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Overview of Students' Contributions in Realizing Sustainable Development Goals Point 12 (SDGs-12)

Dwi Pratiwi Meisari*[1], Asri Astria2, Tuti Alawiah3 , Nurul Hikmah[4], Andi Heriani5
[1,2,3,4,5] University Sulawesi Barat, Indonesia
Email: dwipratiwimeisari@unsulbar.ac.id

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Abstrak

Isu keberlanjutan lingkungan dan pengelolaan sumber daya secara bertanggung jawab menjadi salah satu tantangan global yang mendesak untuk ditangani. Pola konsumsi dan produksi yang berlebihan telah menyebabkan ketidakseimbangan lingkungan. Kondisi ini menuntut keterlibatan semua pihak, termasuk lembaga pendidikan tinggi, dalam mewujudkan perubahan perilaku yang lebih berkelanjutan. Penelitian ini bertujuan menganalisis gambaran kontribusi mahasiswa Program Studi Pendidikan Guru Sekolah Dasar (PGSD) Universitas Sulawesi Barat dalam mendukung pencapaian Sustainable Development Goals (SDGs) ke-12, yaitu Responsible Consumption and Production atau konsumsi dan produksi yang bertanggung jawab. Dalam penelitian ini memuat aspek pengetahuan dasar, persepsi, dan perilaku yang dilakukan mahasiswa. Metode penelitian yang digunakan adalah deskriptif kualitatif. Pemilihan sampel menggunakan purposive sampling dengan pengumpulan data menggunakan kuesioner melalui Google Form, pertanyaan memuat 3 aspek utama, yakni segi pemahaman, persepsi, dan perilaku untuk menggambarkan pemahaman dan peran mahasiswa dalam mewujudkan SDGs poin 12. Hasil penelitian menunjukkan bahwa 1) dalam aspek pengetahuan, mayoritas mahasiswa sudah memiliki pengetahuan mengenai SDGs 12. 2) Dalam aspek persepsi, sebagian besar mahasiswa sangat yakin dari penerapan gaya hidup berkelanjutan khususnya SDGs-12 akan berdampak positif bagi masa depan. 3) Dalam aspek perilaku, perilaku mahasiswa mendukung terwujudnya SDGs-12 rata-ratanya masih ada pada kategori kadang-kadang. Maka dapat disimpulkan bahwa mahasiswa PGSD Universitas Sulawesi Barat sudah mengetahui dan melakukan kebiasaan yang membantu terwujudnya SDGs-12 yakni konsumsi dan produksi yang bertanggung jawab dalam kehidupan sehari-hari mereka

Kata Kunci: Mahasiswa PGSD; Konsumsi dan Produksi Bertanggung Jawab; SDGs-12; Pendidikan Lingkungan

Abstract

Environmental sustainability and responsible resource management are among the most pressing global challenges that need to be addressed. Excessive consumption and production patterns have led to increased waste, environmental imbalance. This situation requires the involvement of all parties, including higher education institutions, in bringing about more sustainable behavioural change. This study aims to analyse the contribution of students in the Elementary School Teacher Education Program (PGSD) at the University of West Sulawesi in supporting the achievement of Sustainable Development Goal (SDG) 12, namely Responsible Consumption and Production. This study covers the basic knowledge, perceptions, and behaviours of students. Method used is descriptive qualitative. The sample selection used purposive sampling. Data collection used a questionnaire via Google Form, covering three main aspects, namely understanding, perception, and behaviour to describe students' understanding and role in realizing SDGs-12. The results show that 1) in terms of knowledge, the majority of students already have knowledge about SDGs-12. 2) In terms of perception, most students strongly believe that the implementation of a sustainable lifestyle, especially SDGs-12, will have a

positive impact on the future. 3) In terms of behaviour, students in supporting the realization of SDGs-12 is still in the "sometimes" category on average. Therefore, it can be concluded that PGSD students at the University of West Sulawesi already know and practice habits that help realize SDGs-12, namely responsible consumption and production in their daily lives..

***Keywords**: PGSD students; SDGs-12; Responsible Consumption and Production; Sustainability; Enviromental Education*

Research Background

The global world is facing a serious challenge of maintaining a balance between economic development, social conditions, and environmental sustainability. Environmental issues such as climate change, exploitation of natural resources, and poorly coordinated waste management are some of the issues of concern. The importance of this environmental issue is affirmed in the United Nations' SDGs 2030 agenda, which is outlined in 17 key goals, 169 detailed goals, and 241 indicators to monitor the potential success of a sustainable lifestyle (Ford & Hewitt, 2020). This agenda is considered a blueprint for achieving a better and more sustainable future globally. The concept of the Sustainable Development Goals, especially the 12th point regarding responsible consumption and production, is becoming increasingly crucial in the midst of increasing environmental problems and a global resource crisis (Haida et al., 2024). Production and consumptive lifestyle by the global community must be accompanied by an attitude of responsibility in fulfilling it.

