on prices, facilities, and services based on the quantitative research of Siripattanakul et al. (2022).

Research Hypothesis Development

H1: Prices significantly influence customer satisfaction at drug stores in Thailand.

H2: Services significantly impact customer satisfaction at drug stores in Thailand.

H3: Facilities significantly affect customer satisfaction at drug stores in Thailand.

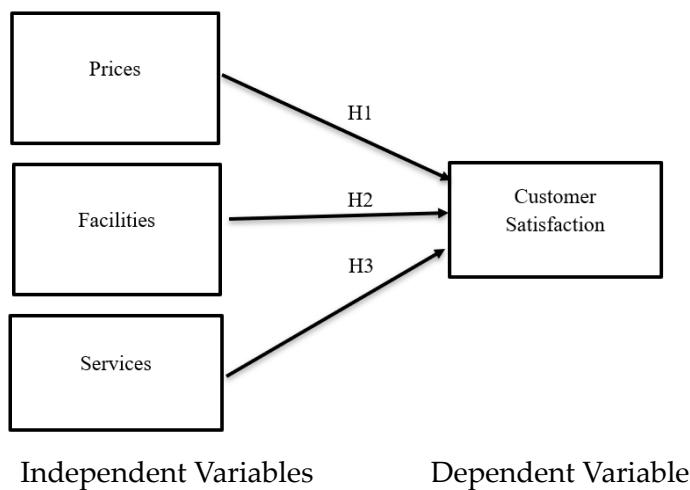


Figure 1 Conceptual Framework of the Study

The conceptual model to explain customer satisfaction at drug stores in Thailand from determinant factors (prices, facilities, and services) is shown in figure 1 above. This model is based on the study of Siripipatthanakul and Nyen Vui (2021, a; b), Siripipatthanakul and Bhandar (2021), Siripipattanakul et al. (2022), and Limna et al. (2022).

Methodology

Population and Sampling

The population in this study are people in Thailand who are age more than 18 years old. The sample size was determined by using the formula for the unknown population. (Zikmund, 2003: 425). It is necessary to collect a minimum of 385 cases at $P=0.5$ by convenience

sampling for a sample error at a 5 % confidence level of 95%. The total number of respondents in this study was 385.

Research Method

The data for this study was gathered through online closed-end questionnaires (Likert's rating scale). The researchers developed the questionnaire items based on previous research that was valid. The reliability and validity of the measurements were assessed. The respondents' demographics were based on Jaipong et al.'s study (2022) and Sitthipon et al. (2022). The questionnaire was revised accordingly to the recommendation of three experts, one in healthcare management and two in business administration. Thus, the online survey questions were tested for content validity before distribution.

Data Collection

The researcher gathered the information through online self-administered questionnaires. The study's purpose was explained to the respondents before the online questionnaire was distributed to participants, and the data collection duration was between November 30th, 2022, to January 10th, 2023.

Data Analysis

The respondents' demographics were analyzed using descriptive statistics (frequency and percentage), Cronbach's Alpha and multiple regression analysis by SPSS (version 29). Mean analysis and standard deviation were used to calculate each variable's results and questionnaire items. Cronbach's Alpha was used to determine the reliability of the data set at 0.6. The validity test was carried out using factor analysis and was set at 0.6.

Results

Table 1. Demographic Characteristics of the Respondents (n=385)

Demographics		Frequency	Percentage (%)
Gender	Male	164	42.6
	Female	221	57.4

Age	18-25 years old	53	13.8
	26-30 years old	64	16.6
	31-35 years old	74	19.2
	36-40 years old	69	17.9
	41 years old or over	125	32.5
Status	Single	231	60.0
	Married	154	40.0
Education	Below bachelor's degree	21	5.5
	Bachelor's degree	276	71.7
	Master's degree	79	20.5
	Doctoral degree	9	2.3
Occupation	Government Officer	84	21.8
	Labourer or Employee	186	48.3
	Business owner	17	4.4
	Student	41	10.6
	Other	57	14.8
Income THB	Less than 30,000	236	61.3
	30,001–40,000	56	14.5
	40,001–50,000	28	7.3
	More than 50,001	65	16.9
Resident Region	Northern or Central	163	42.3
	Eastern	184	47.8
	Northeastern	16	4.2
	Western or Southern	22	5.7
	Total	385	100%

According to Table 1, most respondents were female (57.4%), single (60%), held a bachelor's degree (71.7%), labourer or employee in occupations (48.3%), monthly income was less than 23,000 Thai Baht (61.3%) and lived in the central or eastern of Thailand (47.8%).

Table 2. Factor Loadings, Cronbach's Alpha, Mean and Standard Deviation (SD) (n=385)

Items	Factor Loadings	Mean	SD
Prices			
(Cronbach=0.8759)			
The prices are related and relevant to the quality of the products.	0.9158	3.97	0.848
The prices of products are reasonable	0.8957	3.90	0.857
The product quality depends on the price	0.8735	3.97	0.805
Facilities			
(Cronbach=0.6778)			
The drugstore is clean, and the environment is good	0.8195	4.22	0.790
The drug store location is easy to access.	0.7824	4.31	0.728
The drug store temperature is comfortable.	0.8706	4.20	0.763

The parking area of the drugstore is appropriate.	0.6910	3.66	1.103
Services			
(Cronbach=0.9081)			
Pharmacists are always willing to help customers.	0.8735	4.24	0.811
Pharmacists work together in the customers' best interest.	0.8656	4.07	0.859
Pharmacists give customers personal attention.	0.8868	4.13	0.808
Pharmacists respond to what the customers need.	0.8922	4.21	0.766
The drugstore has varieties of products.	0.7569	4.22	0.764
Customer Satisfaction			
(Cronbach=0.9016)			
I am satisfied with the product price.	0.8515	4.10	0.805
I am satisfied with the drug store's facilities.	0.8737	4.12	0.762
I am satisfied with the services of the drugstore.	0.8959	4.16	0.777
I feel good about visiting the drugstore.	0.8933	4.13	0.798

According to the Table 2, Cronbach's Alphas are over 0.6. Factors Loadings are over 0.6. The means are between 3.66 and 4.31. The standard deviations are between 0.728 and 1.103.

