

PROCEEDINGS
APTIK International Conference
**"ENVIRONMENT AND POVERTY ON HUMAN SENSITIVITY:
JUSTICE, SOLIDARITY, AND OPEN VISION"**

The lockdown due to COVID-19 seems to be over, and now a "new vision" of life must be prepared to face our future. We believe that COVID-19 is just a disturbing phenomenon, but it does not stop APTIK's willingness to place human dignity amidst the negative disturbances to the environment and good efforts to eradicate poverty. What we need then is sensitivity to justice, solidarity and openness of vision.

This means that an open vision is the ideal method or approach to create a better world for everyone, and in accordance with APTIK's concerns, this new vision must be developed simultaneously with the world's struggle to overcome environmental violence and poverty. The novelty of this vision stands out because the difficulties caused by COVID-19 have succeeded in hitting all aspects of human life, including the perspective of a shared vision in the struggle against injustice and anti-solidarity. This may involve technological advances, health choices, legal breakthroughs, behavioral policies, and other changes.

As an organization that carries the spirit of Christianity, especially among its members, APTIK aims to provide them with the opportunity to share this spirit in and through the same flame. Moreover, because we are disturbed by the issue of "environment and poverty", this proceedings book was published to convey ideas and suggestions and take part in solving problems in building a better world for everyone to live in.



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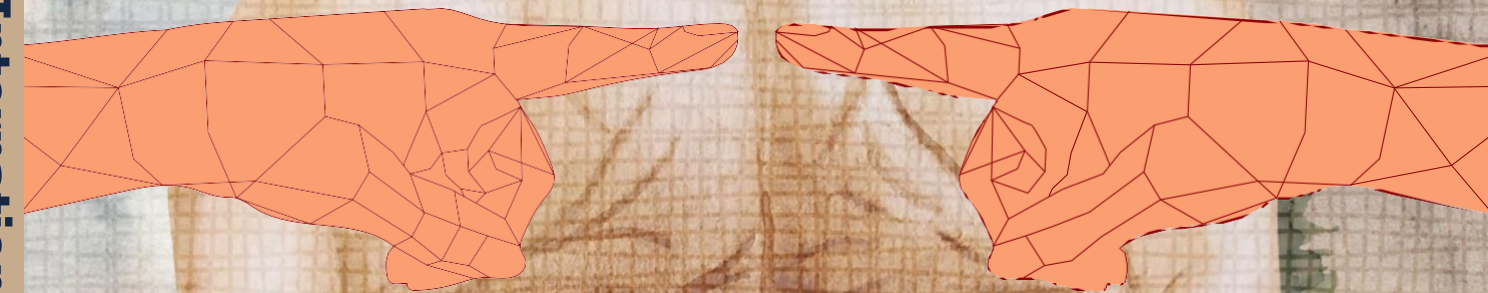
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8-9 September 2023
Universitas Sanata Dharma
Yogyakarta

Proceedings APTIK International Conference "Environment and Poverty On Human Sensitivity: Justice, Solidarity, and Open Vision"



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On Human Sensitivity: Justice, Solidarity,
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PREFACE

The COVID-19 lockdown appears to end, and now the “new vision” of living must be prepared in order to face our future. Indeed, the COVID-19 was just one out of the bulk of crisis torturing us, however it has already forced and pushed almost all parts of this Earth into a totally “new experience.” All activities had to break to stay alive for lockdown. They have had to wait and see what the next to undergo is. Even, some may signify that’s about the time for us to be silent and muse of our previously bad conducts. In 2020 (“A Sustainable Recovery for People and the Environment”), is still the fruitful flame for contributing the establishment of a better world for all. It means the show must go on. Our certainty is that the COVID-19, therefore, is just a phenomenon disturbing, but not stopping, APTIK’s will to position human dignity among the evil disruptions towards environment and the good efforts of minimizing poverty. What we need then is about sensitivity on justice, solidarity, and open vision.

Father General Arturo Sosa, SJ, as cited by Pedro Walpole, strongly emphasized that injustice is still the greater virus (<https://www.ecojesuit.com/learnings-from-a-crisis-in-the-time-of-covid-19>). The destructions of environment and ignorant deeds about poverty have been the phenomena, culturally and not naturally, and the struggles of overcoming them are obviously compulsory. The more powerful individual/s and groups must absolutely understand that those have been caused by the exercises of uncontrolled injustice. “This sister now cries out to us because of the harm we have inflicted on her by our irresponsible use and abuse of the goods with which God has endowed her.” (Laudato Si, https://www.vatican.va/content/francesco/en/encyclicals/documents/papafrancesco_20150524_enciclica-laudato-si.html). Lack of solidarity is also the painful destiny occurring in this present civilization, called the most advanced modern world. In order to mitigate the worst, the need of community solidarity is prominent, by the myth that everyone is kin (Kotakk, 2015, 198). However, since our civilization is continuing to undergo changes, it is a great hope that they would be in the context of improving human quality and dignity, and the emphasis on the importance of justice and solidarity is the priority. It means open vision is the ideal method or approach how to establish a better world for all, and in accordance with APTIK’s concern, the new vision must be structured together with the World’s struggles to overcome environmental violences and poverty. The newness of vision is prominent since the last hardships given by the COVID-19 have successfully struck any aspects of human life, including the common vision’s perspectives dealing with the fights against injustice and anti-solidarity. It may involve technological advancements, health options, law breakthroughs, behavioural discretions, and any other conversions.

Indonesia, who was successful in standing as the presidency of G20 last year, at present is aiming at the new national capital, called IKN, in East Kalimantan. Interestingly, the first principle, out of 8, in building it is about “the agreement with nature,” as delivered “Designed according to Nature”(<https://www.ikn.go.id/en>). The government really understands that the position of nature, i.e. environment, is prominent and ultimate to support the future Indonesian livings, and consequently nature stands as the first element to consider. This idea seems to counter the present condition of Jakarta, having complicated hardships dealing with, especially, environment or nature.

Therefore, how to improve and sharpen human sensitivity is the important question or problem for those interested in the better World. Any notions, suggestions, concepts, and contributions to create, or at least to imagine, it are waited. Our vocation of being the participants to save our Earth will be concrete later in the APTIK International Conference, hosted by Universitas Sanata Dharma, in September 2023 in Yogyakarta.

Thank you

Dr. Gabriel Fajar Sasmita Aji
Person in Charge

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SENSITIVITY AND OPENNESS IN OVERCOMING THE BURDENS OF FAMILY WITH DISABLED CHILDREN

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Abstract

This study aims to explore the role of sensitivity and openness in overcoming the burdens of a family with disabled children. Families with disabled children face bigger challenges than the typical family. For a common family, it takes a village to raise a child; however, for a family with disabled members, it needs a country since disability is closely related to poverty. This research tries to explore the perspectives of family members of disabled students at SLBN 2 Gunung Kidul Yogyakarta. While Gunung Kidul has around 6000 disabled people, there are not many supporting facilities around.

This is qualitative research. Data were collected through interviews. Interviews were conducted with families of children with various disabilities that were physical, intellectual, and sensory. Data were analysed by identifying experience, challenges and potential factors related to disability costs for the family with disabled children.

The results showed that the hardest challenge among parents with disabled children comes from the environment surrounding them. It reveals that sensitivity, specifically disability sensitivity that involves empathy and emotional responsiveness, plays an important role in promoting a healthy environment for the growth of disabled children. Furthermore, sensitivity, also closely related to openness, consisting of effective communication, mutual support, and willingness to seek external resources, is another key factor in overcoming the burdens associated with raising disabled children. In the future, this disability sensitivity and openness will be supported and integrated into government policy in the poverty alleviation programme.

Keywords: Disability; Human Sensitivity, Justice, Openness, Financial Burdens

Introduction

Poverty and disability have been closely related. Disability is part of the vicious cycle of poverty (Palmer, 2011). In some rural areas of the world, the increase of disability is consistent with the increase of poverty (Kheir, 2023). This issue has also become a serious concern in low-middle-income countries (Banks et al., 2017; Kusumastuti et al., 2014). Thus, it becomes the main concern for several organisations that resulted in the establishment of some movements such as the Universal Apostolic Preferences of the Jesuit, Laudato Si, and Sustainable Development Goals.

Disability have strong impact on poverty due to the burdens following the handicaps. This challenge is called disability cost. There are several studies on disability costs, ranging from low-middle-income countries (Asuman et al., 2021; Mont et al., 2022; Palmer et al., 2015, 2019; Raut et al., 2014; Van Minh et al., 2015) to the upper income countries (Arora et al., 2020; Doran et al., 2012; Hirsch & Hill, 2016; Knapp et al., 2009).

Disabled people not only overcoming the additional cost related to their impairment. They also experience discrimination that may hinder them in fulfilling their needs. It is

common to see an employment gap between the disabled and typical employee (Geiger et al., 2017). Moreover, some disabled people also experience some hindrance to participating in decision making (Lotan & Ells, 2010). This will be more severe when women suffer from disabilities; they need to struggle harder than their male peers (Astutik, 2019).

Although disabled adults face some challenges in their life, disabled children affect not only their own life but also their family members. Families with special needs children experience psychological (Djap et al., 2021; Khairunnisa & Hartini, 2022; Ricou, 2020)(Djap et al., 2021; Ricou, 2020) and physical (Bixby, 2023).

It takes a village to raise children, but a country needs to raise disabled children. Families of special-need children cannot survive alone. They need support systems consisting of many elements such as extended family, community and country (Chawa et al., 2021; McCormick et al., 2021; Ratti et al., 2016; Verdugo et al., 2020; Wardany et al., 2018). Therefore the families with disabled children can ease the burden.

Sometimes, the support provided is not in accordance with the needs of the family. This is due to the variety of disabilities. Thus, a combination of internal and external factors is required. The openness of the family as an internal factor can help others understand what they need (Boström & Broberg, 2014). Additionally, sensitivity is necessary for external parties to help them understand the intention of the family (Jazukiewicz, 2020).

This research tries to explore the role of sensitivity and openness in overcoming the burdens of family with disabled children. This research also tries to answer questions about the needs of families with special needs children, their challenges, and how sensitivity and openness help them overcome those challenges.

Methodology

This is a qualitative descriptive approach. This research is intended to gain a deeper understanding of the perspectives of families with disabled children on disability cost, while also investigating the existence or importance of sensitivity and openness in this matter.

Data were collected by interview. Interviews were conducted to explore the perspectives and experience of family members. Respondents to this research are family members of the disabled student at Sekolah Luar Biasa Negeri (SLBN) 2 Gunung Kidul Yogyakarta. SLBN 2 Gunung Kidul is a special school in Gunung Kidul regency. Gunung Kidul regency has around 6000 disabled citizens. SLBN 2 Gunung Kidul is also one of the few special schools that provides a dormitory for students located near the school area.

There were several steps in analysing the data. First, the interview data were analysed to understand the perspective of the disabled child family about their challenge in raising special needs children. Although challenge could also be considered a burden, this research tried to explore the met and unmet need of families with children with special needs.

Second, data were analysed to search for sensitivity and openness issues in the effort of a family with disabled children. Therefore, this research investigates the role of sensitivity and openness in helping the family of special needs children.

Results and Discussions

Experience of Special Needs Children's Caregivers

Most parents and caregivers of disabled children at SLBN 2 Gunung Kidul have a low educational level and will have difficulty participating in research. Therefore, this investigation involved only three family members who agreed to participate in this investigation.

One of the participants is Mr. A. He is the father of a high school junior with intellectual disability. The participant works in the informal sectors. The other two participants are housewives. The first woman, Mrs. N is the mother of a third-grade elementary student with hearing and physical impairment. The other woman, Ms. S, is the sister of a third-grade elementary student with severe non-verbal autism spectrum disorder or sensory disability. She became the caregiver for the child because their parents passed away last year.

Mr. A's son was diagnosed with intellectual disability when he was in kindergarten. However, Mr. A regretted that only after almost three years of kindergarten, the teacher told him to bring his son for a doctor checkup. He used National Health Security, known as BPJS Kesehatan, to fund the diagnosed fee. He wished he knew earlier that his son had special needs.

Mr. A's son previously has discrimination and was bullied by the neighbors. However, the late head of the special school gives Mr. A motivation. The headmaster told Mr. A that the Special School is neither a hospital nor a witch doctor. This school is like a workshop that has a very broad opportunity. Therefore, they cannot expect special-need children to become exactly like typical children. The school objectives were to help minimize their disability so that they can live a decent life like typical children. Later, Mr. A became very active at every society meeting to educate the neighborhood about his son's condition.

Mrs. N has a different experience than Mr. A. Her son was born as a normal baby. Only after he reached around four to six months did he develop a disease. This condition left him with hearing and physical impairment. The physical impairment made him unable to walk normally. Ms. S has just taken care of her sister since their parents passed away. Her husband became the sole breadwinner in the family since Ms. S has to be a stay-at-home mom to take care of her daughter and sister. Ms. S's sister only receives intervention during school time. Until now, she has not received any additional medication or therapy.

Disability costs

People with disabilities have a barrier to obtaining a standard of life similar to that of normal people. The disability can prevent them from performing some activities that are common for typical people. Therefore, to obtain a similar standard of living, disabled people have to spend more than typical people to pay the additional cost due to disability (Asuman et al., 2021; Mitra et al., 2017; Mont et al., 2022; Palmer et al., 2019; Schuelke et al., 2022). Furthermore, the burdens also have impact not only on the disabled person, but also on family members.

The cost of disability is closely related to the type of disability. The three children in the families of the participants have different needs. This research divides the cost of disability by tangible cost and intangible cost.

Tangible costs are related to direct and indirect costs that can be physically measured by monetary value. On the other hand, intangible costs are related to costs that cannot be directly measured by monetary value (Razzouk, 2017).

The medical cost is the most common tangible cost for special needs children. Most disabled children need medication for their entire life. Some intellectual disability is often followed by several other health problems, the most common being epilepsy and gastrointestinal disturbance (Kerr et al., 2003; Sappok et al., 2019). Although autism spectrum disorder (ASD) is also sometimes related to intellectual disability, some type of ASD, especially with hyperactive and attention deficit problems, needs routine medication to help them calm down and focus (Levy & Hyman, 2008; Trudeau et al., 2019). For the type of physical disability, the medical cost is closer to the purchase of aid. Hearing impairment also needs assistive technology. Meanwhile, autism spectrum disorder (ASD) requires various kinds of therapies. The most common therapies for ASD are behavioural therapy, speech therapy, sensory integration therapy, and occupational therapy (Domínguez-Lucio et al., 2023; Georén et al., 2022; Randell et al., 2022; Sabzevari et al., 2023). The cost of disability as a result of the high cost of medical treatments, therapies, specialised equipment, and assistive technology can cause financial hardship for families.

Fortunately, in this research, Mr. A's son does not have any additional health complications. He mentioned that the school previously provided a routine medical check-up consisting of physical and psychological examination. However, the facilities have not been continued in the last two years. *“There was regular health monitoring, especially from first to fourth grade. Internal, external health, and even psychology were there. But now,*

perhaps due to school finances or government assistance to schools, this activity has been interrupted for the past 2 years or so."

Ms. However, N's son needs more medical treatment. Treatment ranges from consultation with a pediatrician, therapy, and assistance. *"Speech therapy and physical therapy, as well as doctor consultations"*

Mrs. N's son received treatment since he was 10 months old. She took him to the hospital with National Health Security. Mrs. N also regularly took his son to the pediatrician. He received some therapy, such as physical therapy and speech therapy. Some of the therapy was provided by the school, and the other was provided by the parents. Later, due to the financial problems of the parents, the therapy was stopped. *"I used to go to Sardjito (Hospital) two to three times a week with BPJS. There are no costs for going to the hospital, just going to the doctor. I used to do therapy myself. But now we cannot afford it, so we only rely on school facilities."*

Due to hearing and physical impairment, the doctor suggested the use of a medical aid. However, due to economic problems, the student stopped using assistive technologies. *"I bought a hearing aid, but only used it for 1 year. I used to go with my husband to Jogja, but he returned home and we did not continue with it. Buying the battery is 60 thousand a month, there is no money to commute."*

Children with disabilities cannot join ordinary educational institutions. This is related to the experience of the participants. *"In the past, he went to regular kindergarten. He could not do anything there."*

Consequently, children should join special educational programmes. Since special educational programmes are usually customised as an individual educational plan, the programmes require higher costs than regular educational programmes. Special-need children can also join inclusive programmes (Jauhari, 2017; Mayasari, 2016). Fortunately, they can access the special school provided by the government without paying a tuition fee. *"It's free. I only provided fuel for transportation, plus intention and a healthy body. Just that."*

Disabled children also need special care. This may force family members who act as caregivers to work fewer hours or to give up the jobs entirely. This situation may also further worsen the financial stability of the family. This situation occurs to Ms. S as the caregiver for her sister. *"Since our parents passed away, I don't go to work because I have to take care of my sister."*

The family can incur unexpected costs as a result of their child's handicap. The unexpected costs are related to home adaptations, travel expenses, or legal fees associated with obtaining disability-related benefits. *"Our home is far away. Its hard to escort him since he also has a younger brother who goes to regular school. "*

The psychological burdens of a family with disabled children may not be easy to recognise. This can be included as intangible costs. Special-need children bring more uncertainty and unpredictability; therefore, increase the emotional stress of caregivers. They may experience a higher level of anxiety and depression as a result of their ongoing concern for the welfare of children. *"I want, for example, if I am no longer there, my child's mother is not there, my child can be independent."* This also resulted from stigma and pressure from the environment.

"If we look into the past..... (unable to speak), if people here say 'peyung-peyung' (that means stupid) like that, it hurts here, ma'am, (pointing to chest)."

"Small children who are still in kindergarten don't know about autism, calling her crazy"

Additionally, due to the difficulties of caring for a disabled child, it may result in social isolation.

"In the neighbourhood, she seems invisible. People stay away because they think she is crazy. I am alone, I don't have anyone to help me even from the family"

Fulfilled Needs

Indonesia provides Special Needs Schools in all regions. Therefore, children can have basic educational needs. Moreover, the special school does not also charge tuition fees for students. Indonesia has a social security system called BPJS (*Badan Penyelenggaraan Jaminan Sosial*). The national health service in Indonesia is called BPJS Kesehatan. BPJS Kesehatan provides their basic health needs that can help them access diagnosis of disability, medical check-up, paediatrician consultation, and therapy.

Unfilled Needs

There are still some unfilled needs due to various reasons, such as the limited knowledge, that make them unable to get earliest disability detection, as stated by Mr. A and Ms. S.

“What I regret was that the kindergarten teacher said that he had special needs, but it was already approaching 3 years in the kindergarten. Well, that is what I regret. Finally, one of the kindergarten teachers said: “Sir, your son has special needs.” At that time, I had BPJS (National Health Systems), then I consulted with the hospital.”

“In the past, my parents had no knowledge. My sister was born prematurely. But at normal age, when she should be able to walk, she could not walk yet. So she just got a traditional massage.”

Both the sons of Mr. A and Ms. S’s sister got a formal diagnosis after they reached school age, and that was due to the fact that they could not follow the regular educational curriculum. Mrs. N has a different experience. Since her husband works in the city, she got better information. Furthermore, the disability of her son was caused by certain diseases. *“He was born as normal children. But when he was around four to six months old. He got sick like a chicken pox. That’s where everything started.”*

As a child with ASD, Ms. S’s sister should receive various interventions. National Health Systems also provides facilities for ASD therapies at general hospitals in Yogyakarta. The special region of Yogyakarta also has an Autism Centre in Kulon Progo. However, the facilities are far from Gunung Kidul. Therefore, her sister does not receive the sufficient intervention needed. *“She does not take any medicine. She also does not have therapy. She just goes to school.”*

Sensitivity

Sensitivity is an important factor when interacting with disability. Due to diversity of disabilities, each special needs individual cannot be treated as similar individuals. This is particularly important for entities that deal with disabled people. This applies to professionals who will work with disabled people and government who will accommodate the special needs citizen (Peterson & Quarstein, 2001). Often, government policies work partially. It only accommodates part of the community, while actually it can also be utilised by other target groups.

“During the rainy season, he wants to raise catfish. He is happy, so I just let him be. That kind of children are mostly in the agricultural sector, right? Here also on an agricultural basis. Unfortunately, government or non-governmental aid is intended for farmers who work in the paddy field. For the kind of livestock, our children also need some kind of help. Farmer groups do not accommodate special needs members. Actually, they can, they just don’t understand. The environment determines the future of children.”

From that sentence, we found that people do not understand about special needs people. In this way, they need to employ empathetic understanding. It is a form of simulation that is also an epistemic means of understanding other people's minds (Hannon, 2020). With some understanding, we can help them according to their needs. *"It happened that I met Ms. Through an acquaintance, she supported my decision to register my son in special schools. In special schools, I met the late headmaster. So yeah, I am currently very enthusiastic."*

From the sentences above, the caregiver got an emotional response from the teacher. It is a kind of support that can help them reduce the psychological burden and provide more motivation. Emotional responsiveness helps to resolve root problems and acknowledge negative emotion (Byun & Jeon, 2023).

Openness

The caregivers in this research show that openness helped them ease their burden in raising disabled children. Communication openness build trust between parties in a relationship to reflect the degree of information sharing (Boström & Broberg, 2014; Conley & Nadler, 2022; Martínez-Tur et al., 2020) *"But now, when I go to community meeting , I tell them that basically my son is like this. My son has special needs. I beg them that if my son is rude, remind him and do not discriminate him. However, do not use violence, or you will have trouble with your father. "*

Part of the openness is the support from several parties, also helping the family with disabled members. This will make them feel accepted and at ease. *"Alhamdulillah, there are not many problems with the family. The children in the neighbourhood also understand that my son cannot hear and cannot talk. Many people care and his friends can understand his situation."*

From an internal point of view. The openness of family members can also help them to have a willingness to seek external resources. This will reduce their workload. *"I asked his older brother to help this kid, for example, who wants to open Youtube. Since then, there has been no distance between his communication with his friends. There is no longer any distance. If he doesn't know, he can ask the teacher."*

Conclusions

The disability costs of family members with special needs children are related to physical and emotional factors. However, not all needs can be met independently by families. Therefore, the support of the surrounding environment, especially from extended families, the neighbourhood and the government, plays an important role for families.

To help families with members of special needs, it is important to involve sensitivity in the process. Sensitivity as an external factor to support families. Sensitivity in this case is related to empathetic understanding and emotional responsiveness.

Meanwhile, family members of disabled children should also embrace openness. The openness in this case is effective communication and mutual resources that require the cooperation of internal and external factors. However, family members should also have the willingness to seek external resources, so that people know how to help them.

This research has some limitations. The first limitation is related to the type of disability. In this research, we only discuss hearing and physical impairment, intellectual disability, and autism spectrum disorder. Second, this study has not added a monetary proxy for the cost of disability, nor the impact of sensitivity and openness on the family with members of special needs. Thus, future research is expected to add different types of disability and explore the monetary impact of sensitivity and openness. There is also an opportunity to explore the integration of sensitivity and openness into the government's poverty alleviation programme for disabled people.

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ENVIRONMENTAL DAMAGE AND POVERTY ALONG CITARUM RIVER

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Abstract

Citarum is the longest and biggest river in West Java, also known as the world's most polluted river. The environmental degradation in Citarum has been taking place since the 1980's, when rapid industrialization activities started in the southern parts of Bandung that led to the increase of factory wastes pollution. The revitalization and restoration program did not contribute significant results as the water pollution and environmental degradation had led to several health issues. A heavily polluted river has also increased the poverty level of populations living along the river. This paper aims to analyse the correlation between environmental degradation and poverty. The research objective is to provide input and policy evaluation to the government on issues related to environment management. In theoretical point of view, this research is a case study to demonstrate the significance of the government in increasing people's standard of living. A descriptive analytical method is used with primary and secondary data gathering. Primary data obtained through interviews with the government actors, non-governmental organizations, and individuals. The research indicated that the river pollution was due to weakness on the government's side, which has a lack of coordination and cooperation with other stakeholders.

Keywords: Citarum, environment, government, poverty.