The environmental damage that occurred highlights the urgency of forming environmentally friendly behavior at various levels of society, including in the campus environment (Sentia et al., 2024). The University of West Sulawesi (UNSULBAR) as one of the state universities in West Sulawesi, has a strategic role as an agent of change and a center for scientific development. The involvement of universities in supporting the SDGs is a national and global mandate (Sudarming, et al., 2025). Students hold a unique position in dealing with this issue, especially for elementary school teacher education students as prospective educators for the nation's next generation in the future. Realizing the SDGs requires continuous socialization, even from an early age, to achieve sustainable development goals (Lestari et al., 2024).

Students' contributions to realizing SDGs-12 can be seen through the aspects of knowledge, perception and behavior carried out. In encouraging awareness of the importance of sustainable development, students should also be parties who have knowledge and understanding of the 2030 SDGs (Putri et al., 2024). The perception that students have is very important to determine how they respond or behave in realizing SDGs-12. Students' perceptions of the SDGs provide a clear framework to achieve the goals they want to achieve (Wardhani, 2023). Measuring student contributions requires a deeper study to see the potential of theoretical knowledge with real practice that students have done. Then document it in the form of research that can later be used as a basis for evaluation in development programs that support sustainable lifestyles.

This study aims to analyze the Overview of Student Contributions in Realizing the Sustainable Development Goals-12, which contains aspects of basic knowledge, perceptions, and behaviors carried out by students. It is hoped that the results of this research can foster awareness for all circles, especially those who are engaged in the world of education to support the realization of responsible production and consumption in life and the surrounding environment.

Method

This research is qualitative descriptive. Located at the University of West Sulawesi, Majene Regency, West Sulawesi The sample selection was using purposive sampling, namely 5th semester PGSD students who program environmental education courses totaling 74 people. Data collection uses a questionnaire through Google Form, which consists of 15 questions that contain 3 main aspects, namely understanding, perception, and behavior to describe students' understanding and role in realizing SDGs point 12.

The data collection technique in this study uses a questionnaire distributed online through Google Form to PGSD students in the fifth semester of the University of West Sulawesi who program the Environmental Education course,

with a total of 74 respondents. The selection of respondents was carried out by purposive sampling, which is based on certain criteria: (1) registered as PGSD students, (2) in the fifth semester, and (3) participating in the Environmental Education course in the research semester.

The questionnaire instrument was prepared in the form of closed-ended and/or semi-open-ended questions totaling 15 questions. The questions are grouped into three main aspects, namely: (1) aspects of student understanding of the concept of SDGs point 12 (responsible consumption and production), (2) aspects of student perception regarding the urgency and relevance of SDGs point 12 in daily life and educational contexts, and (3) aspects of student behavior in applying the principles of sustainable consumption and production in daily activities and campus activities.

Before being distributed, the questionnaire is first consulted with experts/validators (lecturers in the field of environmental education or research methodology) to ensure readability, suitability of content, and clarity of question items. Once declared eligible, the Google Form link is shared through the class WhatsApp group and other official communication platforms. Filling is carried out independently by students within the time span determined by the researcher.

This study uses a qualitative descriptive approach, so that the data obtained from the questionnaire is analyzed by referring to the stages of qualitative data analysis: data reduction, data presentation, and conclusion drawing (Sukmawati, et al, 2023). Respondents' answers to each question item were first collected and downloaded from Google Forms, then classified based on three main aspects: understanding, perception, and behavior.

At the data reduction stage, the researcher selects, groups, and codes the respondents' answers so that thematic categories are formed that represent the level of understanding, form of perception, and behavior patterns of students related to SDGs point 12. If there is an open-ended answer, the researcher conducts coding to find the main patterns and themes that emerge.

The next stage is the presentation of the data, which is compiling the results of the category in the form of a descriptive narrative, frequency table, or simple diagram to clarify the picture of response tendencies. Finally, the researcher drew conclusions by interpreting the data thoroughly, so that a complete picture was obtained of how PGSD students' understanding, perception, and behavior in realizing SDGs point 12 through environmental education.