Table 3. Assumptions

Hypotheses	Results	Actions
H1: Prices → Customer Satisfaction	$\beta=0.24$ at p-value < 0.01**	Accepted
H2: Facilities → Customer Satisfaction	$\beta=0.18$ at p-value < 0.01**	Accepted
H3: Services → Customer Satisfaction	$\beta= 0.501$ at p-value < 0.001***	Accepted

p<0.01** and p<0.001***, at R=0.845; R-Square=0.713 and Adjusted R-Square=0.711

The highest significant factor of customer satisfaction at drug stores in Thailand is services ($\beta= 0.501$ at $p < 0.001$), followed by prices ($\beta= 0.24$ at $p < 0.01$) and facilities ($\beta= 0.18$ at $p < 0.01$), respectively. Customer satisfaction at drug stores in Thailand could be explained well by services, prices and facilities by about 71.3% (R-square=0.713).

Discussion of the Research Finding

Most respondents were female (57.4%), single (60%), held a bachelor's degree (71.7%), labourer or employee in occupations (48.3%), monthly income was less than 23,000 Thai Baht (61.3%) and lived in the central or eastern of Thailand (47.8%). Demographic profiles represent the drug store customers in Thailand.

Firstly, to discuss the multiple regression model, the prices of products and services at Thailand's drugstores were examined for customer satisfaction. The findings that prices significantly affect customer satisfaction at drug stores support the studies of

Bahari and Ling (2010); Harisman et al. (2021); Siripipatthanakul and Nyen Vui (2021); Siripipatthanakul and Bhandar (2021), Siripipattankul et al. (2022) and Limna et al. (2022). Thus, H1 was supported. Drug store managers should increase customer satisfaction by setting the appropriate pricing strategies, such as the prices being related and relevant to the quality of the products.

Secondly, the services offered by drug stores in Thailand are provided by pharmacists and personnel that influence customer satisfaction. The findings support the studies of Nurcahyo et al. (2017); Wang and Shieh (2006); Siripipatthanakul and Vui (2021); Siripipatthanakul and Bhandar (2021), and Siripipattankul et al. (2022) that services significantly influence customer satisfaction at drug stores in Thailand. Thus, H2 was supported. Drug store managers should increase customer satisfaction by setting the appropriate service strategies, such as pharmacists are always willing to help customers. Also, the drugstore has various products to serve the customers' needs.

Thirdly, the study focuses on the environment and physical evidence at Thailand's drugstores as a determinant factors of facilities that impact customer satisfaction. The findings of facilities significantly affecting customer satisfaction at drug stores support the studies of Nurcahyo et al. (2017), Harisman et al. (2021), and Siripipattankul et al. (2022). Thus, H3 was supported. Drug store managers should increase customer satisfaction by setting the appropriate strategies related to facilities, such as the drug store location being easy to access when using social media to search. Moreover, the drugstore should be clean, and the environment should be good.

According to Bowen and Ostroff (2004), Wang and Shieh (2006), Hsee et al. (2008), Hanif et al. (2010), Sriratanavit (2015), Dias-Souza (2017), Hermansyah et al. (2018), Prasilowati et al. (2021), strategic management, customer satisfaction and customer loyalty should be considered for further research.

Conclusions and Research Contribution

This study confirms that the significant factors of customer satisfaction at drug stores in Thailand are services, followed by prices and facilities. The managers at drug stores could enhance customer satisfaction through prices by focusing on the prices that are related and relevant to the quality of the products. The pharmacists' managers could improve customer satisfaction through services by concentrating on pharmacists who are always willing to help customers. The managers at pharmacies could enhance customer satisfaction through facilities by focusing on the parking area of the drugstore. This study examined the influence of prices, services, and facilities on customer satisfaction at drug stores in Thailand. It may be applied to improve customer satisfaction at other organizations in the healthcare sector, such as hospitals, dental clinics, and clinics or even through other service companies in Thailand and other countries.

Limitations and Recommendations

This study could be explained well at drug stores in Thailand with only three factors: prices, facilities, and services. It may not be used to predict other factors. Therefore, more variables should be considered for further study. This study employed a quantitative methodology. It may not include insight and specifics in detail. Thus, qualitative research methods, such as interviews and focus groups, should be considered for further investigation.

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Analysis of development driving factors in Sorong District as an impact of integrated industrial parks and port areas development

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Abstract

The availability of a long coastline in Sorong District is a potential entry and exit point for trade activities both regionally and internationally. Furthermore, this potential will have a further impact on industrial development. This study aims to analyze the driving factors for regional development in Sorong District as a result of the development of integrated industrial estates and integrated ports. The research method used is the elaboration of a systematic review and the results of observations in the field. Data obtained through observation, surveys, in-depth interviews, and documentation. The results of this study showed that

there are 5 (five) driving factors that influences regional development due to the development of integrated industrial parks and port areas, including the regional economic level, social conditions, policy support, spatial development area and management sustainability area support, which resulted in a total of 20 (twenty) indicators for the findings factors. This study recommends elaborating each of those factors in an effort to realize sustainable regional development in Sorong District.

Keywords: driving factors, industrial parks, integrated port, regional development

Introduction

Regional development is an important aspect in the implementation of development which is an embodiment of the utilization of the potential of an area to improve people's welfare (Matondang, 2018) which is closely related to the development of land use in an area (Deng, Huang, Rozelle, & Uchida, 2010). Land development is influenced by urbanization which is oriented towards the industrial, trade and service sectors (Surya, Syafri, Hernita, & Harry, 2020) and influences development policies in the region (Sun, Chao, Zhenshan, Jikang, & Yu, 2016). Changes in land use are caused by population pressure due to economic activities (Bringezu, et al., 2014) and involve the nature and intensity of changes that include spatial and temporal aspects (Lambin & Meyfroidt, 2010). The increase in development activities causes land use conversion and contributes to an increase in energy demand (Surya, et al., 2023). Land use change will become an important issue when land use needs are not met (Steinhauser, Siebert, Steinführer, & Hellmich, 2015).

One type of land use change that plays an important role in supporting the economic growth of an area is industry. Previous research stated that the industry is a leading sector that can spur and promote the development of other sectors such as trade, agriculture, or service sector. While others have demonstrated that lead economies monopolize the production of radical innovations, the empirical relationships among one lead economy's leading sectors, its aggregate growth, and the growth

of the world economy (Reuveny & Thompson, 2010). The industrial sector contributes to economic development in a region through increasing productivity capacity, creating jobs, innovation, and optimal use of resources. Externally, the existence of the industry could increase interest in foreign direct investment, integrate global markets, and bring about the flow of technological progress in a region (Elfaki, Handoyo, & Ibrahim, 2021).