Abstrak

Citarum merupakan sungai terpanjang dan terbesar di Jawa Barat yang juga dikenal sebagai sungai paling tercemar di dunia. Degradasi lingkungan di Citarum telah terjadi sejak tahun 1980-an, ketika dimulainya proses industrialisasi yang pesat di wilayah selatan Bandung yang menyebabkan meningkatnya pencemaran limbah pabrik. Program revitalisasi dan restorasi tidak memberikan hasil yang signifikan karena pencemaran air dan degradasi lingkungan telah menimbulkan beberapa permasalahan kesehatan. Polusi sungai juga meningkatkan angka kemiskinan penduduk yang tinggal di sepanjang sungai. Tulisan ini bertujuan untuk menganalisis korelasi antara degradasi lingkungan dan kemiskinan sebagai bahan masukan dan evaluasi kebijakan kepada pemerintah terhadap permasalahan yang berkaitan dengan pengelolaan lingkungan hidup. Secara teoritis, penelitian ini merupakan studi kasus yang menunjukkan pentingnya pemerintah dalam meningkatkan taraf hidup masyarakat. Metode yang digunakan adalah deskriptif analitis dengan pengumpulan data primer dan sekunder. Data primer diperoleh melalui wawancara dengan aktor pemerintah, lembaga swadaya masyarakat, dan individu. Hasil penelitian menunjukkan bahwa pencemaran sungai disebabkan oleh kelemahan pemerintah yang kurang berkoordinasi dan bekerja sama dengan pemangku kepentingan lainnya.

Kata-kata kunci: Citarum, lingkungan, pemerintah, kemiskinan.

Introduction

Citarum is the longest river in West Java which flows over an area of 12,000 square kilometres. The headwaters of the river are in Mount Wayang south of Bandung City and flow to the north of the Java Sea. The Citarum River also reaches two provinces, namely West Java and DKI Jakarta, by crossing nine administrative areas, namely Cianjur, Bogor, Karawang Bekasi, Purwakarta, Subang Sumedang, Bandung and Bandung Municipalities. The significance of the river increases with the presence of three dams that receive direct water supply, namely the Jatiluhur Reservoir (1963), Saguling (1986) and Cirata (1988). The river also irrigates 420,000 hectares of rice fields, which benefits approximately 25 million people in both provinces. (Basuki, 2013).

Citarum pollution is partly due to the community's paradigm that the river is a giant garbage dump and the final destination for all types of waste. A total of 20,462 tons of organic and inorganic waste dumped into the river. The Citarum River contains poisons from various pollutant substances; about 70 percent from domestic waste and 30 percent comes from industrial, agricultural and animal husbandry waste. The pollutant parameters that increased the sharpest in the Citarum River included coli bacteria from human feces. In fact, the absence of bacteria whose natural habitat is in the human intestine is one of the parameters for good drinking water quality. Based on the seven parameters in the environmental quality index, especially the water quality index, the Citarum River is categorized as moderate to heavily polluted. These hazardous substances are directly and indirectly consumed by residents in two provinces as most of the drinking water and consumption of fish for DKI Jakarta residents comes from this river. Saputra (2018) stated that pollutants from factory waste operating along the river, without being processed through a Wastewater Management Installation (IPAL). The results of this disposal can be harmful to humans and the environment, therefore further processing is required before being discharged into the sewer.

Majority of small companies have not properly treated wastewater. Low supervision from the government causes companies or business actors to easily ignore provisions. Only about 20 percent of industries have WMI facilities. This condition causes pollution to get worse, considering the number of factories operating along the river has reached 3,236 industries. Due to the lack of control from the government, coupled with the lack of awareness from business actors regarding the importance of waste treatment, many waterways and the environment are contaminated with industrial waste. Pollution and chemical pollutants cause disease from mild to severe. Contaminated water is certainly very harmful to health both in short and long term, depending on the substances or bacteria contained therein. Wilk at al stated that the most immediate impact is digestive problems, which are exacerbated if people consume water containing harmful chemicals such as mercury, cadmium or lead. The deposits of these substances would cause diseases such as various types of skin diseases. The people's health degradation had resulted in increasing medical costs incurred by the government insurance company. In addition, the residents also experienced stunting or obstacles in the growth process. Various scientific studies have indicated that heavy metal pollution can negatively affect the function of the human body. Even though the effects of river water pollution are quite obvious, the government has a slow response in handling various problems. Husodo (2017) reveals pollution that has been going on for decades.

Quoting "Unreported World" (2017) in April 2014, a *YouTube* channel broadcasted a documentary film entitled 'The World's Dirtiest River'. The documentary film described how the river was initially a source of livelihood for the local community. The sources of livelihoods from drinking water, freshwater fisheries, irrigation, and transportation. The sentence that accompanies the documentary film reads: "today we will take you to the most polluted river in the world. As many as 35 million people depend on the Citarum River, which is located on the island of Java, Indonesia, but now it has become a poisoned river and filled with garbage.

The movie starring Seyi Rhodes has received a lot of attention, however, the Indonesian government did not take it seriously until the British Broadcasting Corporation

(BBC) released a documentary in 2017. The BBC broadcast has succeeded in attracting the attention of President Joko Widodo to deal with the problem. The broadcast depicts two French citizens, Gary and Sam Benchehib (2017), wading through a river filled with trash and waste. Following the broadcast, President Joko Widodo launched the “Citarum Harum” program in January 2018, involving many stakeholders, including the Indonesian National Armed Forces (TNI), academics, mass media, and non-governmental organizations. The program promises that within seven years the water would be drinkable directly.

Research Method

The research is applied qualitative and a descriptive analytical method and used primary and secondary data. A secondary data obtained through article from books, journal, media publication, and report of government and non-government institutions. Primary data obtained through interviews with the government actors, non-governmental organizations, and individuals. The strength and weaknesses of several river restoration programs (Citarum Bergetar, integrated, Bestari, Bestari Ultimate, Citarum Harum, Citarum Harum Juara) were analyzed to elaborate available data and challenging factors that led to the success and failures of each program. The time frame is from 2000 when the first restoration program was introduced, up to 2023, or 5 years after President Joko Widodo launched the “Citarum Harum”.

Findings and Discussion

Strength

The Big Budget and Full Support of the Government and Public

Various programs have been implemented to resolve the environment issue in Citarum River. During 2000-2003, the provincial government launched “Citarum Bergetar” program, that stands for “clean, beautiful, and sustainable”. This program focuses on control of conservation restoration and community empowerment. The program replaced in 2011 by “Citarum Integrated Water Resources Management” or “Integrated Citarum Program”, involving various stakeholders (the government, communities, private sector and NGOs). Five ministries formally engaged in various activities; Public Works, Agriculture, Health, Environment, and the National Planning and Development Agency (Bappenas). At provincial level the government involvement through the Development Planning Agency (Bappeda), the Environmental Control Agency (BPLH), the Housing and Settlements Service, the Water Resources Service (DSDA), and the Ministry of Forestry. Other institutions are the Agriculture Service, Food Crops, Energy and Mineral Resources Office, Animal Husbandry Service, Health Service, Environment Agency, and Disaster Management Agency (BNPBD).

The Bappenas website reported the total cost of “Integrated Citarum” program was around IDR 9.1 trillion. The budget allocation aims of improving the upstream water catchment area to improve the quality and availability of drinking water. Only three years after the implementation, the program was protested by academics and the People's Coalition for the Right to Water (KruHA), demanded to the ADB Board of Directors discontinued financing the programs until the management being improved. KruHa indicated a mismatch in the number of affected communities compares to the report of “West Tarum Canal Rehabilitation project”. KruHA also reported that the program is detrimental to residents, unclear, irrelevant to the initial objectives and lack of budget transparency.

The “Citarum Bestari” was introduced in 2014, through West Java Governor Regulation Number 75/2015, with a budget around IDR 80 billion. The program means “good manners” and abbreviation for “clean, healthy, beautiful and sustainable”. In 2016 the provincial government launched the “Citarum Bestari Ultimate” program., targeting by 2018, or 3 years after launching, the water drinkable straight from the river. The flagship of “Citarum Bestari” was the establishment of “ecovillages” or an environmentally cultured villages along

the river. The program was supported by a community in each village who are trained and educated to protect the river. The community task was to clean trash from the river while campaigning on environment management.

In February 22, 2018, the “Citarum Harum” program was launched, after encouraged by President Joko Widodo. Mildan reported that the program focuses on restoring the Citarum watershed ecosystem, including the water quality, regulating spatial planning, and optimizing the water resources. The program continued under the governorship of Ridwan Kamil, under the name of “Citarum Harum Juara”. The name of program was in line to governor’s provincial slogan “West-Java Juara” or “West Java Champion”.

The strengths of Citarum programs (Bergetar, integrated, Bestari, “Bestari Ultimate”, “Citarum Harum”, and Citarum Harum Juara”) was full support from the central government, international donor agencies, and community. Another strength is the awareness and support from various stakeholders, such as the central and local governments, non-governmental organizations, private groups, universities/academics and individuals. Among the NGOs involved were the Mandiri Taruna Group, the Bina Mitra Foundation, Driya Media Studio, the Family Care Association for Education (KERLIP), Wanadri, EKOLINK, OIKOS, Greeneration, ICORD, Cooperatives Rise Together, and Kanumayasa. Various universities or study centres also involved mostly through community service and research programs as a basis for designing various policy changes and improvements. The main actors were the people who living along the river who are directly affected.

A Strong Political Power

Another potential to support the success of river management program was a strong political power. Ahmad Heryawan (2008-2018) was the governor elected by the people for two terms (2008-2018) with a strong legitimacy and potential to mobilize all stakeholders to carry out various programs. The report of West Java General Election Commission (2013) indicated Heryawan’s strong legitimacy was supported by 40% votes in first term (2008) and 33% in the second (2013). As a leader he expected to lead and coordinate the program effectively in West Java. Unfortunately, this strong support did not follow by an effective leadership and capability. *Tempo* special issue on May 6th, 2018, reported the failures were due to “involvement of government and non-government institutions”.

The governor also supported by various laws and regulations, such as law number 32/2009 on environmental protection and management. Article 60 states that “everyone is prohibited from disposing of hazardous waste and/or toxic materials (B3) into environmental media without permission”. Article 20 paragraph 3 states: “everyone allowed to dispose of waste if meets quality standards”. Article 69 paragraph 1 letter F, states: “everyone is prohibited from disposing of B3 and B3 media waste into public areas”. These regulations are followed by sanctions for violators, namely article 100 paragraph 1 which states: “anyone who violates the quality standards of waste water, emissions or other disturbances, will be punished with imprisonment for a maximum of 3 years and a fine of up to IDR 3 billion”. Article 104 further states: “anyone who dumps waste and/or materials into environmental media without a permit as referred to in article 60, shall be punished with imprisonment for a maximum of 3 years and a fine of up to IDR 3 billion”. For decades of operation, factories

that clearly indicates violate the rules did not punished. This condition strongly demonstrated a collusion between government officials and businessmen. Some factories survived for years due to government “protection” with a mutual benefit at the people cost.

Below is the discussion on weaknesses of the program which would be divided in four parts; littering culture and lack of education, lack of coordination and leadership, corruption and lack of budget transparency, and lack of law enforcement.

Weaknesses

A Littering Culture and Lack of Education

The existence of rivers is closely related to the development of Sundanese culture. The Peta Kampong Community website quotes a famous writer Ajip Rosidi who stated that

during the reign of Tarumanagara, Citarum was used as the "lifeblood" of civilization. In industrialization era, development process and increases of population were unable to maintaining the water purity. Economic interests and various political conflicts have overpowered the desire to maintain the sustainability of the river. One of the factors causing pollution is the littering culture that causes flooding every year during rainy season and water turbidity and draught during the dry season. Even though the flood threatened every year, as agrarian society, the residents living along the riverbanks refused to relocate for socio-historical reasons. A strong attachment to homeland forced them to adapt the flood every year. (Doweng (2012)). To support relocation program, the local government has provided 360 housing units suitable for habitation. However, the housing units were not fully utilized as the people prefer to live in old dwellings that prone to disasters. The kinship system of Sundanese culture regarded the importance of families that living close despite hardship and risks.

The culture could be transformed through education. The pollution along Citarum River correlate to the government's failure to provide environmental education to the people. Education does not only address the people living along the river watershed, but also environmental management in general. The people mindset that considered the rivers as giant garbage had failed various physical efforts such as infrastructure development, scraping of sediment/mud which causes siltation of rivers. Other program also ineffective, even though supported by the central and provincial governments to increase the capacity of the upper Citarum River and normalize number of tributaries. The construction and designed of 146 check dams to control 266 sediments also unsuccessful without the people support. The government have also carried out various physical activities including the management of water resources, management of liquid and solid waste along rivers and resettlement of people living on the banks or areas prone to flooding. The programs were ineffective without the support of education programs.

The success of environmental education programs required cooperation and involvement of educational institutions. Education on health management could reduce the use of the allocation of state budget for health care and health insurance. The medical budget for West Java Province was IDR 1.9 trillion which mostly used for the Health Social Security Administration Agency (BPJS). Most of the budget was allocate to community health treatment in the river watershed.

Lack of Coordination and Leadership

Another weakness is related to the lack of coordination between stakeholders. Various non-governmental actors took part in supporting community empowerment and environmental preservation through Corporate Social Responsibility (CSR) scheme. The most significant is a Corporate Forum for Community Development (CFCD), that established under the coordination of the provincial Development Planning Agency (Bappeda).

The river pollution which occurred since more than 3 decades continued to date. The July 18, 1981 edition of *Tempo* Magazine published a special report regarding factory waste pollution. A same magazine on April 2018 edition, or after nearly four decades, raised a similar concern. Several governors who came and went were unable to handle the problems. The April 2018 edition reported on the governor incapability to manage the river. The governor's explicit statement is as follows:

"Cleaning up the Citarum River is not my authority, the provincial government is only the coordinator. Each agency works independently. I also work alone with my budget. But it is the most serious and the most frequently blamed even though it is outside our jurisdiction. The river management is under the Ministry of Public Works, while the forest upstream is under the authority of the Ministry of Environment and Forestry. We could not involve in the river, only outreach to the community. Then what's the problem? There is no commander. If someone in charge, the problem can be overcome."

The above statement indicates a weakness in leadership and managerial ability. If the governor states that river is outside his jurisdiction, meaning the river does not belongs to anyone. The failure of other program mainly due to lack of awareness and community involvement as the people was not the program focus.

During the two periods of Ahmad Heryawan's governorship, the programs was failed to improve river conditions. On May 6, 2018, *Tempo* daily reminded the point made during Heryawan's campaign for his second term governorship, a promise that the water would be drinkable directly from the river. However, until the end of 2018, the river water is still dirty, polluted, and far from the initial target of being drinkable. In 2018, only about 50% of river water has been successfully cleaned, while the rest is still polluted. Various problems around the river such as garbage and waste management and flood control are still unresolved. (Solehudin, 2017). In 2023, Governor Ridwan Kamil, as reported by "Okezone" stated the river condition is categorized as "mildly polluted" compared to situation in 2018 which was "heavily polluted".

A weak of bureaucracy is indicated by the lack of cooperation between the government and other stakeholders. There were lack of involvement with universities or higher educational institutions. The West Java Province especially the City of Bandung is home to various universities and higher education institutions. Cooperation could support the government with skilled human resources and technical innovation in forms of various scientific researches on natural resources management. However, the government mostly work as a sole actor without collaborative supports. In globalized era, a synergy is needed to deal with global problems. West Java which is rich naturally, however, the human capital was inadequately used. Environmental problems have caused a degradation in quality of life as the people could not enjoy clean drinking water. The people have little option but to bear various health risks, both would have short-term and long-term impacts. Polluted water cost more to low income families residing in the river watershed as they could not afford to buy clean water.

The "Pentahelix" concept that involves government, academics, business, media and communities, were not synergized in this case. Amrial et.al indicated the ability of government with its the political power to formulate a policy through decisions, supported by the community with social power. The third is academics who has the power and ability to share knowledge that helps social activities faster, more effective and more efficient. The fourth element is a businessman or entrepreneur with capital power and the media which controls publication and communication. (Amrial, 2017). The weakness of the bureaucracy is indicated by the failure to involve the "pentahelix" actors in the management of the river. Each party are working separately, which led to ineffective results.

Weaknesses in coordination also demonstrated through the implementation of programs that mostly out of sync between agencies. Both government and non-government agencies have own interests. Based on the provisions in Regional Autonomy, the local government has stronger and greater authority compared to during the New Order era. Chapter 4 (article 7) on regional autonomy under law No. 22 of 1999 concerning Regional Government, stated that regional authority covers all areas of governance. The law indicated the broad authority for regional governments in managing resources operating under its territory. In the utilization of natural resources, stated that the authority to provide a business permits is given by the district government while supervising the implementation of businesses established in the respective areas.

Corruption and Lack of Budget Transparency

As previously stated, the Citarum programs were supported by several donor agencies such as the *Asian Development Bank* (ADB), the *Japan International Cooperation Agency* (JICA) and the *Global Environment Facility* (GEF). The grants from GEF through the ADB amounted USD 3.75 million covered the period of 2010-2013. The fund was allocated for forest conservation and support the upstream biological natural resources and ecosystems. The large budget was approved to reinforce the river preservation. Unfortunately, the budget allocation was ineffective and leakage in various posts.

An online media, *Mongabay*, reported that since 2008 the “Citarum Bergetar” funded by the Asian Development Bank (ADB), with a total amount of USD 500 million or around IDR 6.7 trillion for a 15-year period. The fund divided into four phases in a multi-tranche financing facility (MFF) scheme, with the first allocation of IDR 50 billion. The *Republika* website on September 2014 stated that “Citarum Bestari” budget had increased to about IDR 100 billion in 2015. Compared to 2014, the budget had increased by around 50 percent, excluded the central government loan (around IDR 20 billion) in addition to the company’s CSR. The amount increased in 2016, as published on the *People’s Mind* page, to IDR 120 billion after the program new format was proposed. The budget was used on “massive movement” program, involving the mobilization of communities, education to factories operators, cattlemen, farmers, and households. The fund was also allocated to normalization program of the upper river (Cisarea, Cimande, Cikijing, and Cikeruh).

On the government fund, the *Pikiran Rakyat* daily on December 29, 2016, reported that financial support for the “Citarum Bestari” program for conservation, water utilization, and damage control was IDR 90 billion (2015), increased to IDR 120 billion (2016), and IDR 280 billion (2017). The program involves several ministries (Fisheries, Animal Husbandry, Health, Environment, Agriculture, Public Works and regional planning. Egeham (2017) states that each of these agencies allocated budgets such as providing feed and livestock business assistance, assistance with latrines, tree planting, garbage trucks and motorbikes for waste transportation. Another budget was IDR 110 billion for physical arrangement and construction of facilities and infrastructure at tributaries. The budget is distributed among five agencies, such as environment and sanitation, housing, settlement planning, land and landscaping, regional planning, health, and education. The Bandung City government had budget allocation to maintain the construction of water facilities, infrastructure and the provision and management of sanitation related to water resources, education and student development. On January 18, 2018, the *Pikiran Rakyat* reported that the Environment and Sanitation Service had also installed trash nets and transportation facilities. A report on May 10th, 2018, stated on various efforts of the provincial government and the Central government. Various improvements have been established without optimal results. Even though the amount of the budget spent on the Citarum River is very significant numbers, the implementation was ineffective. Most likely there has been waste, fraud, and double budgets (Bayu, 2018). The ineffective program indicated by the budget allocation which mainly removing waste from rivers while no sanctions enforcement applied to polluters.

The culture of “Corruption, Collusion and Nepotism” (CCN) are still a serious problem in the bureaucracy including the provincial, city and district governments. The amount of budget allocated for the river revitalization program was not proportional to the results. Based on the suspicion on budget leakage, the West Java Public Relations office reported that the central government also directed the Corruption Eradication Commission (KPK) to evaluate various programs. The direction was due to several indications of budget losses on the rehabilitation program in the river watershed. Some indication of collusion also occurred between the government officials and factories that dispose of waste directly into the river without going through the IPAL process. On failure to implement IPAL, the factories argued on the equipment damage, or the reluctance of factory managers to replace as it increased the production costs. Regarding IPAL, as reported by CNN media (2019), Walhi West Java found number of companies in Majalaya District, remained disposed hazardous coal waste to watershed. As previously mentioned, and supported by research finding, only 20% of industries have IPAL facilities (Haryadi, 2018). These condition causes worsening pollution of the river. To control pollution and river damage, the government planned a factories relocation to less densely populated area. To reduce cost, the government proposed that several factories made a joint instalment of IPAL system.

The budget allocation on Citarum was the largest in term of natural rehabilitation program. However, the funds did not used effectively and efficiently. Widespread of corruption occurred in various programs after the government disbursed IDR 22 trillion for revamping the river over the last 20 years. Up to 2023, the river is still known as the “mildly

polluted". Even though there are no exact figures of the budget leakage from the various programs, indications of corruption have been very clear. The February 2019 *Kompas* daily quoted the results of an audit from the Supreme Audit Agency (BPK), which indicated that the "Citarum Harum" fund was spent ineffectively. The critics of BPK highlights that programs have not addressed the root of the problem.

Lack of Law Enforcement

The river watershed is a home of 3,236 factories, most of which are textile industries. Among those, only 20% have a Water Management Installation Waste (IPAL) system. In addition, the factories which already installed, continues to throw waste directly into the river. This condition turned the river as a giant garbage dump that holds all types of factory waste and pollutants. After the launching of the "Citarum Harum" program in 2018, a local NGO, the Indonesian Forum for the Environment (Walhi) founded companies in Bandung Regency of Majalaya, still dumped hazardous and toxic coal waste into the river. Even though the disposal of toxic, hazardous and medical waste has been stated on the government regulation Number 101 (2014), weak of law enforcement has led to many abuses of permits and violations of regulations. The "Seruji" page reports a finding from the Citarum River Ecosystem Management Survey team had confirmed the discharge of various types of liquid waste into the river basin.

The law number 32 (2009) on "Environmental Protection and Management", article 106 confirms that anyone who imports hazardous waste into the territory of Indonesia is subject to imprisonment for a minimum of 5 years and a maximum of 15 years, in addition to a minimum fine of IDR 5 billion and a maximum of IDR 15 billion. These rules and sanctions should be the basis for the government authority to take firm action against any perpetrators of river pollution. Factories around the river Basin (DAS) continued to dispose waste for decades without sanctions and punishment. In addition, several factories around the river were unregistered. The companies took advantage of the high unemployment rate and took economic benefit by refusal to install a waste management system.

Another challenge was the result of population pressure that led to the diversion of the water catchment forests into vegetables plantation. For economic reasons, the forests or water catchment area under the responsibility of the Ministry of Forestry (Perhutani) had diverse into vegetable plantation. *Tempo* of May 6th, 2018 edition reported that the government's inability to forbid communities to diverse the forest functions also indicate the lack of law enforcement.

Conclusion

The failure of the Citarum management program has resulted in an increase in the level of poverty along the river. The government weakness as coordinator, communicator and facilitator of development contributed to the failures. The governor had fails to transform various potentials and supporting forces to overcome various problems. Strong legitimacy as well as financial and budgetary support from the central government and international donor agencies, meaningless without political will, strong leadership, and a firm bureaucracy. Weak leadership is also indicated through the failure to implement government regulations and laws enforcement to the perpetrators of environmental pollution. As a recommendation, firstly is to strengthen bureaucracy and to implement a strict law enforcement in accordance to the principle of equality before the law. In addition, education program should be implemented to change the way of thinking and perspective that the river is a source of livelihood instead of a giant dumping bin. By implementing the three points above, the dream of turning Citarum into a clean river with drinkable water could be realized.

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STRATEGIC PRIORITY OF VOLCANIC ISLANDS TOURISM USING SWOT-TOWS AND FUZZY-AHP

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Abstract

Volcanic islands have great tourism potential because of pandemic free, and ideal place for tourists. Several previous studies have shown that the volcanic island is a driver of socio-economic growth. However, many volcanic islands have not taken full advantage of this opportunity. This study aims to determine the priority strategy for developing volcanic island tourism in the Regency of Siau, Tagulandang Biaro (Sitaro) using the SWOT-TOWS and Fuzzy AHP methods based on the perceptions of 15 experts. The results of data analysis show that the WO alternative strategy (29%) is the highest, namely the development of human resources through education and training, and stakeholder involvement in tourism development. Next were SO (27%); ST (23%) and WT (21%). The results of the global weight calculation show that S3 (13%) is friendliness and openness of the people to tourists. Sensitivity analysis shows that the alternative WO strategy is very robust. This study proves that the combination of SWOT-TOWS and Buckley's Fuzzy-AHP is effective for determining strategic priorities for tourism development in Sitaro. This research contributes to the determination of the priority strategies for tourist development of the Sitaro. Researchers recommend future studies on tourist satisfaction to boost regional economic growth.