Result and Discussion

A. Research Results

The results of the questionnaire that have been filled out by students regarding their role in realizing SDGs point 12 are as follows:

1. Aspects of student knowledge about SDGs point 12

Based on the results of the research, the average PGSD students' knowledge of SDGs-12 is at a percentage of 84.3%. This makes it that in general, respondents already know the basis of SDGs-12. However, there are still differences in understanding, one of which is on the question of the intention of consumption and responsible production as the focus of SDGs-12 points.

Table 1. PGSD Students' Understanding of SDGs-12

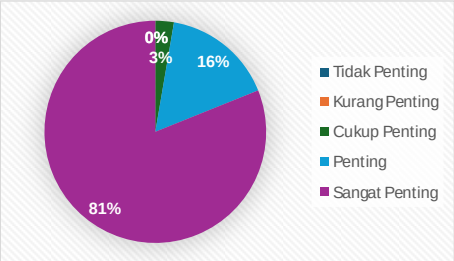
Question	**Answer**			
	True	**%**	**Wrong**	**%**
The meaning of SDGs-12	57	77%	17	23%
Examples of SDGs-12 implementation	57	77%	17	23%
Impact of sustainable lifestyle	71	95,9 %	3	4,1%
The important role of a sustainable lifestyle	62	83,8 %	12	16,2 %
Objectives of SDGs-12	65	87,8 %	9	12,3 %
Average	**62**	**84,3 %**	**12**	**15,7 %**

The data obtained from 5 questions achieved an average of 62 correct answers (84.3%) while for incorrect answers an average of 12 answers (15.7%). The question with the most correct answers is in the third question about the impact caused by the habit

of buying disposable products, namely the accumulation of waste and environmental pollution. While the most incorrect answers are in the first and second questions related to the meaning of the words responsible consumption and production and which do not include examples of implementing a sustainable lifestyle.

2. Aspects of student perception of SDGs point 12

Q1: The urgency of sustainable lifestyle awareness for a PGSD student



Picture 1. The Urgency of Sustainable Lifestyle Awareness

The data above shows that 81% (60 students) consider it important to be aware of a sustainable lifestyle as a prospective elementary school teacher. While 16% (12 students) considered it important, and 3% (2 students) considered it important to be aware of a sustainable lifestyle.

P2: PGSD students' opinion that sustainable lifestyle has a positive impact on the future

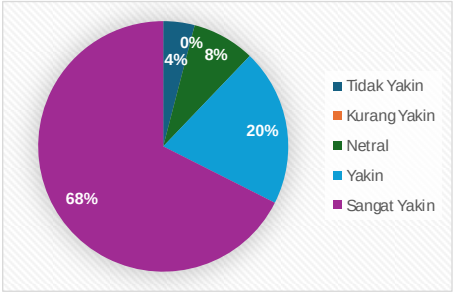


Figure 2. Sustainable Lifestyle Has a Positive Impact For the Future

The diagram above shows that 68% (50 college students) are very confident that implementing a sustainable lifestyle will have a good impact on the future. And 20% (15 students) are at a confident level, while 4% (3 students) are not sure that a sustainable lifestyle will have a positive impact on the future.

Q3: As a prospective teacher, you can be an example for students in implementing a sustainable lifestyle

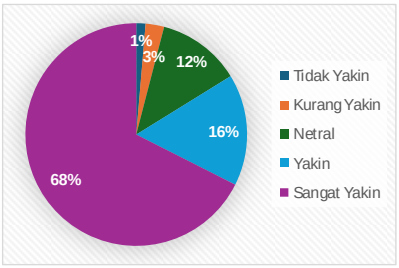


Figure 3. Prospective teachers as an example of applying Sustainable lifestyle

The data above shows the confidence of students as prospective teachers, to be an example of students implementing a sustainable lifestyle of 68% (50 students) is very confident. There are 16% (12 students) who are confident, 12% (9 students) are neutral, 3% (2 students) are not confident and the remaining 1% (1 student) are not sure to be an example in implementing a sustainable lifestyle.

Q4: How important is the role of the campus in fostering awareness of sustainable lifestyles for students

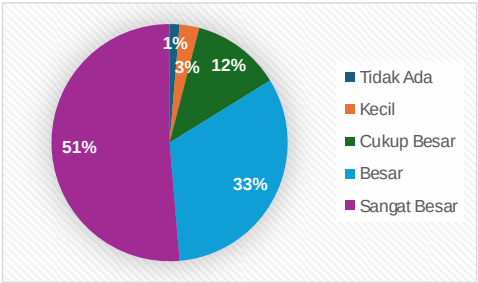


Figure 4. The Role of Campus in Fostering Awareness Sustainable Lifestyle

In the diagram above, students consider the role of the campus to foster awareness of sustainable lifestyles as much as 51% (38 students) consider the campus to play a very large role, 33% (24 students) consider the role of the campus to be large, 12% (9 students)

consider the campus to play a fairly large role, 2% (2 students) consider the role of the campus to be small and 1% (1 student) consider the campus to have no role in fostering a sustainable lifestyle.