Sorong District is one of the regencies in West Papua Province which is geographically located in a coastal area. Sorong has a long coastline and is supported by the existence of an integrated port which has the potential to become a trading entry and exit point. More than 90% of international trade moves by sea, which then makes ports and their hinterland areas a vital component of global trade flows (Mlambo, 2021). These advantages are predicted to be a driving factor in the development of the Sorong District area. Although previous research has explained a lot about the driving factors for development due to industry, not much has been discussed about the driving factors for development due to integrated industry and ports. As it can be seen to the growth pole theory proposed by Francois Perroux in 1949 that economic development is not uniform in all regions, rather, it takes place around certain poles (Syafiq, Sirojuzilam, Badaruddin, & Purwoko, 2022). This indicates that the port has a positive influence on the development of coastal regions. (Astija & Puspitasari, 2017) further explained that as growth nodes, they significantly impact regional development. Therefore, this research focuses on studying the factors driving development due to integrated industries and integrated ports located in Sorong District.

The focus of this research leads to efforts to answer the research question, "what factors drive the growth of integrated industrial areas and integrated ports in Sorong District." The research method used is a quantitative descriptive method which is carried out through comparisons between literature reviews and existing factual conditions. This research contributes to the development of knowledge, especially the science of regional

planning related to regional development issues, and to the development of regional development policies, especially in Sorong District.

Methods

The method used a combination of systematic review analysis and observation in the study area. Systematic review is an effort to identify, evaluate and interpret all relevant research results related to research questions, topics or phenomena raised in research (Siswanto, 2010). Systematic review analysis is carried out by conducting theoretical studies from related literature on the impact of area development due to the integration of industrial parks and port areas and then producing a synthesis. The results of this synthesis are in the form of research variables detailed through indicators. The formulation of these indicators is validated through direct observation in the study area so that the driving factors for regional development in Sorong District are produced because of the development of an integrated industrial parks and port areas. Furthermore, the results of the validation are interpreted using statistical description analysis so that it is easier for readers to understand.

Results and Discussions

The results of the study show that there are 5 main driving factors for regional development in Sorong District. Each of these factors is translated into several indicators with the following description:

Table 1. Factors Driving Regional Development in Sorong District

No.	Factors	Indicators
1	Regional Economic Level	A. Land price
		B. Area tax rate
		C. Regional GRDP value
		D. Type of investment area
		E. Community income level
2	Social Condition	F. Population growth
		G. Job availability

No.	Factors	Indicators
		H. Manpower availability I. Labor force participation rate
3	Policy Support	J. The similarity of regional development around the industry K. Interregional cooperation L. Availability of land for industrial development M. Industrial scale diversification
4	Spatial Development Area	N. Availability of accessibility (road network) O. Integrated transportation system support P. Settlement development Q. Trade and services development
5	Management Sustainability Area Support	R. Waste management S. Incentive and disincentive policies for industry players T. Implementation of green industry policies

Source: Analysis, 2023

Each of the indicators above has unique conditions in influencing the level of regional development. Each of those has an influence when integrated port and industrial activities develop. Detailed explanation of each factor is explained as follows:

1. Regional Economic Level

The successful development of industrial parks and integrated ports will have an impact on increasing the economic indicators of a region. The level of influence is also directly proportional, meaning that the higher the value of this indicator, the greater the level of regional development. The following indicators are listed below:

a. Land Price

The existing conditions in Sorong District showed variations in land prices, ranging from <100,000 per m² to 2,000,000 per m². Overall, land prices in Sorong District are dominated by prices

<500,000 per m². The highest price of up to 2,000,000 per m² is found in areas close to the city/district center (ATR/BPN, 2023).

b. Area Tax Rate

The realization of Sorong District Government revenue shows that there has been an increase in Regional Original Income from an increase in local taxes from 2020 to 2021. In 2020 the Sorong District regional taxes have a value of IDR 11,192,452,658, - and in 2021 local taxes Sorong District has a value of IDR 12,647,214,493, - or an increase of IDR 1,454,761,835, - (Sorong in Figures, Kabupaten Sorong Dalam Angka Tahun 2022, 2022). With an increase in activities, especially industry and ports, it is projected that tax rates and revenues will increase drastically in line with the increasingly massive industrial and port activities in Sorong District.

c. Regional GRDP Value

The industrial sector is the sector that contributes the most to the GRDP of Sorong District. The trend of the manufacturing industry sector is also likely to increase from 2016 to 2021. The growth of this sector is supported by the existence of the Sorong Special Economic Zone (SEZ) as stated in Government Regulation Number 31 of 2016. The condition of GRDP in the Transportation and Warehousing Sector in 2016 to 2021 tends to fluctuate. The transportation and warehousing sector has close links with the Port of Sorong and the Port of Arar which play a role in serving container ports, logistics and passenger ships (Kabupaten Sorong Dalam Angka Tahun 2022).

d. Type of Investment Area

The existence of the Sorong Special Economic Zone (SEZ) opens various investment opportunities. SEZ Sorong is managed by CV. Malamoi Olom Wobok with main activities in the form of Nickel Processing Industry, Palm Oil Processing Industry, Forest, and Plantation (Sago) Product Processing Industry, and logistics. The Sorong SEZ is projected to attract investment of IDR 32.2T with investment opportunities including (RI, 2023):

- Logistics Zone included warehousing, trade center, open storage yard, fuel station, clean water treatment plant, wastewater treatment plant, and public transportation station.

- Industrial Zone included palm oil processing industry and sago processing industry.
- Export Processing Zone included petrochemical, oil refinery and power plants.

e. Community Income Level

The level of people's income can be seen based on the regional minimum wage in Sorong District. Based on the data obtained, total income tends to increase from 2017 to 2022. In 2017 the UMR in Sorong District was IDR 2,421,500 and in 2022 it was IDR 3,200,000. If industrial and port development is successful, it can be projected that people's income levels will increase even further than at present.