Keywords: volcanic islands; SWOT-TOWS; Fuzzy-AHP; strategy; Sitaro; Buckley; tourism

Introduction

The COVID-19 pandemic has greatly impacted the number of tourists globally. Many countries have closed tourist areas, borders, and airports and restricted the visit and movement of citizens. Government and private offices were closed and employees were encouraged to work from home (Huang et al., 2023a). Meetings were severely restricted, human mobility is reduced, and cafes and restaurants are changing their operations to a delivery mode. Other activities such as conventions, festivals, and sports events were canceled. In many cases, in a matter of days, the bustle of the city becomes quiet (Matteucci et al., 2022). People who carried out tourism activities during the pandemic were seen as irresponsible because these activities endanger the lives of others (Huang et al., 2023a).

The pandemic has negatively impacted the economy of Indonesia (Nguyen et al., 2022). The most affected area were the Volcanic island regions that rely on tourism for their economy are particularly hard hit the one that was very much dependent on the tourism industry (Nguyen et al., 2022). (Nguyen, Quang, Alang, Ngo, & Thanh, 2022 (Movono et al., 2022).

However, conditions have now improved. Airports, government offices, business, tourism and hospitality sectors are starting to move again by implementing health protocols, including wearing masks, maintaining distance and washing hands regularly. Several tourism adjustment and restructuring programs were introduced by prioritizing aspects of health, safety, and ensuring a minimum risk of infection for both the tourist and the community (Skryl & Gregoric, 2022).

However, in order to survive and succeed in tourism development, these areas must develop appropriate strategies so that they can compete with other regions (BÜRGISSER & DI CARLO, 2022).

Tourist industries that are expected to grow again after Covid are ecotourism such as beaches, coral reefs, fishing and also geotourism such as volcanic views, volcanic eruptions, and the uniqueness and diversity of the landscape. The Sitaro Islands Regency, which is located in the northern part of Indonesia's Sulawesi Island which is easily accessible by flight service as well as fast boats from Manado has promising tourism development potential, both for ecotourism and geotourism.

This regency has 47 islands and 10 of them are inhabited. This district is famous for its beautiful beaches and abundant marine wealth and an active volcano, namely Mount Karangetang. This island area provides a beautiful location for tourists to rest, away from the bustle and noise of big cities. Mount Karangetang, which is properly located in Siau island, last erupted in 2019. Siau is a volcanic island (Hidayat et al., 2020). The eruption and the beauty of Mount Karangetang has become a tourist attraction.

Volcanoes also provide rich soils and cool climates for agriculture and tourism and fresh sand and rock resources for construction (Andreastuti et al., 2019). The volcanic ash of Karangetang provides fertile soil for nutmeg plants, known as the best in the world in Sitaro Regency. Earlier in history, nutmeg plants were a key reason invaders entered Indonesia. Now, they are a special attraction for tourists.

Given the huge potential for tourist development, the need for a strategic plan for tourism development in the regency is crucial. To fill in the above-mentioned gap, this study aims to explore which is the priority strategy for developing volcanic islands tourism for the Sitaro Islands Regency?

This study aims to identify and determine the internal and external factors of tourism development in Sitaro island regency using the SWOT-TOWS method. The results of the SWOT-TOWS identification are then quantified and ranked using Fuzzy AHP and set priorities for alternative strategies for tourism development.

Methodology

This research follows several steps as shown in figure 1.

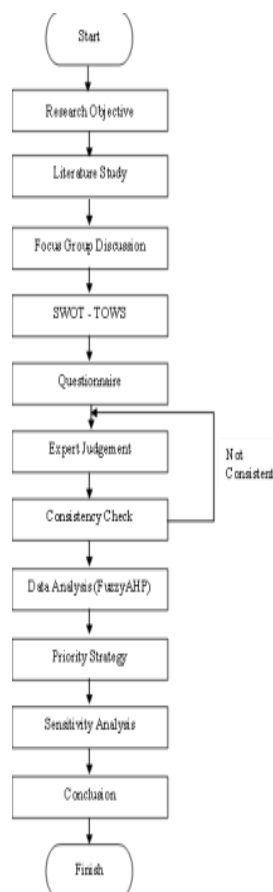


Figure 1. Research steps

The study starts by determining the research objectives. The purpose of the study is to determine the priority strategy for developing volcanic islands tourism in the Sitaro Islands Regency.

Then the researchers conducted a literature review to obtain variables or factors that influence the development of tourism on the volcanic island of Sitaro. These factors were discussed in the Focus Group Discussion (FGD) and the determination of SWOT is to determine internal factors, namely strengths and opportunities and external factors, namely opportunities and threats. From the SWOT analysis, an alternative strategy is made, namely a combination of internal and external factors in the TOWS matrix. The results from TOWS were then analyzed using AHP.

There were 15 experts as respondents who provided answers to this question in the form of pair-wise comparison. These respondents are leaders and decision-making officials in the Sitaro Islands Regency.

In this study, researchers used the aggregation of individual judgments and calculated them manually using the geometric mean. According to Basak & Saaty (Basak & Saaty, 1993) and Mu & Pereyra-Rojas (Mu & Pereyra-Rojas, 2018), the geometric mean is the correct way to synthesize judgments given by the experts as reciprocal matrices. The next step is the data analysis process using Buckley's Fuzzy AHP.

Sensitivity analysis, to assess the robustness of the priority factors in the event of a change in the criteria, is then calculated. If there is a change in the criteria and the priority factors do not change, it can be said that these priority factors can be used in policy making.

But if there is a change in the criteria and the priority factors change, then policy makers must be careful in using these priority factors and it is important to always pay attention if there is a change.

Results and Discussion

SWOT Factors

The purpose of this study was to determine the priority strategy for tourism development in volcanic islands of Sitaro volcanic area by using a combination of SWOT-TOWS and Buckley’s Fuzzy-AHP methods. These factors are organized in the form of a hierarchical structure as shown in figure 2.

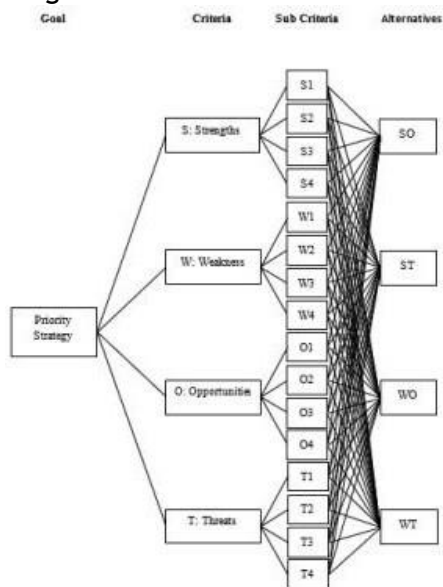


Figure 2. Hierarchy structure

Based on the results of a literature review by researchers which were then validated/discussed through a Focus group discussion forum involving experts and elements of the Sitaro district government, the SWOT of these factors was obtained in table 1.

Table 1. SWOT factors and sub factors

SWOT Factors (Criteria)	SWOT Sub Factors (Sub Criteria)
Strength (S)	S1 Natural beauty, Nutmeg, Karangetang volcano, beaches, culture sites S2 Peoples' Awareness of economic benefits S3 Friendliness and openness of the people to tourists S4 National and local government support
Weakness (W)	W1 Limited tourist accessibility and facilities W2 People not fully aware of tourism W3 Limited promotion W4 Coordination of stakeholders need to develop
Opportunities (O)	O1 Availability of government support to tourism development O2 International reputation of destination O3 Increase people's income O4 Preservation and development of cultures
Threats (T)	T1 Competition of regional tourist destination T2 High-cost investment T3 Wrong perception about safety, security (Karangetang volcano) T4 Natural and environment damage

After the SWOT factors are obtained, an analysis is carried out to obtain a proposed strategy. This is done by combining internal and external factors and produces the S-O, W-T, S-T, and W-O strategies as in table 2 (Taghavifard et al., 2018). The S-O strategy uses the internal strengths to take advantage of external opportunities (ideal case). The combination of S-O is often called a maximaxi strategy. W-T strategies are called 'mini-mini strategies' (Taghavifard et al., 2018). These alternative strategies are aimed at reducing internal weaknesses and avoiding threats. S-T or “maxi-mini strategies” are used to reduce the impact of external threats. W-O is adopted to minimize weaknesses by utilizing opportunities. This strategy is also called “mini-maxi” (Mousavi & Behzadi, 2019)

Table 2. Strategic alternatives

				Internal Factors			
				Strengths		Weaknesses	
				S1	Natural beauty, Nutmeg, Karangetang volcano, beaches, culture sites	W1	Limited tourist accessibility and facilities
				S2	Peoples' Awareness of economic benefits	W2	People not fully aware of tourism
				S3	Friendliness and openness of the people to tourists	W3	Limited promotion
				S4	Center and local government support	W4	Coordination of stakeholders need to develop
				S - O Strategies		W - O Strategies	
External Factors	Opportunities	O1	Availability of government support to tourism development	SO1	Strategy of products' differentiation	WO1	Development of human resources through education and training
		O2	International reputation of destination				
		O3	Increase people's income	SO2	Cooperation with investors	WO2	Strategy of stake-holder inclusion to

		O4	Preservation and development of cultures		and networking development		tourism development : incorporate private public stakeholders for decision making, enhance product quality and exceptional customer care culture, reform new policy environment to develop tourism
				S - T Strategies		W - T Strategies	
	Threats	T1	Competition of regional tourist destination	ST1	Active communication , transparent, honest, informative and centralized	WT1	Effective and flexible tourist promotion
		T2	High-cost investment				
		T3	Wrong perception about safety, security (Karangetan g volcano)	ST2	Involving people in managing tourism.	WT2	Involving banks through credit facilitation to people to develop tourism
		T4	Natural and environment damage				

Perception weighting using Buckley’s Fuzzy-AHP

The results of TOWS, which are qualitative and subjective, are then quantified by author to obtain priority factors using Buckley’s Fuzzy-AHP. Fuzzy-AHP analysis was carried out after obtaining the consistency value of the AHP calculation. The results of the consistency analysis obtained the value of all elements less than 0.1. This means that the respondents' answers are consistent.

The analysis was continued after all the respondents' answers were consistent by applying Buckley’s Fuzzy AHP. The fuzzy pair-wise comparison matrix of the level of importance for the criteria as appeared on table 3.

Table 3. Fuzzy pairwise comparison matrix of the criteria

Criteria	S	W	O	T
S	(1, 1, 1)	(1.49, 2.34, 2.78)	(0.70, 1.29, 2.17)	(0.99, 1.68, 2.90)
W	(0.36, 0.43, 0.67)	(1, 1, 1)	(0.38, 0.70, 1.40)	(0.67, 0.90, 1.22)
O	(0.46, 0.78, 1.43)	(0.71, 1.43, 2.61)	(1, 1, 1)	(2.86, 5.05, 7.12)
T	(0.34, 0.59, 1.01)	(0.82, 1.11, 1.49)	(0.14, 0.20, 0.35)	(1, 1, 1)

Geometric-mean of fuzzy comparison value of criteria strength using:

$$\begin{aligned}
 r_S &= (a_{11} \otimes a_{12} \otimes a_{13} \otimes a_{14})^{1/4} \\
 &= ((1 \times 1.49 \times 0.70 \times 0.99)^{1/4}, (1 \times 2.34 \times 1.29 \times 1.68)^{1/4}, (1 \times 2.78 \times 2.17 \times 2.90)^{1/4}) \\
 &= (1.01, 1.50, 2.04)
 \end{aligned}$$

Using the same method, we get the value of geometric-mean of fuzzy comparison value of other criteria as follows,

$$\begin{aligned}
 r_W &= (0.55, 0.72, 1.03) \\
 r_O &= (0.98, 1.54, 2.27) \\
 r_T &= (0.45, 0.60, 0.85)
 \end{aligned}$$

The weight of the criteria of strength,

$$\begin{aligned}
 \tilde{w}_S &= r_S \otimes (r_S \oplus r_W \oplus r_O \oplus r_T)^{-1} \\
 &= (1.01, 1.50, 2.04) \otimes (1 / (2.04 + 1.03 + 2.27 + 0.85), \\
 &\quad 1 / (1.50 + 0.72 + 1.54 + 0.60) + 1 / (1.01 + 0.55 + 0.98 + 0.45)) \\
 &= (0.16, 0.34, 0.68)
 \end{aligned}$$

We get also the weight of other criteria as follows:

$$\begin{aligned}
 \tilde{w}_W &= (0.09, 0.16, 0.35) \\
 \tilde{w}_O &= (0.16, 0.35, 0.76) \\
 \tilde{w}_T &= (0.07, 0.14, 0.29)
 \end{aligned}$$

Best Nonfuzzy Performance (BNP) value for the strength criteria:

$$\begin{aligned}
 BNP_{wS} &= [(U_{wS} - L_{wS}) + (M_{wS} - L_{wS})] / 3 + L_{wS} \\
 &= [(0.68 - 0.16) + (0.34 - 0.16)] / 3 + 0.68 \\
 &= 0.40
 \end{aligned}$$

In the same way the BNP value can be calculated for other criteria and the results as follows:

$$\begin{aligned}
 BNP_{wW} &= 0.20 \\
 BNP_{wO} &= 0.42 \\
 BNP_{wT} &= 0.17
 \end{aligned}$$

By normalizing we get,

$$\begin{aligned}
 BNP_{wS} &= 0.33 \\
 BNP_{wW} &= 0.17 \\
 BNP_{wO} &= 0.36 \\
 BNP_{wT} &= 0.14
 \end{aligned}$$

The weight of the criteria can be seen in figure 3

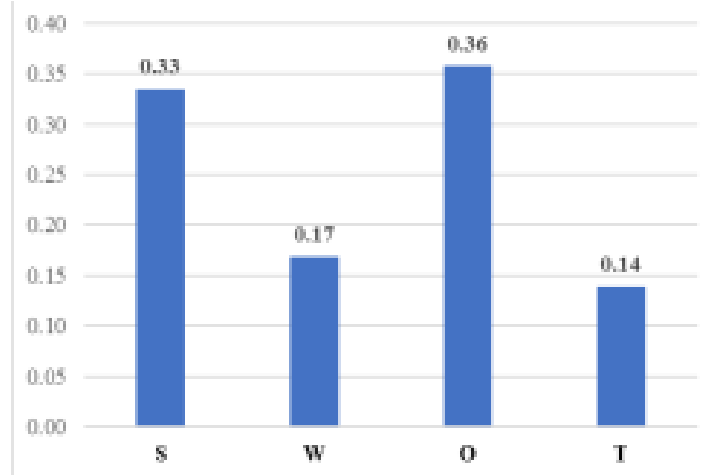


Figure 3. Criterion weight

The weight of each sub-criteria is obtained in the same way and the results are listed in table 4 and figure 4

Table 4. Local and overall weight of criteria and sub-criteria

Criteria and Sub Criteria	Local Weight			Overall Weight
	Fuzzy	BNP (Normalized)	BNP (Normalized)	BNP (Normalized)
<i>Strength</i>	0.16	0.34	2.04	0.33
S1	0.08	0.17	0.39	0.17
S2	0.07	0.15	0.35	0.15
S3	0.16	0.39	0.86	0.38
S4	0.13	0.29	0.64	0.29
<i>Weakness</i>	0.09	0.16	0.35	0.17
W1	0.15	0.32	0.63	0.31
W2	0.07	0.13	0.32	0.15
W3	0.11	0.23	0.49	0.23
W4	0.15	0.32	0.63	0.31
<i>Opportunities</i>	0.16	0.35	0.76	0.36
O1	0.14	0.26	0.47	0.25
O2	0.06	0.11	0.24	0.12
O3	0.16	0.31	0.57	0.31
O4	0.17	0.32	0.59	0.32
<i>Threats</i>	0.07	0.14	0.29	0.14
T1	0.06	0.12	0.24	0.12
T2	0.10	0.19	0.37	0.19
T3	0.14	0.28	0.53	0.28
T4	0.22	0.41	0.76	0.40

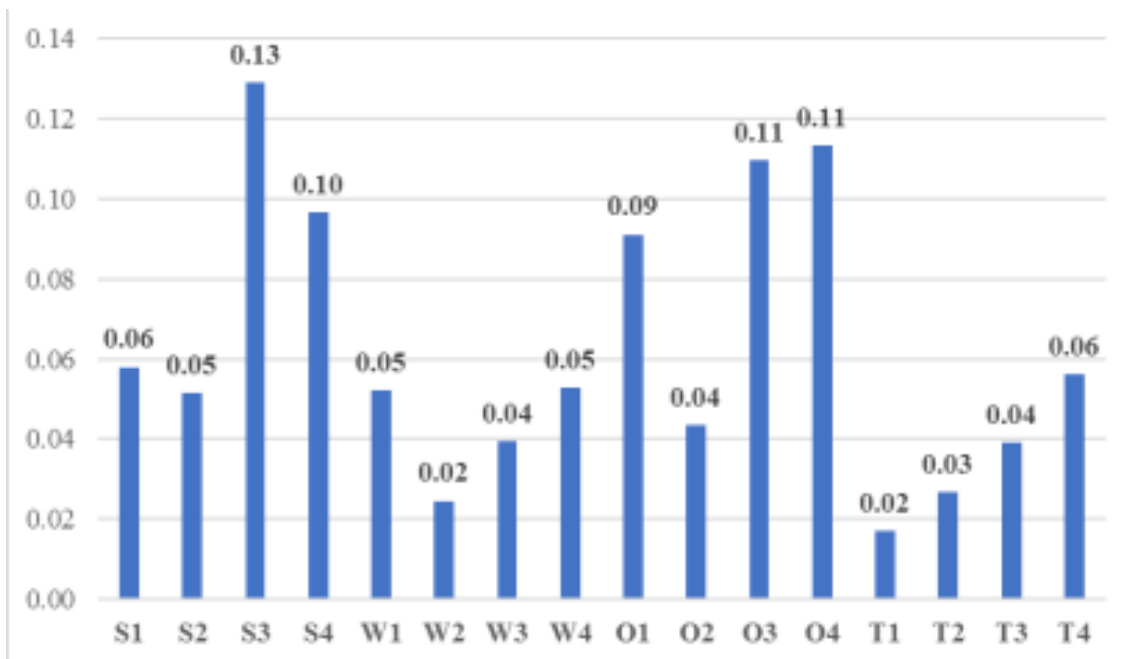


Figure 4. The weight of sub criteria

The weight of each alternative against each sub-criteria is calculated in the same way, the results are listed in table 5 and figure 5. The local weight for each sub-criterion is the result of analysis in each criterion. Meanwhile, the global weight for each sub-criterion is the result of a comprehensive analysis

Table 5. Final weight of the alternatives

Sub Criteria Weight (BNP)			Alternative							
			Local Weight (BNP)				Global Weight (BNP)			
SubCrit	Local	Overall	SO	ST	WO	WT	SO	ST	WO	WT
A	B	C	D	E	F	G	$H = D * C$	$I = E * C$	$J = F * C$	$K = G * C$
S1	0.17	0.06	0.23	0.26	0.32	0.19	0.01	0.02	0.02	0.01
S2	0.15	0.05	0.30	0.21	0.26	0.23	0.02	0.01	0.01	0.01
S3	0.38	0.13	0.27	0.17	0.41	0.15	0.04	0.02	0.05	0.02
S4	0.29	0.10	0.35	0.19	0.19	0.27	0.03	0.02	0.02	0.03
W1	0.31	0.05	0.40	0.21	0.24	0.15	0.02	0.01	0.01	0.01
W2	0.15	0.02	0.17	0.33	0.32	0.17	0.00	0.01	0.01	0.00
W3	0.23	0.04	0.23	0.17	0.38	0.22	0.01	0.01	0.01	0.01
W4	0.31	0.05	0.27	0.12	0.41	0.20	0.01	0.01	0.02	0.01
O1	0.25	0.09	0.26	0.17	0.33	0.24	0.02	0.02	0.03	0.02
O2	0.12	0.04	0.34	0.13	0.34	0.20	0.01	0.01	0.01	0.01
O3	0.31	0.11	0.22	0.34	0.16	0.29	0.02	0.04	0.02	0.03
O4	0.32	0.11	0.19	0.26	0.35	0.20	0.02	0.03	0.04	0.02
T1	0.12	0.02	0.32	0.41	0.14	0.14	0.01	0.01	0.00	0.00
T2	0.19	0.03	0.29	0.32	0.22	0.17	0.01	0.01	0.01	0.00
T3	0.28	0.04	0.24	0.38	0.22	0.16	0.01	0.01	0.01	0.01
T4	0.40	0.06	0.28	0.29	0.21	0.21	0.02	0.02	0.01	0.01
SUM							0.27	0.23	0.29	0.21

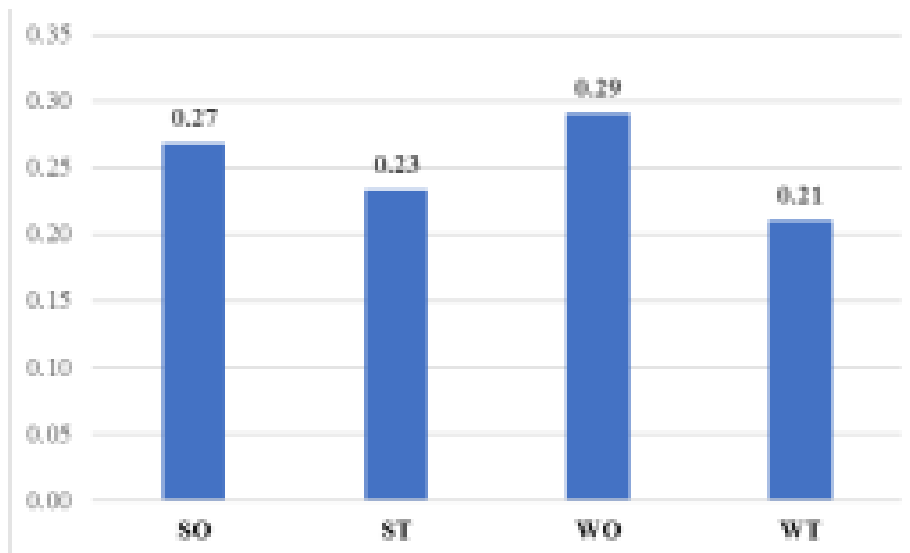


Figure 5. The weight of the alternatives

The calculation results show that the strategy WO (29%) is the highest value followed by the SO(27%); ST (23%) and WT (21%).

Sensitivity analysis

Sensitivity analysis is carried out to find out how robust, consistent, and stable the decisions made by respondents. The original alternative weighting results obtained that the largest alternative weight was the WO alternative with a weight of 0.29. Then the other alternative weights in succession from the largest are: SO with a weight of 0.27, ST with a weight of 0.23 and WT with a weight of 0.21 (table 6).

Table 6. Scenario of sensitivity analysis

Scenario	Weight of Criteria (BNP)				Overall priority of Alternative (BNP and Normalized)			
	S	W	O	T	SO	ST	WO	WT
Original	0.34	0.17	0.36	0.14	0.27	0.23	0.29	0.21
Sc1	0.25	0.25	0.25	0.25	0.27	0.24	0.28	0.20
Sc2	0.10	0.30	0.30	0.30	0.27	0.25	0.28	0.20
Sc3	0.30	0.10	0.30	0.30	0.26	0.25	0.28	0.21
Sc4	0.30	0.30	0.10	0.30	0.27	0.24	0.28	0.20
Sc5	0.30	0.30	0.30	0.10	0.27	0.22	0.30	0.21

Scenario 1, all weights are made equal by 0.25. As a result, the alternative weights sorted from the largest are: WO (0.28), SO (0.27), ST (0.24) and WT (0.20). The alternative ranking does not change from the original result in the order: WO, SO, ST, WT.

Scenario 2 to scenario 5, one alternative is given a weight of 0.1 while the other alternative is given the same weight of 0.3. The results are sorted from the largest weight as follows:

1. Scenario 2: WO (0.28), SO (0.27), ST (0.25), WT (0.20). The alternative ranking is the same as the original result, namely WO, SO, ST, WT.
2. Scenario 3: WO (0.28), SO (0.26), ST (0.25), WT (0.21). The alternative ranking is the same as the original result, namely WO, SO, ST, WT.

3. Scenario 4: WO (0.28), SO (0.27), ST (0.24), WT (0.20). The alternative ranking is the same as the original result, namely WO, SO, ST, WT.
4. Scenario 5: WO (0.30), SO (0.27), ST (0.22), WT (0.21). The alternative ranking is the same as the original result, namely WO, SO, ST, WT.