Q5: The implementation of a sustainable lifestyle is difficult to implement and requires a lot of money.

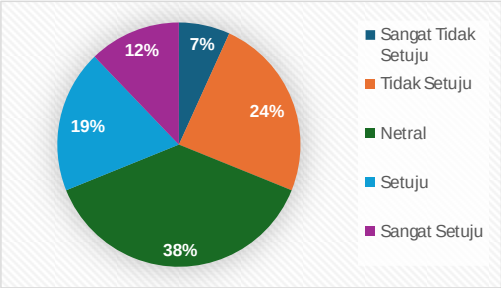


Figure 5. Sustainable Lifestyle Is Difficult to Implement and Costs A Lot

The fifth question aspect of student perception of SDGs-12, shown through the diagram above, the majority of students with a percentage of 38% (28 students) choosing a neutral position for sustainable lifestyle is difficult and it takes a lot of money to implement. Meanwhile, 24% (18 students) disagreed that implementing a sustainable lifestyle is difficult and costs a lot. 19% (14 college students) agree that it is difficult and costly to adopt a sustainable lifestyle. 12% (9 students) strongly agreed, and 7% (5 students) strongly disagreed that implementing a sustainable lifestyle is difficult and costs a lot.

3. Aspects of student behavior in supporting SDGs point 12

Q1: How often do you bring your own water bottles to reduce the use of single-use plastic bottles.

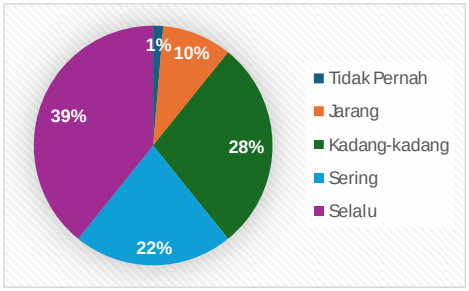


Figure 6. Bring your own water bottle

The behavior of students to support the realization of SDGs-12 by bringing their own water bottles is shown in the diagram above, as many as 39% (29 students) are included in the category of always carrying water bottles. 22% (16 students) in the frequent category, 28% (21 students) in the occasional category, 10% (7 students) in the category rarely bring water bottles, and 1% (1 student) category never bring their own water bottles.

Q2: How often do you sort waste in daily life?

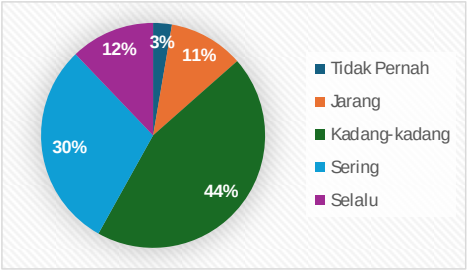


Figure 7. Sorting Waste in Daily Life

The diagram above shows that the majority of students choose the category sometimes in sorting waste in daily life, which is 44% (33 students). 30% (22 students) chose to sort waste often, 12% (9 students) always sorted waste, 11% (8 students) rarely sorted waste, and the remaining 3% (2 students) never sorted waste.

Q3: How often to refuse the use of disposable cutlery when buying food

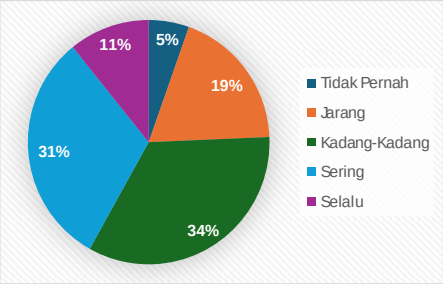


Figure 8. No Plastic Cutlery Disposable

Student behavior supports the realization of SDGs-12 by not using single-use plastic cutlery shown in the diagram above, there are 34% (25 students) who sometimes refuse to use or do not ask for single-use plastic cutlery. 31% (23 students) of the category often refuse the use of plastic cutlery, 11% (8 students) always refuse, 19% (14 students) of the category rarely refuse, and 5% (4 students) of the category never refuse the use of single-use plastic cutlery when buying food.

Q4: How often to turn off electrical appliances when not in use.