2. Social Condition

Social conditions also influenced regional development because of the development of integrated industrial parks and ports. Some of the conditions of social indicators that affected by industrial and port development in Sorong District include:

a. Population growth

The 6 Distrik that became the focus of the research, namely Aimas Distrik, Salawati Distrik, Mayamuk Distrik, Moisigin Distrik, Seget Distrik, and Mariat Distrik experienced an increase in population from 2016 to 2020. Aimas District experienced a rapid increase in population, namely in 2018 it was 23,825 and in 2019 it was 41,624 (Sorong, 2021).

b. Job availability

When viewed based on the number of people working in each economic sector, in 2020 most of the population of Sorong District work in the Agriculture, Forestry, Hunting and Fisheries sectors, namely 13,976 people. While the fewest jobs are information and communication, namely as many as 78 people. In addition, the existence of the Sorong SEZ is projected to absorb a workforce of 15,024 workers by the year of 2025.

c. Manpower availability

The availability of labor is assumed to come from the productive age population aged 15-64 years in Sorong District with a total of 83,342 people in 2021. The majority is dominated by residents aged 15-19 years, namely 5,846 men and 5,371 women (Kabupaten Sorong Dalam Angka Tahun 2022).

d. Labor force participation rate

The labor force participation rate is the percentage of the labor force to the population aged ten years and over. Based on data compiled from BPS Sorong District, the Labor Force Participation Rate in 2018 was 66.37%. In 2019 the Labor Force Participation Rate of Sorong District was 68.37% and decreased in 2020 to 64.37% (Kabupaten Sorong Dalam Angka Tahun 2022).

3. Policy Support

Policy is a basic aspect that is used as a reference in the implementation of activities or planning. This factor is an important factor because it influences the successful implementation of regional development. The indicators that support policy support include:

a. The similarity of regional development around the industry

The industrial area has to be developed in the Mayamuk, Salawati and Seget Districts as an Integrated Port Industrial Area (Sorong Government, 2012). KEK Sorong with its main activities including the Palm Oil Processing Industry, Forest Product Processing and Plantation (Sago) Industry, as well as logistics can be said to be in accordance with the conditions of the use of other spaces in the vicinity which are predominantly dominated by agricultural areas (food crops and plantations).

b. Interregional cooperation

Regional cooperation is a simultaneous effort between regions and other regions, between regions and third parties, and/between regions and institutions or local governments abroad based on considerations of efficiency and effectiveness in fulfilling public services and mutual benefits. The condition of inter-regional cooperation in Sorong District can be seen indirectly in the settlement center plan. The Local Activity Center functions to serve

district or several sub-district scale activities with activities in the form of offices; settlement; education; health; worship; and trade and service facilities are located in Aimas and Mariat Distrik. Regional Service Center is directed as an education service center; health; economy; and sub-district-scale transportation with minimum facilities available at Regional Service Center, namely educational facilities at the junior high school level, inpatient health centers, and sports facilities located in urban Klabot, urban Klasafet, urban Makbon, urban Mayamuk, urban Salawati, urban Sayosa, and urban Seget.

c. Availability of land for industrial development

Support for the existence of land for industry has been determined by the Government through regional spatial planning. The industrial designation area in Sorong District is planned with an area of approximately 1,075 Ha, located in Aimas Distrik with an area of 13 Ha, Mariat Distrik with an area of 24 Ha, Mayamuk Distrik with an area of 738 Ha, Salawati Tengah Distrik with an area of 25 Ha and Seget Distrik with an area of 275 Ha.

Industrial activities generally require large areas of land, especially medium and large-scale industries. For this reason, the scale of the industry to be developed must also consider the available land area so that there is no attempt to force oneself to convert large-scale land for the development of industrial estates. In accordance with Government Regulation Number 142 of 2015, the area of Industrial Estates is at least 50 Ha or at least 5 Ha for Industrial Estates specifically for small and medium industries.

d. Industrial scale diversification

The integrated industrial and port development plans are projected to run optimally and improve people's welfare. In Indonesia, Processing Industry Companies are divided into 4 groups (Ministry of Investment, 2023), namely:

- large industry (100 workers or more);
- medium industry (total workers 20 – 99 people);
- small industry (number of workers 5 – 19 people); and
- home industry (1 – 4 workers).

4. Spatial Development Area

This factor shows a relationship to the development of spatial areas which are driving regional growth. The higher the level of development, the higher the spatial changes that will occur. The indicators that explain include:

a. Availability of accessibility (road network)

The development of port mediates the effect of accessibility on the growth of coastal areas in the Regency. Regulation of the Minister of Industry Number 40 of 2016 which states that one of the criteria for selecting industrial locations is the availability of roads in the form of primary arteries (Ministry of Industry, 2016). Based on (Sorong Government, 2012), Sorong District has been traversed by a network of primary arterial roads, collector roads, and local roads. The planned primary arterial roads in Sorong District include:

- Bts. Regency. South Sorong – Kambuaya;
- Bts. Sorong City – Aimas (km. 18) – Klamono;
- Jln. Basuki Rahmat (Sorong); And
- Klamono – Bts. Regency. South Sorong.

b. Integrated transportation system support

Integrated transportation system support is urgently needed, especially in the process of transporting raw materials and marketing industrial products. Integrated transportation must also be able to separate goods and people, to increase effectiveness and reduce production costs. Based on the Spatial Structure Plan for Sorong District (Sorong Government, 2012), it is known that Sorong District already has an integrated transportation plan, including:

- The specified road network system includes the primary arterial road network, primary collector road network, primary local road network, other local road networks, and special oil and gas road network.
- Type C passenger terminal is planned to be spread across Aimas and Mayamuk Distrik.
- The bridge is planned to be in several segments in Sorong District.

- The railway line network.
 - River, Lake and Ferry Network System.
 - Sea transportation network system.
- c. Settlement development

Industrial developments trigger the development of residential areas in the vicinity (Muna, 2009). Settlement development allocations are directed according to the prevailing spatial pattern plan. If examined in more detail, the location of settlements in Sorong District is directly adjacent to the industrial area so that it supports its main activities. Residential areas in Sorong District consist of 2 types, namely urban settlements with an area of 21,675 Ha and rural settlements with an area of 16,175 Ha.

d. Trade and services development

The commercial area is also developing due to the presence of industry and settlements. The trade and service area is also a place to market industrial products. Based on the previous discussion, it is known that trade and service services are located in the Aimas and Mariat Distrik which act as Centers for Environmental Activities.