These results indicate that changes in the weight of the criteria have no effect on the ranking of alternatives. Thus, it can be said that the decision maker's decision is robust, consistent and stable.

From the results of Fuzzy AHP quantitative calculations on qualitative inputs from TOWS and SWOT, it shows that the most appropriate alternative strategy for the development of tourism in the Sitaro volcanic area is WO (29%), namely development of human resources through education and training and also stake-holder inclusion to tourism development. The second strategy is SO (27%); the third is ST (23%) and the fourth is WT (21%). Calculation of sensitivity analysis strengthens the position of alternative WO strategies. By applying the same value to each alternative strategy, namely 0.25, the results obtained still show that WO is the highest. This means that the WO value is robust, consistent and stable.

Discussion

The combination of the SWOT method with Fuzzy AHP is used to determine alternative strategies for developing tourism in the Sitaro volcanic islands. The use of a combination of these two methods further strengthens the results obtained when compared to using only one method. The results of qualitative analysis through SWOT-TOWS are then quantified in Fuzzy AHP to determine objectivity and reduce the subjectivity of the results obtained.

The results of this study will be used in a tourism development program in Sitaro. The analysis of internal and external factors was obtained from previous studies and then strengthened by input from experts in the FGD. The FGD also succeeded in determining an alternative strategy (TOWS) which was then analyzed using the Buckley's Fuzzy AHP method.

The results showed that the WO alternative strategy (29%) was the highest, namely development of human resources through education and training and also stake-holder inclusion to tourism development: incorporating private public stakeholders for decision making, enhancing product quality and exceptional customer care culture, reform new policy environment to develop tourism.

The second result was SO (27%); ST (23%) and WT (21%). It means that the development of human resources through education and training and the involvement of stakeholders such as private institutions as well as the creation of a friendly environment for tourists are things that must be a priority to develop tourism in the volcanic island of Sitaro regency.

The Strength that stands out from this research is Friendliness and openness of the people to tourists (S3 - 13%). The results of the calculations of the sensitivity analysis strengthens the value of the WO, because by placing all alternative strategies in the same position (0.25) the position of the WO remains the highest. Likewise, by reducing the WO at position 0.1 while the others at position 0.3, the alternative strategy of WO is still higher. It shows the robustness, consistency and stability of WO through sensitivity analysis.

The importance of developing human resources, especially education and training, was emphasized by Liu and Yin (Liu & Yin, 2022). They emphasized that tourism practitioners must have diverse skills, especially mastery of the latest technology, and it is beneficial to use new-age technology. They suggest that more practical skills, such as innovation, digital literacy, ecological security, and crisis management, should be included in the tourism education phase (Liu & Yin, 2022).

Burbano et al (2022) added that efforts made to foster local participation in tourism to be positive. Participants working in the planning and management of tourism consider the progress made to create spaces for dialogue between different stakeholder groups and inter-institutional collaboration, which has been pivotal to generate management policies, to be

important. Including stakeholders' participation in the planning and management of tourism is considered key for attaining sustainable tourism. They also emphasize the importance of education and training for local communities (Burbano et al., 2022).

Zhang, Zhong and Yu (2022) emphasized that communities should be empowered by education and training, and they should be provided with more opportunities to participate in tourism services, planning, and decision-making. For example, local communities can be trained to participate in environmental interpretations. This will not only increase the community's environmental awareness and provide them with a new way of living, but also tourists will have more opportunities to communicate with the local community (Zhang et al., 2022).

In relation to the attitude of the local population, it is said that people who have a positive attitude towards tourists constitute a facilitator of a positive tourism experience (García-buades et al., 2022).

In relation to S3 it was mentioned that tourists thoughtfully plan their trips to ensure enjoyable experiences while positively influencing the destination and local people (Huang et al., 2023b).

The combination of the SWOT-TOWS method with Buckley's Fuzzy AHP is very suitable for this research to determine the strategic priority of tourism development of volcanic island of Sitaro regency.

Conclusion

The development of tourism in the volcanic island of Sitaro is important to boost the economic development of the people. The study aims to find out strategic priority for tourism development in the volcanic islands of Sitaro regency using SWOT-TOWS and Buckley's Fuzzy AHP.

The results of the study showed that the strategy alternative of WO (29%) is the highest, namely development of human resources through education and training and also stakeholder inclusion to tourism development. Following the SO strategy (27%); ST (23%) and WT (21%). Moreover, the global weight calculation proved that the S3 Friendliness and openness of the people to tourists was the highest priority.

Sensitivity analysis shows that the alternative WO strategy is robust, consistent and stable because by positioning all other strategies at 0.25, the WO value remains the highest. Likewise, setting the WO strategy at 10% position and increasing other alternative strategies at 30%, the WO value remains the highest.

This research contributes to the local government and the community in Sitaro regency ability to improve tourism after the covid pandemic by strengthening human resources through education and training and involving investors. The community's welcoming attitude towards tourists really helps the development of the tourism industry

The findings might be different with other research based in different situations. The researchers suggest caution when it came to implementation of the results. Factors such as lack of knowledge and undistinguished opinion in the options of the respondents should be seriously taken into consideration. This is part of the limitation of this research.

Researchers recommend future studies of models of increasing tourist satisfaction and community awareness in volcanic islands to increase economic growth of the regency.

Acknowledgment

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ETHICAL DILEMMAS OF STUDENTS AND TEACHERS IN THE ERA OF WIDESPREAD AI IMPLEMENTATION

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Abstract

As Artificial Intelligence (AI) continues to make significant moves in various sectors, its integration in educational fields has become increasingly prevalent. Artificial intelligence in education (AIED) has potential to revolutionize teaching and learning processes and offers numerous benefits, such as personalized learning and efficient administrative tasks. However, some adoptions of AIED also raise several ethical dilemmas for both students and teachers, demanding careful consideration, and responsible implementation. This paper explores the ethical challenges that arise from the extensive use of AIED, focusing on the perspectives of students and teachers. It sheds light on the complex interplay between technology and human interaction (social intelligence) within the realm of education, seeing through issues concerning intellectual capacity (autonomy, literacy, and authenticity) and ethical capabilities.

Keywords: AIED, ethical capabilities, intellectual capacity, social intelligence

Abstrak

Perkembangan teknologi Artificial Intelligence (AI) yang semakin pesat mendesak integrasi AI dalam bidang pendidikan semakin meningkat. AI dalam pendidikan cukup potensial untuk merevolusi proses pembelajaran dan menawarkan banyak manfaat, seperti pembelajaran personal dan langkah administratif yang efisien. Namun, beberapa penggunaan AI dalam pendidikan juga menimbulkan beberapa dilema etis bagi siswa dan guru, yang memerlukan pertimbangan yang cermat dan bertanggung jawab. Artikel ini mengeksplorasi tantangan etis yang muncul dari penggunaan AI yang luas dalam pendidikan, dengan fokus pada perspektif siswa dan guru, dengan memberikan pemahaman yang lebih baik tentang interaksi kompleks antara teknologi dan interaksi manusia (kecerdasan sosial) dalam bidang pendidikan, melihat melalui masalah yang berkaitan dengan kapasitas intelektual (otonomi, literasi, dan otentisitas) dan kemampuan etis.

Kata kunci: AI dalam pendidikan, kapabilitas etis, kapasitas intelektual, kecakapan social

Introduction

Artificial intelligence (AI) has undeniably emerged as a transformative force, permeating various sectors and revolutionizing how tasks are performed. Among these sectors, education stands out as a domain where AI integration is becoming increasingly prevalent. Afterwards, the name remarked is artificial intelligence in education (AIED).

AIED is an emerging field in educational technology that has been around for about 30 years (Zawacki-Richter, Marín, Bond, et al., 2019). This community explores the ways in which learning and teaching can benefit from new and cutting-edge technology, particularly drawing on artificial intelligence (AI) and data usage in teaching and learning (Almusaed,

Almssad, Yitmen, Homod, 2023; Holmes, Porayska-Pomsta, et al., 2021; Holmes & Tuomi, 2022).

This development of AIED obviously has the potential to revolutionize teaching and learning processes, ushering in a new era of educational innovation and efficiency (Bozkurt, Karadeniz, Baneres, Guerrero-Roldan, & Rodriguez, 2021; Hagendorff, 2020). AIED's potential to revolutionize teaching and learning processes offers numerous benefits, such as personalized learning and efficient administrative tasks (Wang, Hong, & Tai, 2019). As AIED's presence in educational settings grows, it brings with it a host of ethical challenges that necessitate careful consideration and responsible implementation (Dignum, 2021; Tuomi, 2018).

Firstly, AIED provides personalized learning experiences, adapting content and pace to match each student's unique needs and abilities. Additionally, AIED can handle administrative tasks, such as grading and scheduling, with remarkable efficiency, allowing educators to allocate more time to teaching and mentoring. The potential benefits are vast, offering the prospect of bridging educational gaps, improving student outcomes, and enhancing the overall quality of education.

However, as people embrace AIED, they must confront a myriad of ethical dilemmas (Floridi, Cows, Beltrametti, Chatila, et al., 2018). The rapid adoption of AI technologies in educational contexts raises questions about data privacy, algorithmic bias, and the potential for depersonalized and dehumanized learning experiences. Students and teachers find themselves navigating uncharted territory, where issues of autonomy, accountability, and fairness become increasingly complex.

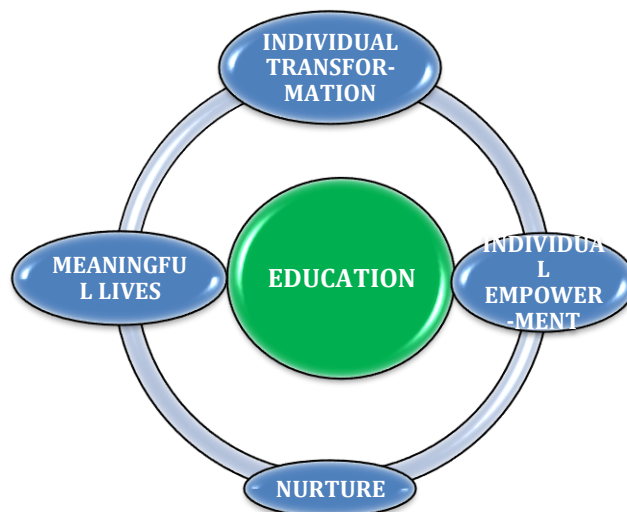


Figure 1. Education and Its Roles

This becomes crucial how to make education play its role for the students. Education serves as a multifaceted catalyst, propelling personal and societal transformation, nurturing individuals through intellectual and emotional growth, empowering them with knowledge and skills, and ultimately guiding them toward lives filled with purpose and meaning (Cantor, 2021; OECD, 2016). It equips individuals with the tools needed to adapt, innovate, and engage meaningfully with their communities and the world, fostering resilience, self-efficacy, and a sense of belonging, thus contributing significantly to their overall well-being and fulfillment.

This paper concentrates on the ethical dilemmas encountered by students and teachers in the context of AIED. Both groups play pivotal roles in the education ecosystem, and their perspectives provide crucial insights into the ethical implications of AI. Students are at the forefront of AIED-powered learning experiences, directly affected by the choices made in AIED-driven curriculum design and assessment. Teachers, on the other hand, must grapple with the implications of AIED on their pedagogical roles, professional autonomy, and the ethical responsibilities associated with AIED-enhanced education.

Method

The method used in the research was descriptive qualitative by accommodating some research articles from journals. Qualitative research is a type of research approach that aims to understand and answer the questions about experience, meaning, and perspective, most often from the standpoint of the participant (Hammarberg, Kirkman, & de Lacey, 2016). In other hand, Yu and Yu (2023) defines descriptive qualitative research as a type of qualitative research that aims to describe a phenomenon or situation in detail, without trying to explain it.

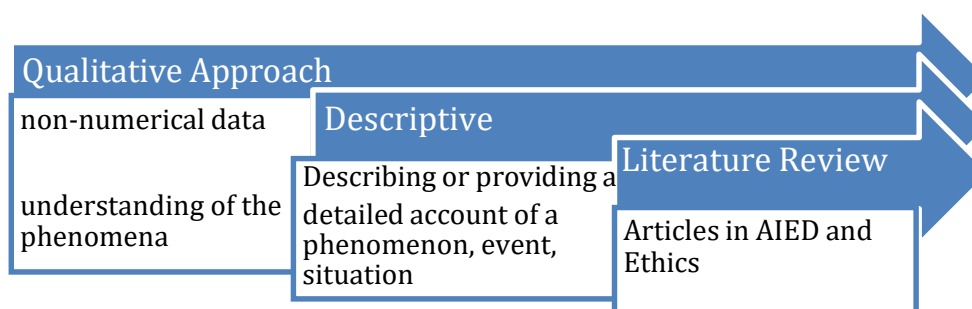
The literature review method is an essential part of this research project - a mini research on ethical dilemmas of students and teachers in the era of widespread AI implementation. The literature review involves a comprehensive search and analysis of existing literature on the topic to identify gaps in knowledge, potential research questions, and relevant theories. In this case, the literature review should focus on ethical dilemmas faced by students and teachers in the context of AI implementation in education. Some potential sources of literature include academic journals, books, and online reports.

Literature review is theoretically considered as one of the instruments used in descriptive qualitative research to collect data. It involves reviewing existing literature on a particular topic to gain insights into the phenomenon being studied. The findings from literature review provide valuable insights, but do not establish cause-and-effect relationships (Sirisilla, 2023). In this case, the research used descriptive qualitative research to analyse the ethical dilemmas of AIED

The primary step of the literature review was to begin with a clear research question and objective, which was "What are the ethical dilemmas faced by students and teachers in the era of widespread AI implementation?" The search then was conducted using relevant keywords, which were "AIED and Ethics" and AIED paradigm and its implication".

The search results were screened for relevance and quality, and the most relevant and reliable sources were selected for analysis. Then the analysis of the literature involved identifying common themes and categories of ethical dilemmas faced by students and teachers in the context of AI implementation. The themes were social intelligence, intellectual capacities, and ethical capabilities.

Table 1. Research Design



Findings and Discussion

AIED has already been brought up into several opportunities of discussion. From all of the aspects having been discussed, this article presents specifically three ethical dilemmas, social intelligence, intellectual capacities, and ethical capabilities. Social intelligence refers

to the complex interplay between technology and human interaction and if the AIED can understand and respond to the emotional needs of students. Intellectual capacities raise questions about whether AIED can replace human teachers and provide personalized learning experiences. Besides, the students' autonomy, literacy, and authenticity are associated to this dilemma as well. Ethical capabilities refer to whether AI can make ethical decisions and be held accountable for its actions.

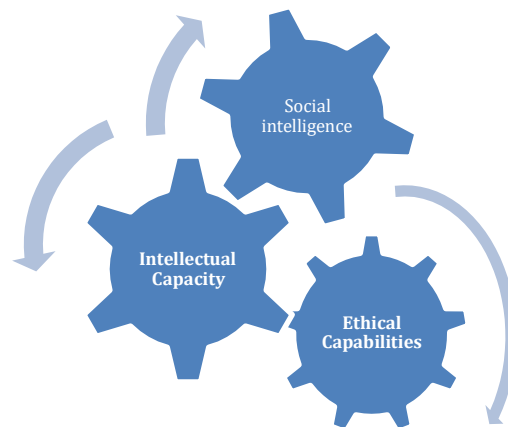


Figure 2. Three Dilemmatic Aspects

Social Intelligence: The Complex Interplay between Technology and Human interaction

One of the dilemmas of the AIED application is how it can affect the students' social intelligence, as the complex interplay between technology and human interaction can create ethical and moral challenges. The following are some ways in which AIED can bring dilemmas to students' social intelligence:

The first reason of how AIED can affect the social intelligence of the students is due to the potential to the teachers' and students' social isolation (Holmes, Porayska-Pomsta, K., et al., 2022). AIED systems can create social isolation among students, as they may spend more time interacting with technology than with other students or teachers. This can lead to a lack of social skills and emotional intelligence, which are important for success in life.

Related to the social isolation, AIED potentially reduces nonverbal intimacy behaviours between teachers and students which can affect their sense of social presence and interpersonal relationships (Jin, Luo, & Zhang 2017; Lai, Zeng, Xu, Xie, Liu, Wang, Lu, & Fu, 2023). Moreover, lack of human interaction due to the AIED can influence the students' social intelligence as well (Nguyen, Ngo, Hong, Dang, & Nguyen, 2023; Remian, 2019). AIED systems can create a lack of human interaction, which is important for social and emotional development. Students may miss out on the benefits of face-to-face interaction with teachers and peers, which can lead to a lack of empathy and social skills.

In the contrary, Seo, Tang, Roll, et al. (2021) by their research entitled the impact of artificial intelligence on learner-instructor interaction in online learning revealed that AIED systems could impact the students-teachers interaction in online learning environments. The AIED community was exploring the impact of AI systems in online education, and studies shown that AI systems could offer effective support for online learning and teaching, including personalizing learning for students.

In addition to the social isolations, the implementation of AIED can also raise biases and discrimination (Baum, 2020; Strümke, Slavkovik, & Madai, 2022). AIED systems can perpetuate bias and discrimination, as they are only as unbiased as the data they are trained on. If the data used to train the system is biased, the system will also be biased, which can lead to discrimination against certain groups of students.

Intellectual Capacity: Autonomy, Literacy, and Authenticity

AIED can influence both teachers' and students' intellectual capacity in terms of autonomy, literacy, and authenticity. The following are some of the ways in which AIED can influence the intellectual capacity of teachers and students.

Firstly, AIED systems can enhance the autonomy of both teachers and students by providing personalized learning experiences that cater to their individual needs and preferences (U.S. Department of Education, Office of Educational Technology, 2023). AI systems can also provide teachers with data-driven insights into student performance, which can help them make informed decisions about teaching strategies and interventions.

However, AIED systems can harm the autonomy of both teachers and students in education. AIED, while designed to enhance educational experiences, can inadvertently undermine the autonomy of teachers. While automation can be a valuable tool, it can also lead to a depersonalization of teaching. They may find themselves compelled to adhere strictly to the recommendations provided by AIED systems, limiting their flexibility to adapt to the unique needs and interests of their students (Seo, Tang, Roll, et al., 2021; Wogu, Misra, Olu-Owolabi, et. al., 2018). This reduction in pedagogical autonomy may stifle creativity in the classroom and hinder the development of innovative teaching approaches, ultimately diminishing the role of teachers as educational designers and mentors.

Similarly, AIED systems can impede the autonomy of students in the learning process. These systems often rely on predictive analytics to determine what content students should engage with and in what sequence. While this personalization can be beneficial, it may inadvertently restrict students' ability to explore diverse topics or learning materials outside the algorithm's recommendations (Holmes, Porayska-Pomsta, K., et al., 2022; Wogu, Misra, Olu-Owolabi, et. al., 2018). This can curtail students' agency in shaping their educational journey, limiting opportunities for independent research and critical thinking.

In addition to autonomy, literacy is brought towards and against the implementation of AIED systems. AIED can enhance literacy skills by providing students with access to a wide range of digital resources and tools (Aiken & Epstein, 2000). AI systems can also provide personalized feedback on student work, which can help them improve their writing and critical thinking skills.

While promising in their potential to enhance learning experiences, AIED can also inadvertently harm the literacy skills of both teachers and students. These systems often prioritize efficiency and automation, which can lead to a reduction in the emphasis on critical reading and writing skills.

For teachers, a study conducted by Alharbi (2023) proved that heavy reliance on AIED systems for grading, for instance, can diminish their engagement in the careful assessment of students' written work and their ability to provide constructive feedback. That is the report from. This can result in a decrease in the quality of literacy instruction, as the human touch in evaluating and fostering advanced reading and writing abilities is replaced by automated processes.

Likewise, for students, the convenience of AIED systems, such as <https://chat.openai.com/>, may discourage them from engaging deeply with textual materials. Automated summaries, text-to-speech functions, and grammar correction tools may inadvertently discourage students from reading and writing comprehensively. This overreliance on AIED systems could lead to a superficial understanding of texts, reduced critical analysis, and a decline in their own writing and comprehension skills.

AIED systems can also pose a threat to both teachers' and students' authenticity in the educational process (Tan, 2020). These systems, while intended to personalize and streamline learning experiences, may inadvertently lead to a loss of genuine, human interactions. Teachers may find themselves compelled to conform to AIED-generated lesson plans and assessments, potentially sacrificing their unique teaching styles, creativity, and the personal connections they establish with students.

In the same way, students also may feel their individuality is diminished as AIED systems prescribe their learning paths, potentially limiting opportunities for self-expression, critical thinking, and exploration of personal interests. In this way, AIED systems, if not carefully integrated, have the potential to erode the authenticity of the teaching and learning experience, replacing it with automated processes and predefined algorithms.

However, AIED systems can efficiently enhance authenticity by providing students with real-world learning experiences that are relevant to their interests and goals (Tan, 2023). AI systems can also provide teachers with data-driven insights into student learning, which can help them design more authentic learning experiences.

Ethical Capabilities

AIED systems, while offering numerous advantages, can potentially harm students' ethical capacities and capabilities in several ways (U.S. Department of Education, Office of Educational Technology, 2023). Firstly, the systems give access to reduce teachers' and students' critical ethical thinking. One concern with AIED systems is that they often prioritize efficiency and standardized learning paths. In doing so, they may neglect the development of students' critical ethical thinking. These systems may not encourage students to engage deeply with complex ethical dilemmas or explore various perspectives on moral issues. As a result, students may be ill-equipped to think critically about the ethical implications of their actions, both in their academic pursuits and in their lives outside the classroom.

Next to the critical ethical thinking, having lack of moral role models might rise against the unfair application of AIED (School of Education, 2020). AIED systems can also lack the ability to serve as moral role models or mentors. Teachers traditionally play a significant role in not only imparting knowledge but also in modelling ethical behaviour and values. A reliance on AIED systems may diminish the human touch in ethical guidance, reducing opportunities for students to interact with educators who can exemplify ethical behaviour and provide moral guidance.

Moreover, the ethical capabilities of teachers and students might be distracted by bias implementations of AIED systems. This can lead to the reduction of the teachers' and students' empathy and emotional intelligence (U.S. Department of Education, Office of Educational Technology, 2023). AIED systems lack emotional intelligence and empathy, which are crucial for ethical development. Human teachers can understand and respond to students' emotional needs, fostering empathy and compassion. In contrast, AIED systems may not recognize or address students' emotional states, potentially hindering the development of empathy and emotional intelligence, which are essential components of ethical decision-making and interpersonal relationships.

Conclusion

AIED has surfaced in numerous discussions, sparking debates and inquiries from various angles. Within this discourse, the conclusion of this article focuses on elucidating three specific ethical quandaries: social intelligence, intellectual capacities, and ethical capabilities. The concept of social intelligence delves into the intricate dance between technology and human interaction. It scrutinizes whether AIED possesses the aptitude to comprehend and react to students' emotional needs. The query revolves around AIED's capacity to engage in empathetic interactions.

Intellectual capacities pose a second ethical dilemma, prompting questions regarding AIED's potential to supplant human educators and furnish tailored learning experiences. This issue also interlaces with students' autonomy, literacy, and authenticity, as it examines whether AIED's automation might impede these vital facets of education.

Lastly, ethical capabilities cast a spotlight on AIED's ethical decision-making capabilities and its potential to be held accountable for its actions. It delves into the ethical framework and responsibility of AI in education. These three ethical predicaments together underscore the complex ethical terrain traversed by AIED as it intersects with human education.

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THE EFFECT OF THE KANGAROO METHOD OF CARE ON STABILITY OF BODY TEMPERATURE IN LOW-BIRTH-WEIGHT INFANTS (LBWIS) AT NICU X HOSPITAL IN SURABAYA

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Abstract

Low Birth Weight Infants (LBWIs) are infants with a birth weight of less than 2,500 grams regardless of gestational age, either premature or full term. LBWIs are very susceptible to hypothermia due to very thin subcutaneous fat. Infants with low birth weight must be cared for in an incubator or by placing the baby between the mother's two breasts so that there is direct contact between the mother's skin and the baby's skin or the so-called kangaroo method. The research aims to determine the effect of the kangaroo method of care on body temperature stability in LBWIs in the NICU of X Hospital in Surabaya. The research method used was a quasi-experiment. The independent variable in this research is kangaroo method care and the dependent variable is the body temperature of LBWIs. The research population was all LBWIs in the NICU who were treated with the kangaroo method, the sample amounted to 41 babies taken with the total sampling technique. Data were collected through observation of patient medical record documents. Statistical tests using the Wilcoxon Test with a significant value of $\alpha = 0.05$ and the results obtained p value = 0.001, because $p < \alpha$ shows that kangaroo treatment affects body temperature stabilization in LBWIs. The results of this research indicate that the kangaroo method is one of the LBWIs care programs, due to the bonding of skin-to-skin contact so that it can build a psychological bond between mother and baby, not just providing warmth.