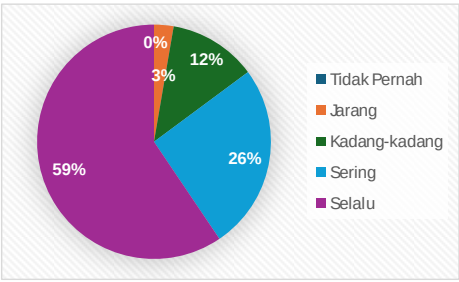


Figure 9. Turning Off Electrical Equipment When Not in Use

The diagram above shows an overview of student behavior to turn off electrical equipment when not in use. As many as 59% (44 students) always turn off electrical appliances when they do not need to be used. 26% (19 college students) often turn off electrical equipment, 12% (9 college students) sometimes turn off unused electrical equipment, and 3% (2 college students) rarely turn off if electrical equipment is not in use.

Q5: How often do you choose products with eco-friendly/recyclable packaging when shopping.

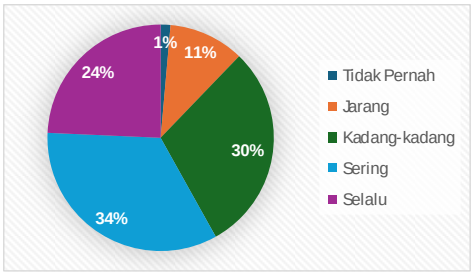


Figure 10. Choosing Products with Packaging Environmentally friendly

One of the behaviors that supports SDGs-12 is choosing products with eco-friendly packaging when shopping. The picture of PGSD students is shown through the diagram above, the majority of 34% (25 students) often choose environmentally friendly packaging products, 30% (22 students) sometimes choose products with environmentally friendly packaging, 24% (18 students) when shopping always choose products with environmentally friendly packaging, 11% (8 students) rarely choose products with environmentally friendly packaging, and 1% (1 student) never choose products with environmentally friendly packaging.

B. Discussion

The results of the questionnaire describing the aspect of student knowledge about SDGs-12 are that the majority already know about the concept of SDGs-12, as evidenced by the 5 questions asked, the percentage of correct answers reached an average of 84.3%. This is in line with the results of the research (Astuti et al., 2020) students already know and get a lot of information about the SDGs in general that they can get from various *platform* information and activities that raise the issue of sustainable lifestyle. However, even so, there are still some students who are wrong in answering questions about understanding SDGs-12, they know SDGs in general but there is a difference in understanding if they specialize in SDGs-12.

The aspect of PGSD students' perception based on the questionnaire filled out is inclined to positive responses and great confidence of students, that it is very important to implement SDGs-12 which will

later have a positive impact on the future. This is in line with research (Edwin et al., 2025) stated that respondents already have a perception of environmentally conscious actions. With the encouragement of a very large role from the campus to foster awareness of sustainable lifestyle for students, making them confident to become *Role Model* for their students later. Through socialization to the nation's future successors in increasing the understanding and existence of the SDGs in the community is one of the good ways to introduce this global program (Lestari et al., 2024). Even so, students' perception of sustainable lifestyles is difficult and requires a lot of costs tends to be neutral, this is because it takes consistency and strong determination to really implement a sustainable lifestyle, especially supporting SDGs-12 in responsible consumption and production.

The aspect of student behavior to support the realization of SDGs-12 of responsible consumption and production, based on the average questionnaire, is in the category of occasional. However, in the behavior of carrying drinking water bottles and turning off electrical equipment that is not used, most of the students' responses have always been carried out. This is in accordance with research (Indirawati, Sri Malem and Purba, 2024) The majority of students are categorized as positive attitudes to climate change mitigation efforts in electrical energy consumption by removing or stopping electrical equipment after use. Meanwhile, the behavior of sorting waste, the use of plastic cutlery, and buying products with environmentally friendly packaging or those that are easy to recycle have occasional and frequent responses, which means that the behavior of PGSD students in support of SDGs-12 has led to a category of frequent to be done.

Conclusion

An overview of the contribution of PGSD students of the University of West Sulawesi realizes SDGs-12 from the research conducted dividing it into three aspects, knowledge, perception, and behavior. The majority of PGSD students already have knowledge about SDGs-12, with a correct answer percentage of 84.3%. Furthermore, the aspect of student perception about SDGs-12 is mostly very confident that the implementation of a sustainable lifestyle, especially SDGs-12, will have a positive impact on the future, and as prospective teachers they are confident that they can be an example for the next generation in the future. While the behavioral aspects of students support the realization of SDGs-12 on average are still in the category sometimes, even so, the habit of carrying water bottles and turning off electrical equipment when not in use is always in the category.

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