5. Management Sustainability Area Support

Management is a continuation of the successful implementation of the development of integrated industrial estates and ports. This policy is needed to reduce the impact caused by industrial and port development activities. The supporting indicators include:

a. Waste management

Waste management in Indonesia has been officially regulated, one of which is in the Minister of Environment and Forestry Regulation Number 6 of 2021 concerning Procedures and Requirements for Managing Hazardous and Toxic Waste (Ministry of Environment and Forestry, 2021). Of course, this is still related to industry and ports which also produce waste.

b. Incentive and disincentive policies for industry players

Incentive and disincentive directives are directives implemented by the provincial regional government to encourage the implementation of spatial use so that it is in line with the spatial

layout plan and to prevent space utilization that is not in accordance with the spatial layout plan. Incentive directives are devices or efforts to provide rewards for the implementation of activities so that they are in line with the spatial layout plan. Disincentive directives are devices or efforts given for space utilization activities in areas where development is restricted. Examples of the application of incentives and disincentives, namely:

Incentives:

- infrastructure (supporting facilities and infrastructure)
- ease of administration
- fiscal (tax holiday and tax allowance)

Disincentive:

- borne land tax
- limitations on the provision of facilities and infrastructure
- increase in public service rates

The proposed incentives include a 200 percent tax cut or tax deductions for expenses related to vocational training and education. In addition, a tax reduction facility of 300 percent for expenses related to research and development activities carried out by the company.

c. Implementation of green industry policy

The Green Industry Standard is a reference for industry players in compiling by consensus related to raw materials, auxiliary materials, energy, production processes, products, business management, waste management and/or other aspects aimed at realizing a green industry. In addition to the SIH references that have been determined based on the regulations of the minister of industry, Sorong District has also prepared development directions for Integrated Industrial Areas and Integrated Ports, including:

- The development of industrial, warehousing and logistics areas as well as ports must be equipped with waste processing facilities.

- Port development is directed to become an environmentally sound port area.
- Development of industrial estates is directed to become environmentally friendly industrial estates.

One of the companies in KEK Sorong which is engaged in the class 1 nickel processing industry, adopts the Step Temperature Acid Leach or STAL technology. STAL technology is a new breakthrough in the field of processing and refining nickel based on hydrometallurgy to process the entire profile of nickel lateritic deposits from limonite to saprolite in a more efficient, safe, and profitable manner.

Considering the previous, the development of industrial parks and port areas is considered highly relevant to Urban development and international trade. In addition, although for Sorong case, there is an effect to economic growth at the regional level. The indicators have been predicted if they are going to develop as a result of successful development of industrial parks and port areas. Other than that, social factor became the further factor that also develop. (Iyer, Kitson, & Toh, 2005) analyzed the relationship between social capital, economic growth, and regional development. It was concluded that social capital positively impacts economic growth and regional development. Furthermore, (Jones, et al., 2011) stated that institutional and social trust positively affected the level of community agreement to enact the policy related to the reorganization of coastal areas in Greece.

(Padeiro) examines the role that the existence of transport infrastructures such as motorways, railways and airports play in the growth of the number of jobs at a municipality level in the metropolitan margins. On the one hand, improving transport infrastructure reduces operational costs and produces inter and intra-industry trade gains through comparative advantages, specialization, and scale economies (Gallego & Sanchez, 2023). On the other hand, transport activities can originate a wide range of possible agglomeration mechanisms that arise from greater integration with other companies, labour markets, product

markets, and intermediate goods suppliers (Lovely, 2017). z
Regarding spatial affects of industrial and port flows, the industrial and port activities in neighbors cities has a greater impact on the host city's economic growth than the activity of the own industrial and port area (Shan, Yu, & Lee, 2014). Therefore, policymakers should facilitate cooperation among industrial and port area in the same region to enhance their total cargo flow, which benefits all industrial and port in the area.

Research by (Surya, et al., 2023) showed that the allocation of land for the development needs of socio-economic activities in the new city area has an impact on increasing the burden of pollution on oil, water and air as well as the complexity of the transportation system in the direction of decreasing environmental quality. Moreover, the intensity of land use change will affect urban resilience and decrease environmental quality in the direction of landscape diversity, increase in surface temperature, and the availability of green open spaces (Dennis, Scaletta, & James, 2019). Environmental quality improvement based on the use of renewable energy is developed by referring to three main principles, namely (i) ensuring the sustainability of natural resources to remain sustainable, (ii) ensuring the supply of energy needs that tend to increase, and (iii) ensuring the needs of future generations (Surya, et al., 2023).

Some evidence shows that green practices can help manufacturing units and ensure sustainable consumption and commercial excellence to meet various SDGs (Zhou, Govindan, & Xie, 2020). Different industries in emerging economies are facing continuous global insistence to adopt green supply chain management practices as a part of sustainable industrial and managerial practices (Shetty & Bhat, 2022). This industry requires a consistent increase in supply chain activities that consume manu natural resources, pollute the environment, and disrupt the ecosystem.

Conclusion

Based on the results of the discussion above, the results show that the driving factors for regional development in Sorong District are

due to the development of Industrial Estates and Ports as part of integrated development with each other, including regional economic level factors, social conditions, policy support, spatial development areas, and management sustainability area support. Each factor is supported by related indicators that also influence regional development. As a refinement of this research, the authors suggest conducting a spatial analysis of the factors obtained so that the results of regional development planning can be more visible and directed.

Acknowledgments:

We are grateful for the Promoter and Examiner Team who have taken the time to guide and provide input and motivation to the author and We also thank all those who have helped in the form of prayers, suggestions, morals and materials to complete this writing.

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Research Methods in Design of Visual Communication Design

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ABSTRACT

Research methods in design of visual communication design are important topics that are widely discussed in the world of design. This article aims to identify several research methods that can be used in the design of visual communication design, as well as analyze the effectiveness and suitability of each method to the needs of design practice. Research methods used include literature studies, interviews, and case analysis. The results showed that there are various kinds of research methods that can be used in designing visual communication designs. Each research method has its own advantages and disadvantages and requires appropriate selection according to the context of the design project to be carried out. In addition, the use of research methods in design designing can help designers to better understand user needs, understand the context of the project, and find creative and innovative solutions that are in accordance with the goals of visual communication to be achieved. This article also provides practical guidance for visual communication designers in selecting and applying appropriate research methods to their design projects. Thus, this article can make an important contribution in enriching insights on the use of research methods in the design of visual communication design.