Keywords: The kangaroo method Care, Body temperature, LBWIs

Introduction

Low Birth Weight Infants (LBWIs) are babies born weighing less than 2,500 grams regardless of their gestation period (Manik, 2022). Low Birth Weight Infants are very prone to hypothermia, this is due to very thin subcutaneous fat reserves. Newborns will try to stabilize their body temperature against causative factors accompanied by signs of hypothermia, namely shivering, reduced activity, weakened crying, and cold palpable feet. One of the main problems in LBW babies is the problem of body temperature regulation as a major complication in the early period of birth. Hypothermia results in constriction of blood vessels causing anaerobic metabolism, and increased oxygen demand causing hypoxemia and subsequent death.

According to WHO estimates of mortality in developing countries most (98%) of the 5 million deaths are caused by neonatal deaths. More than two-thirds of deaths occur in early neonatal age (0-7 days), most of which are caused by a birth weight of fewer than 2,500 grams (Yasin & Ispriyansti, 2017)

Based on the National Basic Health Research (Riskesdas) in 2018, which was conducted in conjunction with the March Susenas (Central Bureau of Statistics), the proportion of birth weight <2,500 grams (LBWIs) was 6.2% (Riskesdas, 2018). The LBWIs birth rate in East Java

based on Riskesdas of East Java in 2018 was 13.23%. Based on data obtained from the East Java Central Bureau of Statistics, there were 21,544 LBW births in 2019 and Surabaya's LBW rate was 855 births.

Based on patient medical record data in the NICU room of RS X Surabaya in the period November 2021 to December 2022, it was found that the birth rate of LBWIs was 41 births. One of the problems that often occurs in LBWIs is hypothermia. Hypothermia is a condition where the body temperature is below normal. The normal temperature of an infant is 36.5°C-37.5°C, hypothermic temperature <36.5°C and hyperthermia >37.5°C. Factors that affect the stability of body temperature in LBWIs are the environment, gestational age, and body weight. Newborns, especially those with low birth weight, tend to have an unstable and weak body temperature regulation system, so the baby will experience stress due to changes in the environment from inside the mother's womb to the outside environment temperature which is higher than the temperature inside the mother's womb.

Infants with a gestational age of less than 37 weeks or premature babies where babies with this condition have a less stable thermoregulation system. Babies with a body weight of less than 2500 gr have a relatively large body surface compared to the baby's weight so the regulation of the baby's body temperature is getting bigger because of the lack of subcutaneous tissue which can cause the baby's body temperature to be unstable (Maryunani, 2013). Actions that can be taken to overcome the decrease in body temperature in LBWIs are incubator care, providing warm blankets, wearing baby hats, and kangaroo method care.

The impact of hypothermia if not resolved in LBWIs is the occurrence of hypoglycemia, peripheral vasoconstriction with anaerobic metabolism, the narrowing of blood vessels causes anaerobic metabolism which increases oxygen demand and results in hypoxemia and continues with the occurrence of death, increased and disturbed metabolism. Hypothermia causes blood clotting disorders so pulmonary pressure increases which causes severe hypothermia, shock, and apnea, and hypothermia can cause LBWIs to experience intra-ventricular bleeding (Sembiring, 2019)

According to (Sapurtri et al., 2019), the kangaroo method treatment is skin-to-skin contact, namely the process of heat transfer by conduction from the mother's skin to the baby's skin so that the baby stays warm and is in a stable state at normal temperature. The kangaroo method is a method of care for LBWIs that is useful in preventing hypothermia because the mother's body can provide warmth to her baby continuously by contacting the mother's skin with the baby's skin. The skin contact that occurs between mother and baby can fulfill the baby's most basic needs. most basic needs, where the mother's body will become a thermoregulator so that the baby can receive warmth, safety, and affection. receive warmth, safety, and affection. Heat will transfer following a decrease in the normal gradient from hotter to colder objects due to the transfer from molecule to molecule. Based on this, it is known that LBWIs will take their mother's body temperature directly through skin contact considering that, at that time the mother's body temperature is higher than the baby's (Zulaekah, 2020)

The kangaroo method is very important in newborn care, increasing the bond between mother and baby. The kangaroo method creates situations and conditions similar to the conditions in the mother's womb including body temperature, thus providing opportunities for LBWIs to adapt to the outside world (Trianingsih et al., 2018). This method is very appropriate and easy to do to support the health and safety of premature babies. The research aims to determine the effect of the kangaroo method of care on body temperature stability in LBWIs in the NICU of X Hospital in Surabaya.

Methodology

The research design used observational research design, where data collection is based on medical record data. This research has been tested ethically with the number : 2113/Stikes Vinc/KEPK/III/2023. The independent variable in this study was the kangaroo method treatment and the dependent variable was the body temperature stability of LBWIs. The inclusion criteria are infants with low birth weight (LBWIs), weight \leq 2500 grams,

gestational age 27 weeks to 35 weeks, and infants not experiencing respiratory distress. The exclusion criteria: are infants with signs of respiratory distress, and infants born with congenital abnormalities The study population was all LBWIs in the NICU of X Hospital in Surabaya who were treated with the kangaroo method. Kangaroo mother care is performed by the father or mother. The nurse who assists in positioning, and observes the implementation of the kangaroo method. The nurse is there during the kangaroo method. Temperature measurement was done before KMC started (10 minutes before) and after KMC (10 minutes after). The sample amounted to 41 babies taken with the total sampling technique. Data were collected through observation of patient medical record documents. The data were taken from the medical records of LBWIs patients who underwent the kangaroo method in the NICU of RS X Surabaya from November 2021 to December 2022. Statistical tests using the Wilcoxon Test with a significant value of $\alpha = 0.05$.

Results and Discussion

Respondent Characteristics

Table 1 Characteristics of LBWIs who have carried out the kangaroo method at the NICU of X Hospital in Surabaya, from November 2021 to December 2022

Indicator	Frequency (n)	Percentage (%)
Gender Male	17	4
Female	24	58,5
Age ≤ 7 day	27	65,9
> 7 day	14	34,1
Gestational Age		
26-28 weeks	1	58
29-31 weeks	9	30
32-34 weeks	19	46.3
≥ 35 weeks	12	29.3
Baby's Weight		
1001-1400 gram	10	24,4
1401-1800 gram	3	7,3
1801-2200 gram	17	41,5
2201-2500 gram	11	26,8
Duration of the Kangaroo Method		
< 1 hours	4	9,8
1-2 hours	37	90,2

Based on the table above, it can be seen that of the 41 LBWIs who performed the kangaroo method, the data obtained in percentage there were 21 babies (51.2%) were male, based on age there were 27 babies (65.9%) aged ≤ 7 days, based on gestational age as many as 19 babies (46.3%) had a gestational age of 32-34 weeks, based on the baby's weight as many as 15 babies (36.6%) had a body weight of 1801-2200 grams, based on the duration of the kangaroo method 37 babies (90.2%) had a duration of 1-2 hours.

Table 2. Body Temperature Values in LBWIs Before (Pre) Kangaroo Method in the NICU of X Surabaya Hospital

Temperature Value	Frequency	Presentation (%)
Stable	34	83
Unstable	7	17
Total	41	100

Table 3. Body Temperature Values in LBWIs After (Post) Kangaroo Method in the NICU of X Surabaya Hospital

Temperature Value	Frequency	Presentation (%)
Stable	41	100
Unstable	0	0
Total	41	100

Table 2 shows that out of 41 patients, there are 34 who have stable temperature values (83%) and 7 patients whose temperature values are unstable (17%), and unstable there are only 7 patients whose body temperature is 65.5°C or 33%. and after the kangaroo method, all babies have a stable temperature. Table 3 shows that after or (post) Kangaroo Method in the NICU of X Surabaya Hospital in the category of normal or stable body temperature, which is a change in thermoregulation in the LBWIs is characterized by an increase in body temperature response from before the performed of kangaroo method.

Table 4. Analysis of Mean of Body Temperature Before and After Kangaroo Method

Variable Body Temperature	Mean	SD	Minimum Value	Maximum Value	p-value
Pre	37.02	0.53	36.30	37.90	0.001
Post	37.18	0.16	36.90	37.40	

Based on Table 3, shows that the average body temperature value obtained from the pre-test measurement of 41 respondents was obtained from pre-test measurements, the average value was 36.50 °C, the minimum value was 37.02 °C and the maximum value was 37.18 °C. The average value of the baby's body temperature in the measurement after (post-test) was 37.18°C, the minimum value was 37.40°C and the maximum value of 37.00°C with the difference between the two means was 0.13°C.

The average body temperature of infants who were carried out KMC at that time was in steady condition. This can be caused by the fact that premature babies are treated in an incubator, where the incubator equipment has been adjusted to the temperature and humidity according to the needs of premature babies. The incubator temperature is set around 27 C - 36 C, for humidity between 40-100%. So that the KMC functions to maintain the body temperature of premature babies when the baby is not in the incubator.

Then, the body temperature variable has a p-value in the Wilcoxon test of 0.001, then the p-value <0.05 means Ho is rejected so that it can be stated that there is an effect of kangaroo method care on body temperature in LBWIs. stated that there is an effect of kangaroo method treatment on body temperature in LBWIs.

According to the results of the study of the description of body temperature stability in LBWIs who were carried out by the kangaroo method from 41 babies with stable body temperatures as many as 37 babies (90.2%) (table 2) were carried out by the kangaroo method with a duration of 1-2 hours. According to the theory of Sapurtri et al., (2019), the Kangaroo method treatment is skin-to-skin contact therapy in LBW babies, namely the process of conduction heat transfer from the mother's skin to the baby's skin so that the baby

stays warm and stable in normal temperature. In the opinion of the researcher, there is a match between theory and fact, this is because the longer duration of the kangaroo method, which is at least 1 hour, causes the mother's body to provide continuous warmth to the baby's body to prevent hypothermia. The results of this study are by research conducted by Astuti, et al. (2021) which states that LBWIs who are carried out by the kangaroo method will have a more stable body temperature when carried out for more than 1 hour continuously for at least 3 days, compared to babies who are carried out for less than 1 hour for 3 consecutive days (Astuti & Suryatama, 2021).

The kangaroo method for LBWIs provides a sense of comfort because LBWIs are more adaptable in the mother's arms, the contact of the mother's skin, and the baby's skin causes the baby to get a warm environment just like in the mother's womb. The application of the kangaroo method is effective when done with a minimum duration of 1-2 hours and carried out continuously for at least 3 days so that the body temperature of LBWIs remains stable.

Based on the results of the study of 41 babies with stable temperatures, 27 babies (65.9%) aged ≤ 7 days were carried out by the kangaroo method. According to the theory of (Sapurtri et al., 2019), the Kangaroo method treatment is skin-to-skin contact therapy in LBWIs, namely the process of conduction heat transfer from the mother's skin to the baby's skin so that the baby stays warm and stable in normal temperature. In the opinion of the researcher, there is a correspondence between the theory and the facts found that the kangaroo method of care immediately after the baby is born helps stabilize body temperature in LBWIs because of the bonding in skin-to-skin contact building a psychological relationship between mother and baby, not just warmth. This is in line with research conducted by (Agustin, Cindi, Sari & Ferina, 2022) which states that the kangaroo method should be carried out on LBWIs immediately after birth, the kangaroo method is a natural alternative to stabilizing body temperature in LBWIs.

There is a similarity of results with research (Lestari et al., 2014) there is an effect of the kangaroo or kangaroo method care mother care method on the stability of body temperature of low birth weight babies in the Peristi Room. Analysis obtained an OR value of 0.3501, meaning that low birth weight babies who are given the kangaroo mother care method treatment have a chance of experiencing normal body temperature 0.350 times higher than respondents who were not given the given kangaroo mother care treatment.

The principle of the kangaroo method is to replace the care of LBWIs in an incubator by imitating a kangaroo. The mother acts as a kangaroo who embraces her baby to maintain a stable and optimal baby temperature (Suradi & Yanuarso, 2020). This optimal temperature is obtained by continuous direct contact of the baby's skin with the mother's skin. The goal of the kangaroo method is to maintain the body temperature of LBWIs and increase the body weight of LBWIs (Artiani et al., 2021).

The benefits of the kangaroo method increase breastfeeding activity and increase maternal confidence and satisfaction (Suwarni et al., 2021). Kangaroo care also provides benefits that incubators cannot. The kangaroo method can increase affection between mother and baby due to the feeling of closeness, build confidence, increase breastfeeding success, and reduce the experience of stress in both mother and baby. The kangaroo method will increase the survival rate of LBWIs and preterm infants and reduce the risk of nosocomial infections, severe illness, and lower respiratory tract disease (Sulistyowati, 2015).

Some other advantages of the kangaroo method are that it fulfills the most basic needs of the baby, namely the baby's skin-to-skin contact where the mother's body will become a thermoregulator for the baby so that the baby gets warmth, facilitates breastfeeding, infection protection, stimulation, safety, and affection (Aisyah et al., 2021).

Conclusion

The results of this research indicate that kangaroo method of care affects body temperature stabilization in LBWIs in the NICU of X Hospital in Surabaya.

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DETERMINING THE STRATEGIC PRIORITY FACTORS FOR RELIGIOUS MODERATION: A CASE STUDY IN NORTH SULAWESI

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Abstract

Indonesia is a nation consisting of many tribes, languages, religions, and beliefs. This plurality is an opportunity to enrich ideas for increased development. However, this diversity, if not properly managed, can threaten unity. One of the severe threats to this nation is conflict between citizens of different religions and beliefs with one another. One way to reduce potential matches based on differences in religion and belief is through religious moderation. Religious moderation aims to instill and develop understanding and understanding of people of different faiths so that they can maintain the spirit of unity in diversity. North Sulawesi is an area whose inhabitants have various types of religions and beliefs. This study aims to find and determine the priority factors for developing religious moderation in North Sulawesi using the Analytical Hierarchy Process (AHP) and Fuzzy-Analytic Hierarchy Process (Fuzzy-AHP) approaches. The results showed that the criterion of being honest in communicating and acknowledging the truth of other religions was the highest (26.3%). Overall, the sub-criteria for interpersonal communication and cooperation

in the public interest were the highest, (7.8%) and (7.4%), respectively. This study proves that the AHP and Fuzzy-AHP methods are appropriate for multi-criteria decision-making to determine priority factors. The results of this study are beneficial for decision-makers regarding religious moderation in increasing cooperation communication and promoting peace and harmony in coexistence between people of different beliefs.

Keywords: *religious moderation; religious dialogue; Fuzzy-AHP; plurality; cooperation*

Introduction

Understanding of religious moderation

The word moderation comes from the Latin "moderatus" which means "moderate," "not excessive" and "not lacking". Another meaning of moderation is regulating and controlling. People with a 'moderate' attitude are often called moderate people (Khairul Amri, 2021).

The Ministry of Religion of the Republic of Indonesia promotes an attitude of moderation in religion to guarantee peace, security, and mutual welfare and to care for Indonesia, which has a variety of faiths. Religion is essential for Indonesian society. Based on the Pew Research Center on faith, it was found that 96% of respondents acknowledged that believing in God is vital as a guide to living a good and moral life in society.

Religious diversity, on the one hand, is a force for nation-building. The history of the nation's struggle to gain independence was played by heroes and children of the country who have different religions. The development of the Indonesian nation that has received world recognition today is the effort and hard work of citizens from various religious backgrounds. Religious motivation drives the nation's citizens to provide the best for the country and state of Indonesia. Indonesia is a nation that also determines the future of world development.

On the other hand, the pluralism of beliefs, religious pluralism has the potential for conflict between adherents. This happens when a particular religion considers its teachings the most correct, and its followers wish to impose their beliefs on followers of other faiths.

Indonesia has had a bitter experience caused by inter-community conflict due to differences in beliefs and religion. Conflicts between religious adherents have claimed lives and enormous material damage. The future of Indonesia is primarily determined by the attitude of adherents of religions to be aware of differences in beliefs from one another, but at the same time recognize and respect the nobility and sanctity of the teachings of each religion's adherents.

Religious moderation is vital because it protects and guarantees that adherents of religions believe and practice their beliefs freely without coercion and intimidation (Amri, 2021). Pope Paul VI's encyclical entitled 'Dignitate Humanae,' which talks about human dignity, emphasizes that humans today are increasingly aware of their dignity. Because of their freedom, humans should force by other people to do something against their will and desire. Everyone should apply their freedom responsibly. Everyone, including the government, must respect this human freedom (McClelland, 2011) (Andorno & Pele, 2015).

One of the freedoms possessed by humans is freedom of religion. Pope Paul VI, in the encyclical, emphasized that humans have the essential freedom to have belief and carry out their religious teachings. This freedom of religion also means that everyone must have immunity against coercion from outside himself to adhere to a particular religion (Human Fraternity for World Peace and Living Together, 2019).

The Council further stated that the right to freedom of religion is based on the dignity of the human person himself, as this dignity is known through the revealed word of God and by reason itself (Boettcher, 2022). The human person's freedom of religion must be recognized and accommodated by law and every constitution.

Therefore, the right to freedom of religion is not based on a person's subjective disposition but is inherent in everyone. This right of immunity remains in every person (Andorno & Pele, 2015). Everyone should not be forced to act in a way that goes against his conscience. Conversely, he may not be prevented from acting according to his conscience,

especially in religious matters. The reason is that the practice of religion, in essence, consists mainly of internal, voluntary, and free actions in which man directs his life path directly toward God (Andorno & Pele, 2015).

Religious communities have the right to claim freedom so that they can practice their religion according to their norms, respect the Highest in public worship, assist their members in the practice of religious life, strengthen them with its teachings, and promote institutions in which they can join together for organize their own life according to the principles of their religion. In addition, in the sense of freedom of religion, religious people must not be prohibited from freely trying to show the unique value of their doctrine in terms of organizing society and the inspiration of all human activities.

Finally, human social and religious natures provide the basis for the right of human beings to freely convene meetings and establish educational, cultural, charitable, and social organizations under the impulse of their religious sense.

Dialogue and cooperation

The Catholic Church gives significant attention to relations with non-Christian religions. Regarding relations with non-Christian religions, the Church focuses more on efforts to find similarities than differences. Emphasis on the aspect of equality will facilitate cooperation with other faiths.

The Catholic Church is open and does not reject anything true and holy in other religions. The Church respects honestly and sincerely the ways of behavior and life, teachings and teachings of other religions, which, although different in many aspects, often reflect the light of truth that enlightens all people (Human Fraternity for World Peace and Living Together, 2019).

The Church encourages and motivates its members to engage in dialogue and cooperation with followers of other religions, carried out with Care and love and as a witness of Christian faith and life. The Church and its followers recognize, maintain, and promote good things, spiritual and moral, as well as socio-cultural values found in adherents of other religions. We cannot call God the Father of all human beings if we refuse to treat others as brothers or sisters God created in his image. Man's relationship with God the Father and his relationship with man, his brothers, and sisters, are so intertwined that the Scriptures say: "He who does not love does not know God" (1 John 4:8). This appreciation for the truth of God's Word will not justify the discriminatory treatment of people of other religions regarding their rights, dignity, and other related rights.

The Church rebukes, as something foreign to the mind of Christ, any discrimination against human beings or harassment against them because of their race, color, living conditions, or religion. Instead, following in the footsteps of the holy Apostles Peter and Paul, this sacred synod earnestly implores the Christian faithful to "maintain good communion among the nations" (1 Peter 2:12) and, if possible, live for their interests. Share in peace with all men (Gabriel, 2017) so that they may indeed become children of the Father who is in heaven (Muhammad Azmi, 2022).

The presence of the encyclical *Nostra Aetate* shows the seriousness of the Church to recognize pluralism, diversification, and inclusiveness as part of modern society (Sihombing et al., 2020). Pope John Paul II was the first Pope to enter the Umayyad mosque in Damascus and speak with Muslims in the mosque. Pope John Paul II encouraged Catholics to respect and recognize the noble values of other religions.

On February 4, 2019, Pope Francis met with the High Priest Sheikh Ahmed el-Tayeb, the High Priest of the Al-Azhar Mosque in Egypt. At the meeting, they both said that religion should not incite war or spread hatred, hostility, and terrorism that causes the human soul to float (Sihombing et al., 2020). This call is a trigger for leaders and adherents of their respective religions in Indonesia to work together and promote peace and tranquility. The same appeal encourages adherents of religions to prioritize religious moderation.

Religious moderation in Indonesia

Renewal in the Catholic Church since the Second Vatican Council has brought fresh air for religious moderation in Indonesia. Joint activities and dialogue with other religions, especially Islam, are becoming increasingly intense. The Second Vatican Council opened new insights for religious communities in Indonesia to establish friendship and cooperation for national and world peace.

There are several types of dialogue carried out by religious leaders: life, work, theology, and faith. As the most basic form of dialogue, the dialogue of life involves people from all backgrounds. This dialogue creates a sense of solidarity and togetherness. Dialogue work is carried out more intensively and requires collaboration between people of different religions. Theological dialogue is more specific, especially involving scholars and other people with the necessary expertise. In this dialogue, people of different religions try to enrich and better understand their respective religions' doctrines and apply them to everyday human problems. Finally, faith dialogue, namely the exchange of religious experiences, is intended to enrich individuals' experiences with their respective religions and enable them to realize the most fundamental values of their religion. Such dialogue requires maturity and security in one's faith (Riyanto 2010). As Pope Francis said, open dialogue between religions, marked by cooperation and mutual respect, offers a way to protect the freedoms enjoyed by all human beings, including the right to life, the right to worship freely, and the right to express oneself freely. As Furnal wrote (2016, p 10),

"Dialogue based on mutual respect can give birth to good seeds which in turn become friendship and collaboration in various fields, especially in serving the poor, the little ones, the elderly, and loved ones—acceptance of migrants, in concern for those excluded. We can walk together, caring for each other and creation—all religions."

Religious moderation in Indonesia, imbued with the spirit of pluralism, has been quite successful in this country. We witness in our lives every day as a people the meaning of the value of togetherness and cooperation when we assist disaster victims, create interfaith dialogue, engage in humanitarian organizations, live in harmony and peace with their neighbors and communities, and support others regardless of religious beliefs. Such experiences are only possible when people interact positively with others without judging them based on religion or ethnicity.

The Church relentlessly promotes and articulates moderation, urging Catholics to leave their 'comfort zone' and open their doors and windows to the world. Catholics are encouraged to welcome the world, establish friendships, and work actively with fellow Indonesians to achieve the greater good (Sihombing et al., 2020)(Human Fraternity for World Peace and Living Together, 2019).

This research aims to find the strategic priority factors of religious moderation, which is quite urgent in North Sulawesi using the AHP and Fuzzy-AHP methods. North Sulawesi is a multi-religious province. Determining the priority factor of religious moderation is very important to maintain and improve religious harmony among residents in the palm waving area. The results of this study will be used as material for recommendations for the Inter-Religious Harmony Forum in this area.

Methodology

AHP and Fuzzy AHP

This study uses the AHP and Fuzzy-AHP methods. The AHP method is commonly used to determine the priority of a complex and multifaceted reality. The advantage of this method is that complex problems are arranged in a hierarchical form, making them easy to solve (Raco & Krejci, 2022).

This method is a combination of qualitative and quantitative approaches. Qualitative data in the form of respondents' perceptions were then arranged in a questionnaire through pairwise comparisons, the results of which were quantitative. Data that has been quantified will make it easier to determine the priority factor. The analysis results are valid and

acceptable if they meet the ratio consistency standards. The standard consistency ratio means that the calculated result must be <0.1 .

Because AHP uses a single number (crisp number), the researcher also uses the fuzzy-AHP method to see if there is a significant difference in the results of the two ways. The advantage of the fuzzy-AHP method is using triangular fuzzy numbers to reduce the bias in assessing perceptions, which are difficult to capture using a single number.

Research steps

This research follows several steps. The first step is a literature review to obtain criteria and sub-criteria. The second step is compiling a questionnaire as a pairwise comparison according to the AHP method. The third step is determining the respondents who will complete the prepared questionnaire. The fourth step is data analysis, which determines the data consistency level. The fifth step is applying the Fuzzy-AHP method to AHP data that is already consistent to see if there is a difference between the two methods. The sixth step is to determine the global weight of the analyzed data. The seventh step is a sensitivity analysis to determine whether the priorities set are stable, robust, and consistent when there are changes to other criteria.