Keywords: Research methods, design designing, practical guidance.

Introduction

Design of Visual communication design is a complex process that involves various aspects, such as understanding the objectives of visual communication to be achieved, recognition of user characteristics, understanding of the project context, to

finding the right creative and innovative solutions. Therefore, a systematic and structured approach is needed in the design process. One approach that can be used in designing visual communication design is to use research methods. Research methods can help designers to gain a deeper understanding of user needs and project context, so as to produce more precise and effective design solutions.

However, the choice of appropriate and effective research methods in designing visual communication design is often a challenge for designers. This is because the success of a research method in design designing is highly dependent on the context of the project, the purpose of visual communication, and the characteristics of the users to be served.

In the world of visual communication design, the use of research methods in design designing is a very important topic. However, there are still many questions about what research methods can be used in design designing, as well as how they can be applied in effective design practice. In the field of visual communication design, there needs to be a proper understanding of the research methods used to determine the stages and effective ways of design designing. Therefore, it is necessary to conduct research to find out what methods are used in designing visual communication designs and how to apply these methods in design designing.

The purpose of this study is to identify various research methods that can be used in the design of visual communication design, as well as analyze the effectiveness and suitability of each method to the needs of design practice. In addition, this study also aims to provide practical guidance for visual communication designers in selecting and applying appropriate research methods for their design projects. The benefit of this research is to provide information for visual communication designers about effective and appropriate research methods to be used in design designing. The results of this study can also be used as a reference for other researchers and practitioners in this field. Therefore, this article will discuss a wide variety of research methods that can be used in visual communication design designing, as well as provide

practical guidance for designers in choosing and applying appropriate research methods. Thus, it is hoped that this article can make an important contribution in enriching insights on the use of research methods in the design of visual communication design.

Visual communication design requires a systematic and structured approach, and the use of research methods can help designers gain a deeper understanding of user needs and the context of the project. In theoretical studies, there are several approaches and research methods that can be used in designing visual communication designs. In addition, there are also important concepts such as recognition of user characteristics, understanding of the context of the project, and the search for creative and innovative solutions that are appropriate to the objectives of visual communication.

Here are some theoretical studies in research that become references such as: Visual Communication Design Theory. This theory focuses on the concepts and principles of designing effective visual communication and can meet the goals of visual communication. This theory can help designers in producing more precise and effective design solutions (Huang et al., 2019). Research method theory that discusses various kinds of research methods that can be used in designing visual communication designs, such as case studies, surveys, observations, and interviews. In this study, this theory will be the main focus to discuss and select research methods that are appropriate to the project context and user characteristics.

Preece et al., (2015) with the theory of user characteristics. This theory discusses the recognition of user characteristics, such as user needs, preferences, and behavior in using products or services. This theory can help designers gain a deeper understanding of the characteristics of the users they want to serve. In addition, the project context by Ambrose et al., (2019) discusses the introduction to the project context, such as visual communication objectives, target markets, competitors, and socio-cultural environments that affect design designing. This theory can help designers understand the context of the project to be

served and produce appropriate design solutions. And the theory of creative and innovative solutions from (Brown, 2008), theory discusses the development of creative and innovative design solutions that can meet the goals of visual communication and user needs. This theory can help designers in finding appropriate and innovative design solutions.

Research Methods

The research method used is a qualitative research methodology that focuses on a deep understanding of the perceptions, attitudes, and experiences of research subjects. It is obtained through a literature tidy, used to identify various research methods that have been used in the design of visual communication design, while interviews are conducted with design practitioners who gain their views and experience in applying research methods in design practice. Case analysis is used to analyze the effectiveness and suitability of a particular research method in a real design situation, and documents are used to understand how those research methods are used in design designing.

Results and Discussion

Design research is a type of research that focuses on the process and methodology of designing a product or system. This research aims to understand how a product or system is designed, identify problems and constraints that arise in the design process, and find solutions to overcome these problems. Design research is often used in the fields of design, engineering, and information technology, where the product or system designed requires a structured and systematic approach.

Design research usually involves several stages, such as: problem identification, needs analysis, sketching and prototyping, evaluation, and improvement. The results of this design research can be in the form of products or systems that are better and in accordance with user needs. In addition, design research also provides a deep understanding of the design process and effective methodologies for use in the subsequent design of products or systems.

In design research, several methodologies that are often used include: 1) Design Thinking methodology; 2) Human-centered Design methodology; 3) Lean Design methodology; 4) Agile Design methodology; and 5) Systematic Design Methodology and 6) Design Based Research logic method. Here's the analysis and example:

Design Thinking Methodology:

Design thinking is a methodology that emphasizes the thinking process to solve problems and solve obstacles in the design process. examples of the use of Design Thinking methodology in some design designing cases (Brown, 2008). The relevant visual communication design designing cases are as follows:

1. New product design: Gadget companies want to release the latest products, but don't have the right idea yet. The design team uses the Design Thinking methodology by carrying out four stages, namely Empathy, Define, Ideate, and Prototype, to understand the needs and desires of users and generate new innovative ideas. As a result, the design team succeeded in designing a product that better suits the needs and desires of users, and can compete in a competitive market.
2. Healthcare design: Hospitals want to improve the quality of healthcare provided to patients and their families. The design team used Design Thinking methodology with a focus on the Empathy, Define, and Ideate stages, to understand the problems and needs of patients and their families, and come up with better solutions in delivering healthcare. As a result, the design team succeeded in designing health services that are more humane, effective, and in accordance with the needs and desires of patients and their families.
3. Mobile app design: Startups want to release new mobile apps to make it easier for users to carry out their daily activities. The design team uses Design Thinking methodology with a focus on the Empathy, Define, Ideate, and Prototype stages, to understand user needs, generate new ideas, and test application prototypes with users. As a result, the design team succeeded in designing a mobile application that is easier to

use, efficient, and in accordance with the needs and desires of users.