The first step is to determine the criteria and sub-criteria of the literature review. From the literature review results, the researcher determined five criteria: respect, openness, honesty, cooperation, and fairness. These criteria were obtained from literature review. The definition of each criterion then forms sub-criteria.

The criterion of respect for other religions is defined as the recognition of freedom, inheritance of different religious values, and love for humanity. The criteria for being open to other religions are learning from the good things of other religions, accepting people of different faiths with an open heart, promoting the path of repentance, and acknowledging the existing differences.

The criteria of being honest and sincere with other religions are understood as acknowledging the sanctity of different faiths and building personal communication with them while emphasizing the existing aspects of equality and truth (Sihombing et al., 2020)

The criteria for cooperation are defined as promoting peace and the existence of God, fighting for the common good by not imposing their will, and eradicating poverty. Fair criteria are understood as efforts to promote equality, increase solidarity, respect for living things and the environment, and concern for the forgotten and the marginalized. The criteria and sub-criteria are arranged in a hierarchical form (Sigrid Müller, 2020)

The second step is compiling a questionnaire in the form of pairwise comparisons. Collecting data using the pairwise comparison model makes it easier for respondents to choose only the two options using Saaty's comparative scale (1987). The third step is to determine the respondents. The number of respondents in the study was 25 people. They are religious leaders who actively participate in interfaith relations activities in North Sulawesi. They have Masters and Doctoral degrees.

The fourth step is data analysis. Questionnaire data was averaged in aggregate using the geometric mean formula. A consistency analysis ensures that the data obtained is valid by first calculating the maximum eigenvalue.

The following analysis is to get index consistency. After obtaining the results from the consistency of the index, proceed with the analysis of the consistency of the ratio by utilizing the index ratio. The results are valid and acceptable if the consistency ratio value is <0.1 . After obtaining data consistency, then proceed with sensitivity analysis. The sensitivity analysis aims to ensure that the results obtained are stable, robust, and consistent when there is a change in other criteria. Sensitivity analysis is often also called a 'what if' analysis, meaning that if there is a change in other criteria over time, will the results remain the same or change? If the results change, it is said that the results are not robust. However, if the results remain, they are said to be strong. The next step is Buckley's Fuzzy-AHP analysis to ensure that the gray elements, characteristic of Perception, can be counted. For this reason, the data obtained is transferred as a triangular fuzzy number.

Results and Discussion

Hierarchy Structure



Figure 1. Hierarchy structure

The weighting of Perception using AHP

Pairwise comparison matrix and priority weight of the criteria in table 1.

Table 1. Priority weight of the criteria

	C1	C2	C3	C4	C5	Prio. Weig.
C1	1.000	1.321	0.562	0.721	0.988	0.172
C2	0.757	1.000	0.642	0.630	0.781	0.147
C3	1.780	1.558	1.000	1.016	1.723	0.268
C4	1.388	1.588	0.984	1.000	1.252	0.238
C5	1.012	1.281	0.580	0.799	1.000	0.176

The data processing results showed that the criterion with the highest weight was C3 honest and sincere to the good values of other religions, weighing 26.8%. The consistency ratio value is 0.039 < 0.10; thus, the respondent's Perception of the criteria is consistent. The sub-criteria priority weights for each criterion are shown in table 2 below.

Table 2. Priority weight of sub-criteria

Criteria	Sub Criteria	Priority weight	Consistency Ratio
C1. Respect for differences	Recognize the freedom of each religion / C1.1.	0.185	0.046
	recognize the heritage/truth of other religions / C1.2	0.190	
	Respect the spiritual values of each religion / C1.3	0.333	

Criteria	Sub Criteria	Priority weight	Consistency Ratio
	Respect for humanity and other creatures / C1.4	0.293	
C2. be open to differences	Learn from the positive values of other religions /C2.1.	0.253	0.008
	Cordially reception / C2.2	0.296	
	Promoting the way of forgiveness / C2.3	0.113	
	Be open and recognize differences / C2.4	0.337	
C3. honest and sincere to the good values of other religions	Recognize the sanctity and richness of other religions /C3.1.	0.192	0.009
	Interpersonal communication with other religions / C3.2	0.282	
	Emphasize aspects of similarities / C3.3	0.269	
	Be honest about the truth of other religions / C3.4	0.258	
C4. Interreligious cooperation	Promote salvation, peace, and non-violence /C4.1.	0.156	0.014
	Promoting the truth of the existence of God / C4.2	0.102	
	Mutual enrichment and support for the common good and welfare / C4.3	0.212	
	Not imposing will and beliefs on other religions / C4.4	0.219	
	Build cooperation to fight poverty, injustice, and social ills / C4.5	0.310	
C5. Be fair towards other religions.	Prioritizing commonality /C5.1.	0.146	0.041
	Promoting interfaith solidarity / C5.2	0.269	
	Respect for life and protection of nature / C5.3	0.208	
	Care for the lowly and forgotten / C5.4	0.377	

The most significant number of local weight of the sub-criteria C1 was C1.3 which respects the spiritual values of each religion by 33.3% and consistency ratio value $0.046 < 0.10$; thus - the respondent's Perception of the sub-criteria C1 respect for differences is consistent.

The most significant local weight of sub-criteria C2 was C2.4, with open and recognized differences as 33.7%, and the consistency ratio was $0.008 < 0.10$. The respondents' response was consistent. The most significant local weight of sub-criteria C3 is C3.2. interpersonal communication with other religions was 28.2%, and the consistency ratio was $0.009 < 0.10$. So, it was consistent.

The most significant local weight of the sub-criteria C4 was C4.5, which builds cooperation to fight poverty, injustice, and social ills, which was 31.0%, and the consistency ratio = $0.014 < 0.10$. So, the result was consistent. The most significant local weight of sub-

criteria C5 was C5.4, which built cooperation to fight poverty, injustice, and social ills as much as 37.7%, and the consistency ratio was $0.041 < 0.10$. So, the result was consistent.

Perception weighting using Fuzzy AHP

Fuzzy pairwise comparison matrix of criteria in Table 3.

Table 3. Fuzzy pairwise comparison of criteria

	C1			C2			C3			C4			C5
	L	M	U	L	M	U	L	M	U	L	M	U	M
C1	1.000, 1000, 1000			0.964, 1.321, 1.801			0.458, 0.562, 0.745			0.563, 0.721, 0.979			0.722, 0.988, 1.345
C2	0.555, 0.757, 1.038			1.000, 1.000, 1.000			0.510, 0.642, 0.885			0.470, 0.630, 0.917			0.606, 0.781, 1.047
C3	1.342, 1.780, 2.183			1.130, 1.558, 1.961			1.000, 1.000, 1.000			0.790, 1.016, 1.343			1.304, 1.723, 2.197
C4	1.022, 1.388, 1.777			1.091, 1.588, 2.130			0.745, 0.984, 1.266			1.000, 1.000, 1.000			0.872, 1.252, 1.655
C5	0.744, 1.012, 1.384			0.955, 1.281, 1.652			0.455, 0.580, 0.767			0.604, 0.799, 1.146			1.000, 1.000, 1.000

The geometric mean of the fuzzy comparison value of criterion *i* to each criterion, The results are below:

The researchers calculated the geometric mean of other criteria using the same way, and the results were:

Then, the weight of each criterion was as follows:

$1.121 + 0.975 + 1.661 + 1.513 + 1.150$, $1 / (0.880 + 0.751 + 1.372 + 1.221 + 0.903)$, $1 / (0.709 + 0.604 + 1.093 + 0.937 + 0.721)$) 0.110, 0.172, 0.276)

We got the weight of other criteria using the same way:

The defuzzification process uses the center area method to obtain the Best Nonfuzzy Performance (BNP) weight as follows:

The results were : The weight of other criteria was obtained using the same way:

The results are listed in table 4

Table 4. complete weight of the criteria

Criteria	Weight	
	Fuzzy	BNP and Normalized
Respect for differences / C1	(0.110, 0.172, 0.276)	0.174
Be open to differences / C2.	(0.094, 0.146, 0.240)	0.150
Honest and sincere to the good values of other religions / C3	(0.170, 0.268, 0.409)	0.263
Interreligious cooperation / C4	(0.146, 0.238, 0.372)	0.235
Be fair towards other religions / C5	(0.112, 0.176, 0.283)	0.178

The researchers got the weight of sub-criteria Tablein the same way as in table 5.

Table 5. The weight of the sub-criteria

Sub Criteria	Weight	
	Fuzzy	BNP and Normalized
Recognize the freedom of each religion /C1.1.	(0.127, 0.183, 0.269)	0.184
recognize the heritage/truth of other religions / C1.2	(0.128, 0.187, 0.277)	0.188
Respect the spiritual values of each religion / C1.3	(0.228, 0.336, 0.489)	0.334
Respect for humanity and other creatures / C1.4	(0.199, 0.294, 0.432)	0.294
Learn from the positive values of other religions /C2.1.	(0.177, 0.253, 0.363)	0.253

Sub Criteria	Weight	
	Fuzzy	BNP and Normalized
Cordially reception / C2.2	(0.208, 0.297, 0.424)	0.297
Promoting the way of forgiveness / C2.3	(0.081, 0.113, 0.167)	0.115
Be open and recognize differences / C2.4	(0.233, 0.338, 0.476)	0.334
Recognize the sanctity and richness of other religions /C3.1.	(0.131, 0.192, 0.281)	0.193
Interpersonal communication with other religions / C3.2	(0.200, 0.281, 0.396)	0.281
Emphasize aspects of similarities / C3.3	(0.193, 0.268, 0.373)	0.267
Be honest about the truth of other religions / C3.4	(0.180, 0.259, 0.369)	0.259
Promote salvation, peace, and non-violence /C4.1.	(0.110, 0.157, 0.228)	0.158
Promoting the truth of the existence of God / C4.2	(0.070, 0.100, 0.150)	0.102
Mutual enrichment and support for the common good and welfare / C4.3	(0.149, 0.214, 0.306)	0.213
Not imposing will and beliefs on other religions / C4.4	(0.150, 0.219, 0.320)	0.220
Build cooperation to fight poverty, injustice, and social ills / C4.5	(0.214, 0.310, 0.438)	0.307
Prioritizing commonality /C5.1.	(0.102, 0.143, 0.208)	0.145
Promoting interfaith solidarity / C5.2	(0.189, 0.267, 0.377)	0.266
Respect for life and protection of nature / C5.3	(0.149, 0.213, 0.307)	0.214
Care for the lowly and forgotten / C5.4	(0.262, 0.377, 0.532)	0.374

Compare result

The next step is to compare the results.

The comparison of the analysis results using AHP and fuzzy-AHP for the criteria weight is in Table 6 Figure e 2.

Table. 6. Comparison of AHP and fuzzy-AHP for the criteria

Criteria	Weight	
	AHP	F AHP
respect for differences / C1	0.172	0.174
Be open to differences / C2	0.147	0.150
honest and sincere to the good values of other religions / C3	0.268	0.263
interreligious cooperation / C4	0.238	0.235
Be fair towards other religions / C5	0.176	0.178

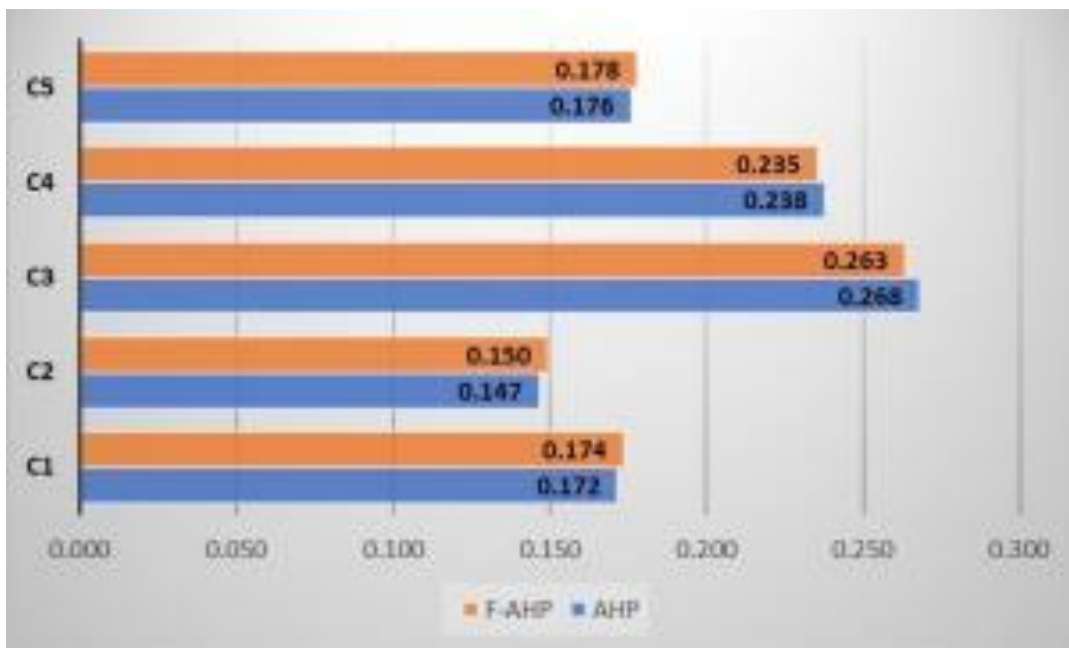


Figure 2. Comparison of AHP and Fuzzy AHP for the criteria

The results of the data analysis listed in the table and figure above show no difference in the results of data analysis using the AHP and Fuzzy AHP methods, both for the weight value of each criterion and the order/rank of the criteria.

The highest criterion weight is C3, honest and sincere to the good values of other religions, weighing 26.8% (AHP) and 26.3% (F-AHP). While the weight of the other criteria successively arranged from the largest is interreligious cooperation / C4 with a weight of 23.8% (AHP) and 23.5% (F-AHP), be fair towards other religions / C5 with a weight of 17.6% (AHP) and 17.8% (F-AHP), respect for differences / C1 with a weight of 17.2% (AHP) and 17.4% (F-AHP) and finally be open to differences / C2 with a weight of 14.7% (AHP) and 15.0% (F-AHP).

The following table and figure list a comparison of the analysis results using the AHP and Fuzzy AHP methods for each sub-criteria.

Table 7. Comparison results of the criteria C1 between AHP and fuzzy-AHP

Criteria	Weight	
	AHP	F AHP
recognize the freedom of each religion / C1.1	0.185	0.184
recognize the heritage/truth of other religions / C1.2	0.190	0.188
respect the spiritual values of each religion / C1.3	0.333	0.334
respect for humanity and other creatures / C1.4	0.293	0.294

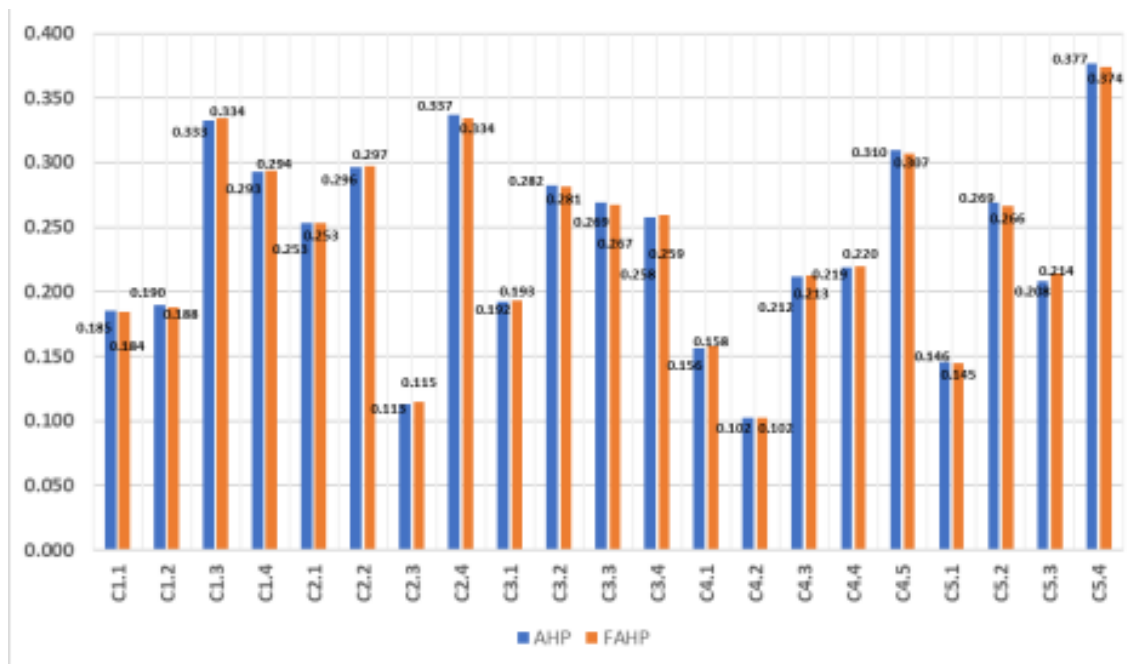


Figure 3. Comparison results of the criteria C1 between AHP and fuzzy-AHP

Table 8. Comparison results of the criteria C2 between AHP and fuzzy-AHP

Criteria	Weight	
	AHP	F AHP
Learn from the positive values of other religions / C2.1	0.253	0.253
Cordially reception / C2.2	0.296	0.297
Promoting the way of forgiveness / C2.3	0.113	0.115
be open and recognize differences / C2.4	0.337	0.334

Table 9. Comparison results of the criteria C3 between AHP and fuzzy-AHP

Criteria	Weight	
	AHP	F AHP
Recognize the sanctity and richness of other religions / C3.1	0.192	0.193
Interpersonal communication with other religions / C3.2	0.282	0.281
Emphasize aspects of similarities / C3.3	0.269	0.267
Be honest about the truth of other religions / C3.4	0.258	0.259

Table 10. Comparison results of the criteria C4 between AHP and fuzzy-AHP

Criteria	Weight	
	AHP	F AHP
Promote salvation, peace, and non-violence / C4.1	0.156	0.158
Promoting the truth of the existence of God / C4.2	0.102	0.102
Mutual enrichment and support for the common good and welfare / C4.3	0.212	0.213
Not imposing will and beliefs on other religions / C4.4	0.219	0.220

Build cooperation to fight poverty, injustice, and social ills / C4.5	0.310	0.307
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Table 11. Comparison results of the criteria C5 between AHP and fuzzy-AHP

Criteria	Weight	
	AHP	F AHP
Prioritizing commonality / C5.1	0.146	0.145
Promoting interfaith solidarity / C5.2	0.269	0.266
Respect for life and protection of nature / C5.3	0.208	0.214
Care for the lowly and forgotten / C5.4	0.377	0.374

The Global weight

Calculation results of the global weight in Table 12. This table shows the highest value of all factors calculated as well as determining the priority factors for this research

Table 12. Global weight

Criteria/SubCriteria	LocalWeight		GlobalWeight	
	AHP	F-AHP	AHP	F-AHP
respect for differences / C1			0.172	0.174
Be open to differences / C2.			0.147	0.150
honest and sincere to the good values of other religions / C3			0.268	0.263
interreligious cooperation / C4			0.238	0.235
Be fair towards other religions / C5			0.176	0.178
		SUM	1.000	1.000
Sub-Criteria C1				
recognize the freedom of each religion / C1.1	0.185	0.184	0.032	0.032
recognize the heritage/truth of other religions / C1.2	0.190	0.188	0.033	0.033
respect the spiritual values of each religion / C1.3	0.333	0.334	0.057	0.058
respect for humanity and other creatures / C1.4	0.293	0.294	0.050	0.051
	SUM	1.000	1.000	0.172
Sub-Criteria C2				
Learn from the positive values of other religions / C2.1	0.253	0.253	0.037	0.038
Cordially reception / C2.2	0.296	0.297	0.043	0.044
Promoting the way of forgiveness / C2.3	0.113	0.115	0.017	0.017
be open and recognize differences / C2.4	0.337	0.334	0.049	0.050
	SUM	1.000	1.000	0.147
Sub-Criteria C3				
Recognize the sanctity and richness of other religions / C3.1	0.192	0.193	0.051	0.051
Interpersonal communication with other religions / C3.2	0.282	0.281	0.075	0.074
Emphasize aspects of similarities / C3.3	0.269	0.267	0.072	0.070
Be honest about the truth of other religions / C3.4	0.258	0.259	0.069	0.068
	SUM	1.000	1.000	0.268
Sub-Criteria C4				
Promote salvation, peace, and non-violence / C4.1	0.156	0.158	0.037	0.037
Promoting the truth of the existence of God / C4.2	0.102	0.102	0.024	0.024

Criteria/SubCriteria	LocalWeight		GlobalWeight	
	AHP	F-AHP	AHP	F-AHP
Mutual enrichment and support for the common good and welfare / C4.3	0.212	0.213	0.050	0.050
Not imposing will and beliefs on other religions / C4.4	0.219	0.220	0.052	0.052
Build cooperation to fight poverty, injustice, and social ills / C4.5	0.310	0.307	0.074	0.072
SUM	1.000	1.000	0.238	0.235
Sub-Criteria C5				
Prioritizing commonality / C5.1	0.146	0.145	0.026	0.026
Promoting interfaith solidarity / C5.2	0.269	0.266	0.047	0.047
Respect for life and protection of nature / C5.3	0.208	0.214	0.037	0.038
Care for the lowly and forgotten / C5.4	0.377	0.374	0.066	0.067
SUM	1.000	1.000	0.176	0.178

Sensitivity Analysis

Sensitivity analysis aims to determine how robust the decisions taken by respondents are. The method compares the global weight of the sub-criteria after the global weight of the criteria has changed to various values. The original results show that the most considerable sub-criterion weight is the Interpersonal communication with other religions C3.2 sub-criterion of 7.5%. Sensitivity analysis is listed in Table 13.

Table 13. Sensitivity analysis

Criteria/SubCriteria	Global Weight		
	Original	Scenario 1	Scenario 2
respect for differences / C1	0.172	0.200	0.172
Be open to differences / C2	0.147	0.200	0.147
honest and sincere to the good values of other religions / C3	0.268	0.200	0.248
interreligious cooperation / C4	0.238	0.200	0.257
Be fair towards other religions / C5	0.176	0.200	0.176
recognize the freedom of each religion / C1.1	0.032	0.037	0.032
recognize the heritage/truth of other religions / C1.2	0.033	0.038	0.033
respect the spiritual values of each religion / C1.3	0.057	0.067	0.057
respect for humanity and other creatures / C1.4	0.050	0.059	0.050
Learn from the positive values of other religions / C2.1	0.037	0.051	0.037
Cordially reception / C2.2	0.043	0.059	0.044
Promoting the way of forgiveness / C2.3	0.017	0.023	0.017
be open and recognize differences / C2.4	0.049	0.067	0.050
Recognize the sanctity and richness of other religions / C3.1	0.051	0.038	0.048
Interpersonal communication with other religions / C3.2	0.075	0.056	0.070
Emphasize aspects of similarities / C3.3	0.072	0.054	0.067
Be honest about the truth of other religions / C3.4	0.069	0.052	0.064
Promote salvation, peace, and non-violence / C4.1	0.037	0.031	0.040
Promoting the truth of the existence of God / C4.2	0.024	0.020	0.026

Criteria/SubCriteria	Global Weight		
	Original	Scenario 1	Scenario 2
Mutual enrichment and support for the common good and welfare / C4.3	0.050	0.042	0.054
Not imposing will and beliefs on other religions / C4.4	0.052	0.044	0.056
Build cooperation to fight poverty, injustice, and social ills / C4.5	0.074	0.062	0.080
Prioritizing commonality / C5.1	0.026	0.029	0.026
Promoting interfaith solidarity / C5.2	0.047	0.054	0.047
Respect for life and protection of nature / C5.3	0.037	0.042	0.037
Care for the lowly and forgotten / C5.4	0.066	0.075	0.066

In scenario 1, the five criteria weights equal 20% each. The weight of the most considerable sub-criterion changes to the Care for the lowly and forgotten / C5.4 sub-criterion of 7.5%.

In scenario 2, the weights of the two most significant criteria in the original result are exchanged by reducing the weight of the most significant criteria honest and sincere to the good values of other religions / C3 by 2% and adding the weight of the second largest criterion of interreligious cooperation / C4 by 2%. As a result, the weight of the largest sub-criteria changed to Build cooperation to fight poverty, injustice, and social ills / C4.5 at 8.0%. The sensitivity analysis results showed that small changes in the weight of the criteria changed the global weight of the sub-criteria. Thus, we say that the decisions taken by the respondents were not robust.