In each case, the Design Thinking methodology assists the design team in understanding user problems and needs, generating new and innovative ideas, and testing and implementing better design solutions.

Design Based Research Method:

It is a research approach that combines the design and development of products or systems with the aim of increasing understanding of the problems faced and producing better design solutions that are relevant to user needs. This approach is iterative and involves active participation of users in the entire design process (Koskinen et al., 2011). There are several visual communication design designing cases: are as follows:

1. Online Learning Application Design. Researchers conducted a study on the use of online learning applications at a university and found that most students have difficulty in understanding the material independently. As a solution, researchers designed an online learning application that allows students to interact with lecturers or classmates in real-time. This application was tested on a group of students to find out its effectiveness. After evaluation, the application is implemented at the university level.
2. Restaurant Management Information System Design. Researchers conducted a study of restaurant management information systems and found that many restaurants have difficulty managing inventory and orders effectively. As a solution, researchers designed a restaurant management information system that can help restaurants manage inventory and orders. This system was tested on several restaurants to determine its effectiveness. After an evaluation, the system was applied to several restaurants in need.
3. Development of Interactive Animated Films for Children. A team of researchers used Design Based Research methodology in developing interactive animated films for children. Researchers conducted several stages of research, ranging

from literature studies to understand the characteristics of children, development of film concepts, testing prototypes, and evaluation of finished animated films. The result of this study is an interactive animated film that meets the needs and preferences of children and is able to increase children's interest in learning.

4. Designing Educational Videos for Teens. A team of researchers used Design Based Research Methodology in developing educational videos for teenagers. This research began with the identification of problems in adolescents related to education, then a literature study was conducted to understand the preferences and needs of adolescents related to educational videos. After that, video concept design, prototype testing, and evaluation of the finished video are carried out. The result of this study is an interesting and effective educational video to increase adolescent understanding of the educational material presented.

In the example, Design Based Research methodology is used to develop products that effectively and efficiently communicate messages to the intended audience. The methodology allows researchers to understand the needs and preferences of the audience so as to produce targeted design solutions.

Human-centered Design Method:

It is a methodology that emphasizes the importance of understanding and paying attention to user needs and preferences in the design process ("Design Kit," n.d.) . Therelevant visual communication design designing cases are as follows:

1. Educational Website Designing. A designer needs to understand the needs and preferences of users in designing an effective educational website. Using the Human-centered Design Methodology, designers will conduct research and observation of potential users, such as students and teachers, to gain a deeper understanding of their preferences and needs. Then the designer will produce a design solution that suits the characteristics of the user and the context of the project.

2. Mental Health Application Design. A designer needs to pay attention to the characteristics of users experiencing mental health problems in designing an effective mental health app. Using the Human-centered Design Methodology, designers will conduct research and interviews with potential users, such as patients and therapists, to gain a deeper understanding of their needs and preferences in using mental health apps. Then the designer will produce appropriate and effective design solutions according to the characteristics of the user and the context of the project.
3. Corporate Visual Identity Design. A designer needs to understand the characteristics of users who are the company's target market in designing an effective corporate visual identity. Using the Human-centered Design Methodology, designers will conduct research and analysis of the characteristics of users who are the target market, such as age, gender, and interests, to gain a deeper understanding of their preferences and needs for the company's visual identity. Then the designer will produce a design solution that suits the characteristics of the user and the context of the project.

Lean Design Methodology:

Is a methodology that emphasizes the process of making and improving products or systems periodically and continuously (Ries, 2011). There are several visual communication design cases as follows:

1. Corporate Brochure Design: In developing a corporate brochure, a designer can apply the Lean Design methodology by researching consumer needs and considering aspects that can reduce production costs and project completion time. For example, designers can choose a brochure format that is simple and easy to produce, and determine the content and design that suits the needs of the target market.
2. Promotional Poster Designing: In promotional poster designing, designers can apply the Lean Design methodology by considering the most effective way to display important information in a simple and easy-to-understand format. The

designer can consider the selection of the right colors, as well as select the necessary design elements to achieve the desired promotional goals.

3. Logo Designing: In logo designing, designers can apply Lean Design methodology by considering the most important and simple design elements that can reflect the corporate identity effectively. Designers can do some quick iterations on multiple logo choices and get feedback from teams and users before deciding on the right logo.

Lean Design methodology can help designers speed up production time, reduce production costs, and get feedback from consumers quickly.

Agile Design methodology:

It is a methodology that emphasizes flexible and iterative work processes, and focuses on understanding and adapting to change (Schwaber and Sutherland, 2011). There are visual communication design cases as follows:

1. Packaging Design: In packaging design, design teams can use the Agile Design methodology by iterating quickly in design development, testing packaging prototypes with potential users, and changing designs based on user feedback. Thus, the design team can produce packaging that is more effective and in accordance with user needs.
2. Book Design: In book design, the design team can use the Agile Design methodology by iterating quickly in book layout and design development, testing prototypes with potential users, and changing designs based on user feedback. This can help the design team produce a book that is more engaging and easier to read for the target audience.
3. Visual Identity Design: Agile Design methodology can be used in visual identity design to produce more precise and effective logos and visual identity systems. Design teams can iterate quickly in logo development and visual identity systems, test prototypes with a target audience, and make design changes based on feedback.

In all of the above examples, the use of the Agile Design methodology allows the design team to more quickly produce design solutions that fit the needs of users and the market.

Systematic Design Methodology:

Is a methodology that emphasizes structured and systematic stages and processes in product or system design (Ulrich et al., 2008). There levant visual communication design designing cases are as follows:

1. A comic artist uses the Systematic Design methodology to design a comic series based on a science fiction theme. First, the artist conducts research on the chosen theme, including gathering information about the science fiction genre and the characteristics of the target reader. After that, he made rough sketches of the plot and characters, and began to develop the concept of the story. In this process, he uses brainstorming techniques to generate new ideas and consider feedback from focus groups. After establishing the concept of the story, he begins the stage of character development and sketches different characters. He also adjusted the character design to the views of the focus group. After that, the artist began designing each page of the comic, including the layout, panels, and text. He also conducted trials to ensure the fit between text and images as well as the visual quality of the whole story. After the comic is finished, he evaluates by asking for opinions from focus groups and makes improvements if needed.
2. An illustrator uses the Systematic Design methodology to design children's book illustrations based on pet themes. First, he conducted research on popular pet breeds, including collecting information about the behavior and characteristics of each animal. After that, he makes a rough sketch of the illustration he wants to create and begins to develop the concept of illustration. In this process, he uses brainstorming techniques to generate new ideas and consider feedback from focus groups. After establishing the concept of illustration, he began to design each illustration, including choosing the color, composition, and style of the illustration. He also conducted

trials to ensure the fit between the illustrations and the story as well as the visual quality of the entire book. After the book is finished, he conducts an evaluation by asking for opinions from focus groups and makes improvements if needed.

3. A graphic designer uses the Systematic Design methodology to design a promotional poster for a music event. First, the designer conducts research about the event, including information about the band, location, and target audience. After that, he made a rough sketch of the poster he wanted to create and began to develop the poster concept. In this process, he uses brainstorming techniques to generate new ideas and consider feedback from focus groups. After establishing the concept of the poster, he began designing every element of the poster, including typography, images, and colors. He also conducted trials to confirm

The methodology chosen in design research depends on the type of product or system designed, the problems and constraints that arise, and the needs and preferences of users.

Apart from design methodology in design research, it is also known as development research (R & D). Research and Development (R&D) is a type of research that focuses on developing new products or systems or improving existing products or systems. The purpose of R&D is to produce innovative products or systems and better meet user needs. The methodology used in R&D varies, but usually involves stages such as: identification of problems and opportunities, sketching and prototyping, testing and evaluation, and improvement. In the R&D process, many interdisciplinary approaches are used, such as engineering, design, and science ("University Commercialization Strategies in the Development of Regional Bioclusters* - Breznitz - 2008 - Journal of Product Innovation Management - Wiley Online Library," n.d.) .

The result of R&D can be a new product or system, or an improvement of an existing product or system. In addition, R&D can also provide a better understanding of the product or system development process, and help expand knowledge and skills in related fields.

Design research and Research and Development (R&D) have some similarities, but they also have differences. Both types of research have the same goal, which is to produce better and innovative products or systems. However, design research focuses more on the design process, which is the process of determining how a product or system should look and function, as well as understanding user needs and preferences. Design research often involves human-centered approaches and design thinking. While R&D focuses more on product or system development, including improvement and innovation. R&D usually involves interdisciplinary approaches, such as engineering, design, and science, to ensure that the resulting product or system meets specified specifications and criteria.

In other words, design research and R&D are closely related, but have different focuses and approaches. Both can be used together in the development of innovative products or systems that meet user needs. Both can be used together in product or system development in the following ways:

1. Identification of problems and opportunities: first, identify the problem or opportunity that you want to solve or develop.
2. Design research: conduct design research to understand user needs and preferences, as well as determine how the product or system should look and function.
3. R&D: after that, do R&D to make a prototype and ensure that the product or system produced meets the specified specifications and criteria.
4. Trial and evaluation: trial and evaluation of the resulting product or system to ensure that it meets the needs and preferences of users.
5. Improvement: if needed, make product or system improvements based on the evaluation results.

In this way, design research and R&D can work together to ensure that the resulting product or system is innovative, meets user needs, and meets specified specifications and criteria. Design research can use this type of R&D research as part of the product

or system development process. In the design research process, R&D can be used to make prototypes and ensure that the product or system produced meets specified specifications and criteria. After the design research is complete, R&D can proceed to refine and improve the resulting product or system. For example, by conducting trials and evaluations to ensure that the product or system meets the needs and preferences of users. Thus, design research and R&D can work together in the process of developing a product or system, and ensure that the resulting product or system is innovative, meets user needs, and meets specified specifications and criteria.

Design methods that are often combined with R&D (Research and Development) methods are Agile design methods and Scrum design methods. Both methods emphasize iterative and incremental processes in product development, thus conforming to the R&D philosophy of continuous testing and improvement. Design Thinking design method can also be combined with R&D method. Design Thinking emphasizes the process of understanding the needs and problems faced by users, so as to produce innovative and user-oriented solutions (Cross, 2023). When coupled with R&D methods, Design Thinking can help in ensuring that solutions are developed according to actual needs and problems, through a process of testing and continuous improvement (Ries, 2011). By reading related literature sources, you will gain deeper insight into how Design Thinking and R&D design methods can work effectively together in the product development process.

Each design method has its own advantages and disadvantages, and can be used in the context of different design projects. Therefore, it is important for designers to choose the right method according to the characteristics of the project and the needs of the user. For example, if a design project has challenges in understanding complex user needs, then Human-centered Design or Design Thinking methodologies may be the right choice to use. Whereas if the design project has strict time constraints and requires flexibility in development, then Agile Design or Lean Design methodologies can be used.

In principle, all the methodologies that have been described can be used in product design research, visual communication design. Because these methodologies are designed to assist designers in finding appropriate and innovative design solutions, by focusing on user needs and desired visual communication goals. However, the selection of the right methodology must be adjusted to the context of the design project to be carried out, including product characteristics, target users, available resources, and so on. With the selection of the right methodology, it is expected that it will simplify the product design process and improve the quality of the resulting design products. Therefore, designers need to consider the advantages and disadvantages of each design method and choose a method that suits the characteristics of the design project as well as the needs of users and clients. By choosing the right method, it is expected to produce the right and innovative design solutions and meet user needs and expectations.

Conclusion

Based on the results and discussion in this study, it can be concluded that the methodology used in visual communication design research is very diverse, and each methodology has advantages and disadvantages that need to be considered properly. Design Thinking methodology, Human-centered Design, Lean Design, Agile Design, Systematic Design, and Design Based Research are some of the methodologies that can be used in design research. In addition, R&D is also a type of research that focuses on developing new products or systems or improving existing products or systems. In the R&D process, many interdisciplinary approaches are used, such as engineering, design, and science. In an effort to ensure that the resulting product or system is innovative, meets user needs, and meets specified specifications and criteria, design research and R&D can work together by combining appropriate approaches and methodologies.

As a suggestion, visual communication design research should pay more attention to user needs and the context of use of

the product or system designed. In addition, the use of appropriate and consistent methodologies throughout the entire design process can improve the effectiveness and efficiency of the design process. Finally, it is recommended that future research can involve more user participation in all stages of design to ensure better design results that are relevant to user needs.

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