Discussion

The analysis results show that being honest and sincere to the good values of other religions, with a weight of 26.8% (AHP), is the highest criterion. At the same time, interpersonal communication with other religions has the highest global weight. This result aligns with Pope Francis' recommendations in the declaration on the Human Fraternity for world peace and living together (Document on Human Fraternity For World Peace and Living Together. Apostolic Journey Of His Holiness Pope Francis To The United Arab Emirates (3-5 February 2019), 2019). In this document, the Pope emphasized that belief in God encourages fellow humans to respect each other, protecting creation on this earth. This collaboration carried out with personal communication, which the Pope demonstrated with the Grand Imam Ahmed el-Tayeb of al-Azhar in Abu Dhabi on February 4, 2019. Sihombing et al. added that modern society appreciates pluralism and inclusivism, so relations and communication between human beings and religions have become very important (Sihombing et al., 2020). This is very much in line with the Pope's affirmation in *Nostra Aetate*.

Respect for others is closely related to the Catholic concept of humans as *imago dei*, and communication between humans is essential (Sigrid Müller, 2020).

Conclusion

Religious differences are essential to religious moderation in Indonesia, especially in North Sulawesi. This study aims to determine priorities for developing religious moderation, making it easier for policymakers to develop programs to increase religious harmon. We can implement some concrete programs that include proposing to every religious teacher from elementary, middle, and tertiary schools to include discussion topics about building good communication among students of different religions. Motivate every student to acknowledge other people's different religions honestly. Encourage the Religious Communication Forum to hold regular meetings among religious leaders to build sincere communication and acknowledge existing religious differences.

The researchers used the AHP and fuzzy-AHP methods to determine strategic priority. The AHP and fuzzy-AHP methods are appropriate for determining priority factors for multiple complex problems.

This research shows that honesty and sincerity to the good values of other religions are priority criteria. The results of the global weight calculation show that interpersonal communication with other regions is the main factor for the attention of religious leaders.

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APPENDIX

The questionnaire

MODERASI BERAGAMA DI PROVINSI SULAWESI UTARA

Seminari Pineleng, Sekolah Tinggi Pastoral Don Bosco Tomohon, Unika De La Salle

Respondent yang kami hormati.

Dalam rangka meningkatkan pemahaman tentang moderasi beragama di Sulawesi Utara, Team Peneliti dari Seminari Pineleng, STIPAS Tomohon dan De La Salle Manado akan membuat kajian akademik untuk menentukan faktor-faktor dominan moderasi beragama seperti yang dialami dan dipahami oleh tokoh-tokoh agama Katolik.

Para peneliti telah mengidentifikasi 5 (lima) kriteria untuk moderasi beragama yaitu: hormat, terbuka, jujur, kerja sama dan adil. Masing-masing kriteria memiliki 4 sub-kriteria.

Untuk maksud tersebut, kami mohon bantuan bapak/ibu para responden untuk meluangkan waktu mengisi kuesioner online di bawah ini.

Mohon perhatiannya untuk membaca petunjuk pengisiannya. Terima kasih

Petunjuk Pengisian.

1. Kuesioner ini berbentuk PERBANDINGAN BERPASANGAN. Anda diminta untuk memilih dengan menekan salah satu lingkaran yang tersedia (A atau B)
2. Sesudah itu anda HARUS menentukan bobot nilai dari pilihan yang telah anda pilih sebelumnya dengan menekan lingkaran di bawah angka yang tersedia. Pilih satu diantara 1 - 9

Salam dan hormat
Tim Peneliti

Contoh Pernyataan 1 :

Manakah motivasi yang mendorong anda untuk berbisnis

- a. Motivasi Ekonomi | b. Motivasi Sosial

Berapa bobot nilai yang anda tentukan atas pilihan di atas :

Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting
--------------	---	---	---	---	---	---	---	---	---	-----------------------

Keterangan atas jawaban: misalnya anda memilih A dan bobot yang anda berikan adalah 3. Itu berarti bahwa A adalah sedikit lebih penting dari pada B (lihat keterangan bobot nilai di bagian petunjuk pengisian)

MOHON DIPERHATIKAN: Sangat jarang terdapat bobot yang sangat mutlak. Berarti bobot 7 atau 9 adalah sangat jarang dipilih. Menurut pengalaman peneliti, bobot pilihan biasanya berkisar antara 1 sampai 5 (paling tinggi). Yang banyak dipilih adalah bobot 1

Contoh Pertanyaan 2 : Faktor apakah yang berpengaruh kuat dalam diri anda untuk berwirausaha?

- a. Faktor psikologis | b. Faktor keagamaan atau spiritualitas

Berapa bobot nilai yang anda tentukan atas pilihan di atas :

Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting
--------------	---	---	---	---	---	---	---	---	---	-----------------------

Keterangan atas jawaban: Misalnya anda memilih B dan bobot nilainya 2 Itu berarti bahwa B hampir sama dengan A, hanya berbeda sangat sedikit. Seandainya bobot yang dipilih adalah 1, itu berarti bahwa nilai A dan B adalah sama.

INGAT ! INI ADALAH PERBANDINGAN BERPASANGAN

PERTANYAAN TERKAIT : HUBUNGAN ANTAR KRITERIA

1. Manakah yang harus diutamakan dalam moderasi beragama di Sulut										
A. Hormat pada perbedaan yang ada					B. Terbuka terhadap perbedaan yang ada					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

2. Manakah yang harus diperhatikan dalam moderasi beragama di Sulut?										
A. Hormat pada perbedaan yang ada					B. Jujur dan tulus terhadap nilai baik agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

3. Manakah yang harus diperhatikan dalam kegiatan moderasi beragama di Sulut										
A. Hormat pada perbedaan yang ada					B. Menjalin kerja sama					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

4. Manakah yang harus diperhatikan dalam moderasi beragama di Sulut?										
A. Hormat pada perbedaan yang ada					B. Mengedepankan keadilan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

5. Manakah yang harus diperhatikan dalam moderasi beragama di Sulut?										
A. Terbuka pada perbedaan yang ada					B. Jujur dan tulus pada nilai baik agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

6. Manakah yang harus diperhatikan dalam moderasi beragama di Sulut											
A. Terbuka pada perbedaan yang ada					B. Kerja sama antar umat beragama						
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting	

7. Manakah yang harus diperhatikan pada moderasi beragama di Sulut											
A. Hormat pada perbedaan yang ada					B. Bersikap adil terhadap agama lain						
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting	

8. Manakah yang harus diperhatikan pada moderasi beragama di Sulut											
A. Jujur dan tulus pada nilai baik agama lain					B. Kerja sama dengan agama lain						
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting	

9. Apakah unsur penting dalam moderasi beragama di Sulut?											
A. Jujur dan tulus pada nilai baik agama lain					B. Bersikap adil pada agama lain						
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting	

10. Manakah unsur penting dalam moderasi umat beragama di Sulut?											
A. Kerja sama dengan agama lain					B. Bersikap adil pada agama lain						
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting	

PERNYATAAN TENTANG : HUBUNGAN ANTAR SUB-KRITERIA

11. Terkait dengan hormat pada agama lain, manakah yang menurut anda harus diutamakan?											
A. Mengakui kebebasan masing-masing agama					B. Mengakui warisan dan kebenaran agama lain						
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting	

12. Masih terkait dengan hormat pada agama lain, manakah yang penting harus diperhatikan										
A. Mengakui kebebasan masing-masing agama					B. Menghormati nilai-nilai spiritual masing-masing agama					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

13. Masih terkait dengan hormat pada agama-agama lain, manakah yang menurut anda harus diutamakan?										
A. Mengakui kebebasan masing-masing agama					B. Hormat pada kemanusiaan dan makhluk ciptaan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

14. Masih terkait hormat pada agama-agama lain, manakah yang menurut anda harus dikedepankan?										
A. Mengakui warisan dan kebenaran agama lain					B. Menghormati nilai-nilai spiritualnya					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

15. Masih terkait hormat pada agama-agama lain, manakah menurut anda harus diutamakan?										
A. Mengakui warisan dan kebenaran agama lain					B. Hormat pada kemanusiaan dan makhluk ciptaan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

16. Masih terkait hormat pada agama-agama lain, manakah menurut anda penting?										
A. Menghormati nilai-nilai spiritualnya					B. Hormat pada kemanusiaan dan makhluk ciptaan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

17. Sekarang terkait dengan terbuka pada perbedaan yang ada, manakah yang menurut anda penting diperhatikan?										
A. Belajar dari nilai-nilai positif agama lain					B. Menerima orang beragama lain dengan hati terbuka					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

18. Masih terkait dengan terbuka pada agama lain, manakah yang menurut anda penting?										
A. Belajar dari nilai-nilai positif agama lain					B. Mempromosikan jalan pengampunan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

19. Masih terkait terbuka pada agama lain, manakah menurut anda lebih penting?										
A. Belajar dari nilai-nilai positif agama lain					B. Terbuka dan mengakui perbedaan yang ada					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

20. Masih dalam kaitannya dengan terbuka pada agama lain, manakah yang menurut anda lebih penting?										
A. Menerima orang beragama lain dengan hati terbuka					B. Mempromosikan jalan pengampunan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

21. Masih tentang terbuka pada agama lain, manakah yang menurut anda harus didahulukan?										
A. Menerima orang lain dengan hati terbuka					B. Terbuka dan mengakui perbedaan yang ada					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

22. Masih tentang terbuka pada agama lain, manakah yang harus dikedepankan?										
A. Mempromosikan jalan pengampunan					B. Terbuka dan mengakui perbedaan yang ada					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

23. Terkait dengan ketulusan dan kejujuran terhadap orang beragama lain, manakah menurut anda harus diutamakan?										
A. Mengakui kesucian dan kekayaan agama lain					B. Menjalin komunikasi interpersonal dengan agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

24. Masih terkait ketulusan dan kejujuran terhadap agama lain, manakah menurut anda harus dikedepankan?										
A. Mengakui kesucian dan kekayaan agama lain					B. Menekankan aspek persamaan yang ada bukan perbedaan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

24. Masih terkait ketulusan dan kejujuran terhadap agama lain, manakah menurut anda harus dikedepankan?										
A. Mengakui kesucian dan kekayaan agama lain					B. Menekankan aspek persamaan yang ada bukan perbedaan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

25. Terkait kejujuran dan ketulusan terhadap agama lain, manakah menurut anda penting diutamakan?										
A. Mengakui kesucian dan kekayaan agama lain					B. Bersikap jujur terhadap kebenaran agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

26. Masih terkait kejujuran dan ketulusan terhadap agama lain, manakah yang menurut anda harus diutamakan?										
A. Menjalin komunikasi interpersonal dengan agama lain					B. Lebih menekankan aspek persamaan dari pada perbedaan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

27. Masih terkait dengan kejujuran dan ketulusan, manakah menurut anda penting?										
A. Menjalin komunikasi interpersonal dengan agama lain					B. Bersikap jujur terhadap kebenaran agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

28. Masih tentang kejujuran dan ketulusan pada agama lain, manakah menurut anda lebih penting?										
A. Mengedepankan aspek persamaan dari pada perbedaan					B. Bersikap jujur pada kebenaran agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

30. Masih terkait kerja sama dengan agama lain, manakah menurut anda lebih penting?										
A. Mempromosikan keselamatan, kedamaian dan anti kekerasan					B. Saling memperkaya dan mendukung untuk kesejahteraan dan kebaikan umum					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

31. Masih terkait dengan kerja sama dengan agama lain, manakah menurut anda lebih penting?										
A. Mempromosikan keselamatan, kedamaian dan anti kekerasan					B. Tidak memaksakan kehendak pada agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

32. Masih terkait kerja sama dengan agama lain, manakah menurut anda lebih penting?										
A. Mempromosikan keselamatan, kedamaian dan anti kekerasan					B. Membangun kerja sama untuk memerangi kemiskinan, ketidakadilan dan penyakit sosial					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

33. Masih terkait kerja sama dengan agama lain, manakah menurut anda harus diutamakan?										
A. Mempromosikan kebenaran akan adanya Tuhan					B. Saling memperkaya demi kesejahteraan dan kebaikan umum					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

34. Masih terkait kerja sama dengan agama lain, manakah menurut anda lebih penting?										
A. Mempromosikan kebenaran akan adanya Tuhan					B. Tidak memaksakan kehendak dan keyakinan pada agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

35. Masih tentang kerja sama dengan agama lain, manakah menurut anda lebih penting?										
A. Mempromosikan kebenaran akan adanya Tuhan					B. Membangun kerja sama dengan agama lain untuk memberantas kemiskinan, ketidakadilan dan penyakit sosial					

Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting
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36. Masih tentang kerja sama dengan agama lain, manakah menurut anda lebih penting?										
A. Saling memperkaya untuk kesejahteraan dan kebaikan umum					B. Tidak memaksakan kehendak dan keyakinan pada agama lain					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

37. Masih terkait kerja sama dengan agama lain, manakah menurut anda lebih penting?										
A. Saling memperkaya untuk kesejahteraan dan kebaikan umum					B. Membangun kerja sama untuk mengatasi kemiskinan, ketidakadilan dan penyakit sosial					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

38. Masih tentang kerja sama dengan agama lain, manakah menurut anda harus dikedepankan?										
A. Tidak memaksakan kehendak dan keyakinan pada agama lain					B. Membangun kerja sama untuk memerangi kemiskinan, ketidakadilan dan penyakit sosial					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

38. Masih tentang kerja sama dengan agama lain, manakah menurut anda harus dikedepankan?										
A. Tidak memaksakan kehendak dan keyakinan pada agama lain					B. Membangun kerja sama untuk memerangi kemiskinan, ketidakadilan dan penyakit sosial					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

39. Terkait dengan keadilan, manakah menurut anda harus diutamakan?										
A. Mengutamakan kesamaan (egaliter)					B. Mendorong solidaritas antar umat beragama					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

40. Masih terkait dengan keadilan, manakah menurut anda harus diutamakan?										
A. Mengutamakan kesamaan (egaliter)					B. Meningkatkan hormat pada makhluk hidup dan lingkungan					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

41. Masih terkait dengan keadilan, manakah menurut anda yang lebih penting?										
A. Mengedepankan kesetaraan (egaliter)					B. Kepedulian pada yang hina dan terlupakan (the lost the last the least)					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

42. Masih terkait keadilan, manakah menurut anda harus diutamakan?										
A. Meningkatkan solidaritas antar umat beragama					B. Hormat pada makhluk hidup dan perlindungan alam					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

43. Masih terkait dengan keadilan, manakah menurut anda harus diutamakan?										
A. Meningkatkan solidaritas antar umat beragama					B. Meningkatkan perhatian pada yang terbuang dan terpinggirkan (the last, the lost, the least)					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

44. Masih terkait dengan keadilan, manakah menurut anda harus diutamakan?										
A. Meningkatkan penghormatan pada makhluk hidup dan perlindungan alam					B. Meningkatkan kepedulian pada yang terbuang dan terpinggirkan (the last, the lost, the least)					
Sama Penting	1	2	3	4	5	6	7	8	9	Mutlak Sangat Penting

URBAN SPACES COMMODIFICATION AND YOUTH MOVEMENTS: SEEING FROM THE PERSPECTIVE OF GRASSROOT COMMUNITY IN YOGYAKARTA

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Abstract

This paper aims to discuss rich experiences of urban youth movements in seeing the phenomenon of urban spaces commodification and giving their responses towards it. Within current massive development, there is a certain process of how urban spaces are commodified as capital. The so-called ‘urban spaces commodification’ can be seen from various city-scapes changes, spanning from the development of public and private infrastructures to the abandonment of shrinking public and green areas. As a result, there are some precarious impacts felt by urban dwellers, for example the scarcity of clean water. It is considered crucial to re-strengthen the voice of urban civil society to oversee urban development before the threat of the commodification of urban spaces. It is especially important to highlight creative actions made by urban youth to respond to such issues. Regardless of general stigma judging youth as an apathetic generation, in fact they make such a distinct contribution. Based on what they are doing, it can be stated that urban youth are now practicing ‘right to the city’. To discuss the issue more specifically, this paper attempts to tackle a particular case in Yogyakarta during the last decade. Standing within the qualitative approach, this paper takes some stories from local youth movements in Yogyakarta in giving their creative responses to the issue of urban spaces commodification. It is interesting to take Yogyakarta as a case study since the urban social movements in Yogyakarta can be considered as the trailblazers for other urban social movements in surrounding cities.

Keywords: urban spaces commodification; urban youth movements; grassroots community, social resilience; Yogyakarta.

Introduction

In the Tugu Train Station or Jogja Central Railway Station, at 3 o’clock in the morning in the early of September 2023, one of us (one of the authors) got off a train from Jakarta. It has been a while since he took a train from Jakarta to go to Yogyakarta (thereafter we will use the name ‘Jogja’). Jogja in his memory is a local city with its slow-paced everyday life, much affected by local tradition.

The moment when he stepped outside of the arrival hall of the station, he was very much surprised by the view of the ‘welcoming’ hotels right in front of his eyes, which is in contrast with the image of Jogja that he always had in his mind. The ‘view’ of relatively new hotels, standing side by side closely, as also can be seen in Picture 1, suddenly gave a kind of mixed feelings inside his heart. A little bit weird, he realized.

On the one hand, when he imagined himself as a tourist, he felt comfortable, since he could easily find a cozy and pleasant hotel where he could stay during his holiday. There were many options that he could choose. Yet, on the other hand, the feeling immediately

changed, when he tried to imagine himself as a part of the local community, those who were born in Jogja, grew up also in Jogja, but then worked in other cities.

The changes of the city scapes were just real. In the case of hotels in Jogja, besides the benefits that the hotels were bringing, the rapid and massive emergence of hotels, at least in the last decade, was also bringing several unacceptable impacts, not only to the local people, but also to the local natural surroundings.



Picture 1. Abadi Hotel Malioboro, Jogja, one of many hotels located in front of the Tugu Train Station (by authors, on September 5th, 2023).

Discussing the aforementioned moment directs us, the authors, to deeply ponder on the current situation of Jogja? What is exactly happening in Jogja presently, particularly regarding the context of urban development (*pembangunan kota*)? What should be criticized, what can be learnt, and what should we do?

A number of previous studies have already explained the issue of the bad impacts that urban development in Jogja was giving. They mainly talked on the issue of environmental problems, such as air pollution, water shortage, as well as the shrinking green spaces (Manifesty, 2019; Parker, 2018; Suharko, 2020; WALHI, 2022). Or other studies attempt to highlight the response of the local community from their various backgrounds to such an issue (Ahmada and Susetiawan, 2021; British Council, 2021; Lee, 2015; Sugiyono and Rebecca, 2023).

We argue that this cycle of studies is telling us about the *post-moment*, in regard to the effect and the response of such an urban social phenomenon. Whereas it is also crucial to boldly raise the issue of the *present-moment*, regarding the *what* as the beginning and the *how* as the process of the current phenomenon. Therefore, this paper attempts to explain and elaborate further the *what* and *how* of the urban development in Jogja during the last decade, particularly from the framework of capitalism within the city and from the perspective or eyes of the grassroot communities. A reciprocal analysis on the issue of the response of the local community will be given at the last part of the results and discussion, drawing on a case study of local youth.

We know that city development is an inevitable as well as omnipresent phenomenon that is currently happening in all over parts of Indonesia, spreading from the western to the eastern region. Within this rapid and massive development, some scholars argued that there is a certain process of how urban spaces are commodified as capital, especially by and for certain economic as well as political elites (Alam, 2021).

The so-called ‘urban spaces commodification’ can be seen from various changes in the city, for instance the emergence of private infrastructures, such as new hotels, apartments, and supermalls built, not only in the center but also in the fringes of the city, without considering further the influence on the surrounding natural environment. As a result, there

are some precarious impacts felt by urban dwellers, for example the lack of public and green spaces in the cities and the scarcity of clean water for urban dwellers.

It can be argued that one of the factors that mainly forms the commodification process of urban spaces can be indicated from the unbalanced relation among the inter-related parties, which are the state, the capital, and civil society. At a certain point, the capital always tries to do their best to multiply the profit that they could have, including through the ownership, transformation, and dominance of urban spaces. The capital strives to approach the state and influence their decisions in regard to the making of related public policies. We can easily see the reality of this argument, for instance, from the phenomenon of corruption among the civil officers or public policy makers as the representation of the state. One of the examples is the recent corruption case, committed by the ex-Mayor of Jogja in 2022 regarding the selling of the permits for new hotels and apartments in Jogja (Sugiyono and Rebecca, 2023).

Therefore, we can also assert that the city management does not seem to demonstrate the good purpose (*bonum commune*) for the life of urban dwellers anymore, but only to certain groups of people or elites who desire to increase their own capital or assets. Whereas human beings are only part of nature, and they cannot commodify nature easily without considering the sustainability of nature in the future (Moore, 2016).

Within the relation among the prior mentioned related parties—the state, the capital, and civil society—it can be said that civil society, with its various forms of social communities and actions, is usually positioned as a passive party in the scheme of city management. Thus, it is considered crucial to re-strengthen the voice of the urban civil society to oversee, scrutiny, as well as criticize the public policies before the threat of the commodification of urban spaces. It is especially important to highlight the active, creative, and critical actions made by urban youth to respond to such issues.

Regardless of the general stigma that judges youth as an apathetic generation, in fact they have such a distinct contribution for the better life of the society. Based on what they are doing, it can be stated that urban youth are now practicing what we call ‘the right to the city’, as firstly proposed and elaborated by a French sociologist, Henri Lefebvre (Butler, 2012; Marcuse, 2009; Mitchell, 2003).

Methodology

The research presented in this paper mainly employed a qualitative approach by using literature reviews and complemented by some stories heard from selected key informants (Bryman, 2012).

As a case study, this paper selects Jogja and particularly would like to portray urban development in Jogja from the perspective of impacted local youth as a part of grassroots communities. Why should it be Jogja? We argue that at least there are three main reasons why Jogja, including its impacted local youth’s movements, is an important case when we are discussing the issue of urban development in Indonesia.

First, Jogja can be considered typically as a medium-sized city which has been experiencing, what we assume, ‘over-development’ at least during the last decade. Thus, unlike other previous studies which tend to take case studies of metropolitan cities in Indonesia, especially in Java, such as Jakarta, Semarang, or Surabaya (Lee, 2011; Sugiyono and Dwianto, 2021; Simone, 2014), this paper would like to present some possible novelties rather from the perspective of a ‘middle-sized’ city.

Second, on the issue of urban youth in Jogja, young people in Jogja had been nation-wide known as youth who had a good sense of humor, sometimes even humor that only be able to be understood by those who dwelled in the city long enough to be familiar with the way Jogja’s young people telling jokes. Somehow this shows the creativity of young people of Jogja.

Jogja is also well-known as a city where locals had lived their everyday life in a much slower pace, compared to other cities of Indonesia. Therefore, local youth in Jogja have certain lens in seeing the complex reality, in this context mainly related to the issue of rapid

urban development, and they also have their distinct, critical, as well as creative responses in reacting towards it.

Third, this paper would likely take the perspective of the ‘impacted local community’ since unlike other civil societies, such as non-governmental organizations (NGOs) and academia which tend to see the reality from ‘outside’, the ‘impacted local community’ likely experience it by themselves from ‘inside’.

Highlighting particularly on the issue of local youth responses, Jogja is famously recognized as having various kinds of creative and critical movements. One of the interesting stories is coming from an ‘organic’ movement namely ‘Warga Berdaya’ (The Empowered People). Moreover, it is interesting as well as important to take Jogja as a case study and ‘social laboratory’ since, to some extent, the urban social movements in Jogja can be considered as the trailblazers or pioneers for the other urban social movements in other surrounding cities, for example in the case of the advocacy for the people who are affected by the land conflict in Wadas, Purworejo, Central Java.

Conceptual Frameworks

Accumulation by dispossession

In seeing the rise of capitalism in cities, David Harvey, a British geographer, asserts his famous concept, which is ‘accumulation by dispossession’. What does this concept mean? It means that “within the massive urban development currently happening, there are certain continuation and proliferation of accumulation practices. These include the commodification and privatization of land and the forceful expulsion of peasant populations, conversion of various forms of property rights into exclusive private property rights” (Harvey, 2005). There is, in other words, “a continuous land grabbing in cities in terms of the creation, expansion, and reproduction of capitalist social relations, of accumulation by extra-economic means, and of dispossessory responses to capitalist crises” (Hall, 2013).

Meanwhile, drawing on an empirical case in Lofoten Islands in Norway, Fitchett et al (2021) elaborate Harvey’s concept into ‘accumulation by symbolic dispossession’. Their research argues that “the efforts to open new markets and opportunities in capital has re-structured the symbolic capital and afterwards transformed the spaces, particularly Lofoten Islands, in four various and distinct ways through the mechanism of accumulation logic. Those four ways include (1) defining territory, (2) commodification of time and space, (3) legitimacy and authorization, and (4) symbolic power and resistance.”

Right to the city

As a reflection on the issue of active participation of urban dwellers within the balanced urban development, Henri Lefebvre, a French sociologist, writes a book originally entitled *Le Droit à la Ville* (1968), and afterwards translated to English as *The Right to the City* (1996).

According to him, the right to the city does not only mean that urban dwellers have a right to live, use, and enjoy the spaces in cities, but also, more than that, they have a right to be able to actively participate in determining how urban spaces are managed and used (Butler, 2012; Marcuse, 2009; Mitchell, 2003). At a certain point, cities are thus becoming arenas where various inter-related parties are conflicting against one another since they have their own interest. Unfortunately, ‘the *minuto popolo*’ or ‘small people’ are usually having a weaker position than those who are considered as ‘the *popolo grasso*’ or ‘fat people’ (Sugiyono, 2022).

The right to the city, in other words, therefore simply means that urban dwellers, particularly that of ‘the *minuto popolo*’, have a right to express themselves in various creative ways to fight for the better management of the city, for example by doing social demonstrations against new hotels, apartments, or supermalls development which ignore the important aspect of surrounding natural living environment, delivering their critiques and protests by using the medium of arts (or in a theatrical way), as well as organizing

routine discussions to talk over the issues of the urban spaces commodification happening in the cities where they live.

Results and Discussion

The changes of urban landscapes in Jogja in the last decade

Under the firm banners of the massive promotion of tourism in Jogja, such as ‘Jogja Istimewa’, ‘Jogja Keren’, or ‘The City of Creative’, we argue that Jogja has been experiencing what we assume as an urban spaces commodification. But first, what does urban spaces commodification mean? It is neither a sophisticated nor complex concept. On the contrary, it is just a simple and tangible one.

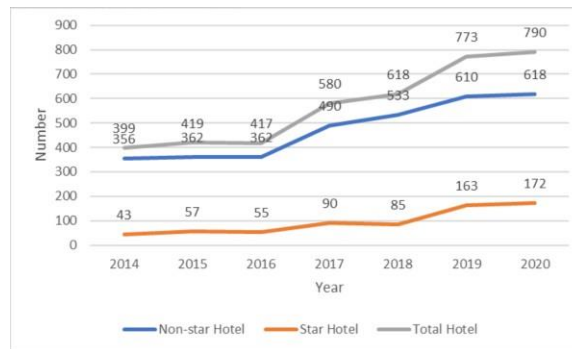
Urban spaces commodification refers to a social process in which urban spaces are being commodified continuously as capitals. As a result, only several political and/or economic elites gain certain benefits of such a commodification. This commodification can be seen accordingly through the changes of urban landscapes over time. For instance, we can see it through the development of public infrastructures, private buildings such as hotels, apartments, and factories, the demolition of cultural heritages, the abandonment of public spaces, and/or the shrinking green areas.

Regarding the development of public infrastructures, in Jogja, for instance, we know that there are some strategic priorities of project happening currently, such as Yogyakarta International Airport (YIA) in Kulon Progo, Yogyakarta Outer Ring Road, Jalur Jalan Lintas Selatan, and Tanjung Adikarto Port. Picture 2 especially shows us the inauguration of the new international airport in Jogja, namely Yogyakarta International Airport (YIA), by the Indonesian President Joko Widodo (Jokowi). This new airport will replace the old one, the Adi Sucipto airport, even though some flights are still using the latter as their departure and arrival airport.



Picture 2. The inauguration of the new Yogyakarta International Airport in Kulon Progo by President Jokowi (source: presidenri.go.id).

Meanwhile, from the phenomenon of hotel development, according to the data from Data Investasi Kota Jogja (2014-2018) and Badan Perencanaan Pembangunan Daerah, Bappeda, (2019-2020), as also can be seen in Picture 3, there is a kind of significant increasing of numbers, for instance in 2017 and 2019 during the period of 2014 to 2020. The total number of hotels in 2017 reached 580, from 417 hotels in 2016. Meanwhile, in 2019, there are all 773 hotels from 618 hotels in the previous year.



Picture 3. The number of hotels in Jogja during 2014-2020, according to data from Data Investasi Kota Jogja (2014-2018) and Bappeda (2019-2020) (reproduced by authors).

Unfortunately, the massive construction of these new hotels was considered bringing some hazardous impacts to the local communities. For instance, in 2014 the people in the Miliran village reported that for the first time in their life they experienced water shortage within their communities. All wells in this community ran dry. This happened because of the emergence of some new hotels around their living areas (Kompas, 2019).

Aside from the effect on the provision of water, some other environmental impacts can also be mentioned, for instance air pollution. It is mainly caused by the proliferation of vehicles coming to Jogja from other cities. Even though there are some public transportations provided by the local government, such as buses and trains, some tourists still opt to use private vehicles because it will ease them to move around from one place to another. Another unpleasant impact then was shortly coming after. Because of the proliferation of vehicles, Jogja is now experiencing the problem of traffic congestion.

The further process of gentrification in Jogja with the emergence of many new hotels deeply affects the life and livelihood of the local community. Due to the construction of these hotels, some people were forced to move from their living areas, which are typically lower-class settlements. The new kind of socio-cultural interaction was also introduced to the surrounding local community. For example, they now see active nightlife activities as a part of their daily view. The practice of traditional performances was also considered greatly reduced to celebrate some special occasions happening in the local communities (Sugiyono and Rebecca, 2023).



Picture 4. Merapi Merbabu Hotel, Jogja (by authors, on May 8th, 2023).



Picture 5. The development of a hotel next to an area of rice fields (by authors, on May 8th, 2023).

Other than the phenomenon of new hotels, the exploitation of nature in Jogja was also marked by the existence of some industrial factories, mainly in the peripheral areas of Jogja. They usually do sand mining as their main business, therefore they exist near some rivers in Jogja because of the richness of its natural resources, for instance Progo river, Gendol river, and Boyong river. According to the report from the local Non-governmental Organization (NGO), namely Wahana Lingkungan Hidup Indonesia Yogyakarta or WALHI Yogyakarta (The Indonesian Forum for Living Environment Yogyakarta) (2022), this massive sand mining by the industrial companies has caused water shortage as well as water pollution and more critically, damaged water sources in the local communities, such as Wiyu Kulon Progo, Jomboran Sleman, Ngemplak and Cangkringan Sleman, Ngandong Sleman, and Banaran Kulon Progo.

The WALHI Yogyakarta (2022) reported that even though the companies already have Izin Usaha Pertambangan or IUP (The Mining Business License), it does not guarantee that their business will comply with the requirements related to nature and its sustainability. Moreover, the process of IUP often also does not include the role of the local communities, yet only certain local elites. Thus, they cannot raise their voices to keep their living areas from further damage.

The changes of urban landscapes in Jogja, in addition, is also marked by the phenomenon of the demolition of cultural heritages. One of the famous examples that we all perhaps know is about Tjan Bian Thiong heritage building. It is located in Jalan Pejaksan. And, famous for its Chinese architecture, it was demolished in 2015, as can be seen in Picture 6, to give space for the Amaris Malioboro Hotel development (Risdiasari, 2018).



Picture 6. The demolition of Tjan Bian Thiong for the development of Amaris Malioboro Hotel (source: gudeg.net).

The response of urban youth as expressions of dissatisfaction

After knowing all tangible phenomena describing urban spaces commodification, it is then interesting to see the resistance movements conducted by the impacted local youth as well. A French sociologist, Henri Lefebvre once wrote on the topic of the ‘right to the city’. Regarding this, Mark Purcell says, “This image of inhabitants encountering each other and actively appropriating space points to another indispensable element of the right to the city: participation. We have seen how the new contract of citizenship involves a thorough going political awakening. So too with the right to the city” (Purcell, 2013).

Purcell highlights the most important meaning of the right to the city, which is participation. The growing active participation is a sign of a political awakening in which many urban dwellers, particularly those of ‘the minuto popolo’, show their desire to take care of their cities and keep it from the unjust treatment from certain economic and/or political elites.

As a response to the issue of urban spaces commodification, there are many social movements made by civil society in Jogja. It spans from the movements from the local non-governmental organizations (NGOs) to the academia among the universities. Yet, what is worthy to be discussed further here is the presence of creative and critical social movements made by urban youth in Jogja. Their movements were sporadic yet considered influential for other movements in other surrounding cities.

One of the famous movements made by local youth as the practice of what we just understood about right to the city, is called Gerakan Warga Berdaya. As an organic movement, it first emerged in 2006 as a response to the earthquake 6.4 on the Richter scale, impacting many urban dwellers in Jogja. The movement came up again in 2010 as a response to the eruption of Mount Merapi. For these first two moments, there was not yet the name ‘Gerakan Warga Berdaya’. Only in 2013, they started to call themselves with this name referring to all people who have the same intentions to take care of Jogja from many urban problems, such as the unsupportive local government for the cycling movement in 2013 and the massive hotel development starting in 2014.

One of this research’s key informants is saying this, “Even though every moment has its own response, the point is that there is always an initiative from the local community, especially youth, to give such a critical response regarding certain socio-political situations happening in their beloved city.” This initiative from below or grassroots communities then can be assumed as an important key to express the right to the city as a response to the unjust urban development.



Picture 7. The history of Gerakan Warga Berdaya (by authors).

Additionally, in 2013, as a part of Gerakan Warga Berdaya, a particular group of local young artists in Jogja also expressed their disagreement against the massive construction of new hotels and apartments in Jogja. They made some murals in some street walls to deliver their critical message. The examples can be seen in Picture 8 and 9. They did it, for instance, in Kewek bridge and in Pojok Benteng Wetan. Some special phrases were used to conclude their messages in criticizing the development in Jogja, for example ‘Jogja Ora Didol’ (Jogja is not for Sale) and ‘Jogja Asat’ (Jogja is Drying Up).



Picture 8. A wall street mural of 'Jogja Ora Didol' (source: indonesiadesignstudio.blogspot.com).



Picture 9. A wall street mural of 'Jogja Istimewa Hotelnya' (source: geotimes.com).

A year later, in 2014, responding to the issue of water scarcity, especially in Miliran village, a group of young people namely WatchDocumentary (WatchDoc) made a documentary movie with the title 'Belakang Hotel' (Behind the Hotel). In this movie, they attempted to investigate why Miliran village is drying up. It was the first time for the local community in Miliran village to experience the problem of water shortage. That is why in collaboration with WatchDoc some young people from Miliran village raise their concerns by showing some drying wells within their living areas. And after all, these young people assumed that this problem was mainly caused by the construction of some new hotels near their living areas. One of them is the Fave Hotel.



Picture 10. 'Belakang Hotel', a short movie by WatchDoc regarding the massive development in Jogja (source: watchdoc.co.id).

This documentary movie afterwards became a special material for public discussions in many places in Jogja, either formally or informally. In several universities, some students watched this documentary movie together and then discussed it among them, sometimes under the guidance of their lecturer. Or elsewhere, in some cafeterias or even amid kampungs (a place where "an interaction between the formalized area of the city and the irregular settlements" is happening, Kusno, 2020), people watched it together. This movie

became a social alarm for them to be aware of the current social problems that are happening within their living areas.

In the same year, a man named Dodok Putra Bangsa, as can be seen in Picture 11, did his theatrical action during the social demonstrations in front of the Fave Hotel Jogja. He did the ‘sand bath’ as a symbol that the emergence of the Fave Hotel, and other new hotels as well, had caused the serious problem of water scarcity in the surrounding local community. His intriguing action then was published in some local media and thus considered as a spark for other youth movements in Jogja.



Picture 11. The theatrical performance of Dodok Putra Bangsa in 2014 as a symbol of community resistance against the development of Fave Hotel (source: kompas.com).

Along with these movements, there was also a musical group named Jogja Hiphop Foundation, who announced their new song entitled ‘Jogja Ora Didol’. As the literal meaning of their song, they want to deliver their message that Jogja cannot be sold to any private sector. This song then quickly became the encouragement for young people in Jogja to bravely express their feelings and opinions in public, especially related to the issue of the urban spaces commodification in Jogja.



Picture 12. Marzuki Mohamad or Kill the DJ, expressing his support for the critique to the development of Jogja (source: medcom.id and tempo.co).

A year later, a young female painter named Lelyana Kurniawati, joined this ‘spreading social movements’ by making a painting entitled ‘Escape’. This painting was included in an art exhibition by female artists in Jogja. According to her, this painting symbolizes the current situation in Jogja where there are no more spaces for green areas.

As a response to this massive movement, the local government of Jogja announced a moratorium on the new hotel construction. Unfortunately, this moratorium had been

cancelled in 2019. Responding to this cancellation, young people began to organize another social movement again. Dodok Putra Bangsa (Mas Dodok), a familiar person, took an action. He came to the office of the provincial government of Jogja and stood in front of the office to perform a ritual *tolak bala* (a ritual to ward off misfortune) by symbolically taking a pee in front of the office as well as taking a bath using seven flowers from seven affected local communities. It was such a typical of Javanese tradition. He also put the word 'Hotel' beside the word 'Provincial Government' in the signpost of the office as a symbol of disagreement of the cancellation of the moratorium.

After a long journey of these sporadic urban youth movements for more than five years, in 2022 the ex-Mayor of Jogja, Haryadi Suyuti, was eventually arrested because of his involvement in a building permit bribery case that potentially uncontrolled hotel developments during his administration. His arrest was seen by many people as the result of the massive urban youth movements in Jogja in the last decade.



Picture 13. Mas Dodok was cutting his famously known long hair to 'celebrate' the ex-Mayor of Jogja's arrest, because of the bribery case for issuing a building permit. (source: kliksumut.com).

Youth's perspectives in seeing the urban development in Jogja

It seems that from the perspective of grassroots communities, particularly youth, they see that Jogja is currently experiencing 'over-development'. This phenomenon, at least, can be signified by three marks. Those are the overuse of urban spaces for certain elites' interest, the unpleasant impacts that this development is bringing especially to the environmental surroundings, and the exclusion of active participation of the local community in the urban development.

From the perspective of the 'accumulation by dispossession' from Harvey, the aforementioned 'over-development' as can be seen from the massive changes of urban scapes, is the real facade of the expansion and adaptation of capitalism and neoliberalism within the urban context (Chan, 2020; Galkowski, 2019; Low, 2005).

To respond to this issue, local youth, particularly in Jogja, have already conducted some creative as well as critical actions in expressing their dissatisfaction. Practicing 'their right to the city', initially they are not afraid of the domination of capitalism and neoliberalism in the 'arena' within cities. They also attempt to claim some spaces within cities as democratic spaces whereby they could deliver their messages. Some wall streets are occupied, for instance, to make some art murals regarding the critiques to the development in Jogja (Murray, 2015). In other experiences, some cultural performances as part of social demonstrations take place in the city sidewalks (Daphi, 2017; Hoskyns, 2014; Parkinson, 2012).

Additionally, regarding strategies, youth in Jogja do not use a 'single way', such as public demonstration, to deliver their messages anymore (Daphi et al, 2021; Monno, 2016). They employ other various means, mainly using an interplay between art, culture, and socio-political perspectives in delivering their critiques (Gurney, 2015). Other than street murals and cultural performances, movies, paintings, as well as music can be good examples of such an interplay. Perhaps, we are intrigued to know the reasons why they choose those kinds of ways to deliver their messages to the related stakeholders, especially the local government.

First of all, attracting more people to be engaged in their movements is one of their main goals. They know that their social capitals and networks are insufficient. Therefore, ‘being different’ in doing their actions will be considered as an important key. They need more echoes to spread their messages. As a result, more people are attracted to these young people’s movements, for instance mass media. More news related to their creative actions can be assumed as echoes that help them to be recognized by broader public, not only in their local areas, but also in the national spheres.

By proving their existence to the broader public, they are then being trailblazers for other youth movements in other surrounding, as well as perhaps ‘smaller’, cities. Their actions are seen as strong examples on how young people are actively engaged to give their responses to the current socio-political situations. Young people nowadays, therefore, cannot be considered as apathetic generations.

Furthermore, more collaborations and networks can be built for such recognitions. Young people from different areas, yet having some passions for their beloved cities, can work together and support one another regarding certain issues in their areas. For instance, young people in Jogja can help and support young people in Purworejo for their movements, for instance regarding the issue of Wadas in Purworejo. And *vice versa*. Therefore, stronger networks can be built through these experiences.

Conclusion

As a concluding remark, continuous urban development is an omnipresent phenomenon happening nowadays. Yet, it is crucial to highlight the issue of balanced development that relates to three important parties, which are people, nature, and culture. Only by paying much attention to this balanced relationship, can urban development be sustainable.

Furthermore, support for young people in Jogja, as well as in other ‘middle-sized’ and ‘smaller-sized’ cities, are indeed needed. There are surely many forms in giving support to these young people, for instance listening to their critiques and engaging them in the deliberation of city management. The main point is that we need to involve them more as a part of important stakeholders regarding urban development.

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VULNERABILITY OF TRADITIONAL FISHERS FOR EXPLOITATION AND HUMAN TRAFFICKING

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Abstrak

Penelitian ini bertujuan untuk melihat kerentanan nelayan tradisional dari eksploitasi dan perdagangan manusia. Selain itu, penelitian ini bermaksud memberikan rekomendasi yang perlu diperhatikan dalam rangka pemberdayaan nelayan tradisional dalam meningkatkan kesejahteraan mereka. Penelitian ini merupakan penelitian kualitatif yang melaksanakan serangkaian Focus Group Discussion dan Wawancara Tokoh Kunci. Protokol FGD dan KII digunakan untuk pengumpulan data. Penelitian dilakukan pada komunitas nelayan tradisional di Bitung, Sulawesi Utara dan Tegal, Jawa Tengah. FGD dilakukan dengan kelompok nelayan, istri nelayan, LSM yang bekerja untuk nelayan, dan paralegal. KII dilakukan dengan pemilik kapal, kepala pelabuhan, dan dinas kelautan dan perikanan setempat. Hasil penelitian menunjukkan bahwa keterbatasan modal dan rendahnya pendidikan menyebabkan nelayan tradisional rentan terhadap tekanan pemilik modal dan ketidakadilan dalam pembagian keuntungan yang berdampak pada kesejahteraan nelayan. Sistem bagi hasil yang tidak adil serta sistem perdagangan dan pelelangan ikan yang tidak transparan berdampak pada kemiskinan nelayan dan terjerumus ke dalam jeratan utang. Beberapa rekomendasi antara lain mengawal implementasi kebijakan pemerintah terkait perlindungan awak kapal penangkap ikan, menyediakan program pemberdayaan gender, dan pengembangan materi Komunikasi, Informasi dan Edukasi (KIE) untuk mendidik nelayan dan keluarganya.

Kata kunci: eksploitasi, nelayan tradisional, perdagangan manusia

Abstract

The aim of this study is to overview the vulnerability of traditional fishers from exploitation and human trafficking. It is also intended to give recommendations that should be addressed for empowering traditional fishers to improve their well-being. This study is a qualitative study that implement a series of Focus Group Discussions and Key Informant Interviews. FGDs and KIIs protocols were used in collecting data. The study was conducted in traditional fishing communities in Bitung, North Sulawesi and Tegal, Central Java. FGDs was conducted with group of fishers, wife of fishers, NGOs working for fishers, and paralegals. KIIs was carried out with boat owner, port chief, and local office of maritime and fisheries. The results revealed that limited capital and lack of education, cause traditional fishers vulnerable to pressure from capital owners and injustice in profit sharing that affecting fishers' welfare. The unfair profit-sharing system and non-transparent fish trading and auction system give an effect to fishers' poverty and fall into debt bondage. Some recommendations include oversee the implementation of government policies related to the protection of fishing vessel crews, provides gender empowerment program, and development of Information, Education and Communication (IEC) materials to educate fishers and their families.

Keywords: exploitation, fishers, human trafficking,

Introduction

The Republic of Indonesia stretches from Sabang to Merauke covering an area of 7.81 million km², of which 3.25 million km² is sea (Pratama, 2020). This shows that Indonesia is an archipelagic country and has enormous marine and fishery potential (Ariansyach, 2018). In 2016 the potential for fish resources in Indonesian waters was recorded at 9.93 million tons/year (Suman, et.al., 2016), and the data is updated to 12.01 million tons/year in 2022 (Direktorat Jenderal Perikanan Tangkap, 2022; Napitupulu, et.al., 2022; Machmud, et.al., 2021). This shows that the potential for fish resources in Indonesian waters is increasing, therefore marine resources must be managed and utilized for the welfare of society, especially fishers.

In fact, various studies show that fishers are a group of people who are classified as poor (Maru, et.al., 2018). Data shows that 90 percent of the 16.2 million fishers in Indonesia live below the poverty line (Goso & Anwar, 2017; Anwar & Wahyuni, 2019). The level of poverty in the fishing community is very high. This is because fishers are a group of people whose lives and income depends directly on marine products, either by catching or cultivating marine products. They also have very limited resources or capital to purchase fishing equipment capable of running a fishing business or other businesses in the maritime sector more profitable and increase income (Moento, et.al, 2020). This means that the welfare of fishers is largely determined by their catch (Wafi, et.al., 2019).

Siregar et.al. (2017) shows that there are ten indicators that can be used as a reference in looking at fishers's poverty, namely 1) family income, 2) household expenditure, 3) living conditions, 4) residential facilities, 5) household health, 6) convenience utilization of health facilities, 7) quality of family education, 8) ease of enrolling children in education, 9) sense of security from crime, and 10) ease of accessing information and communication technology. Meanwhile, Retnowati (2011) explains that the factor that influences the low income of fishers is an unfair profit-sharing system, where owner fishers receive a larger share of the results than tenant fishers. Anjari et al., (2016) stated that fishers' livelihood results are inconsistent because they are very dependent on the weather. If the wind is strong or the sea waves are high, fishers do not carry out fishing activities and do not earn income, and this triggers their poverty.

In addition, low knowledge and skills, as well as limited capital, make fishers vulnerable to pressure from capital owners and injustice in the profit-sharing system. A non-transparent fish trading and auction system is also seen as a factor that influences the low level of fishers's welfare. From the explanation above, education is a fundamental aspect for fishing community groups so that they are not exploited and treated unfairly. From various studies on fishing families, it is reported that parents actually have the desire and hope that their children can pursue higher formal education (Arista & Marhaeni, 2018; Hidayati, et. al., 2021), and that education for children is important for the future, especially to obtain a decent life (Ramadhani, et.al., 2022). Factors that cause children's low education are the economy and low family income so that parents cannot send their children to a higher level of education. Apart from that, one of the factors that causes children not to be able to pursue higher education is because there are no schools for higher levels in their area (Ramadhani, et.al., 2022).

Research from Ajisuksmo and Surya (2019) shows that self-efficacy, learning motivation and learning achievement of children from fishing families on the coast of North Jakarta are low. This finding is in line with the research results of Arista and Marhaeni (2018) who reported that children from fishing families are less interested and show a willingness to go to school, and tend to be lazy about studying. Research by Ramadhani, et. al. (2022) also shows that parents from fishing families realize that their children are not yet fluent in reading and their children's brain capacity to participate in learning activities is relatively slow. The study of Ajisuksmo and Iustitiani (2017) also reported that knowledge and perceptions on HIV-AIDS and drug abuse among adolescents of traditional fishing community in Indramayu West Java is low. The information on HIV-AIDS and drug abuse is obtained from mass media, informal conversation with friends or people around them. IEC materials that provide information on this issue is regarded needed and important.

The study of Fesanrey, et. al. (2020) and Nikmah (2022) reported that fishers' wives have an important role in generating income and earning a living to meet family needs. The wives are involved in selling fresh and processed fish as well as collectors of rattles, or craftsmen of rattles. In research by Rusmana, et.al (2019) in Indramayu Regency, it was reported that there were differences in the decision-making process between the wives of fishers who did not work and those who worked, where the wives of fishers who worked dominated the decision-making process more than the wives of fishers who did not work.

Research results from the Ministry of Maritime Affairs and Fisheries (KKP) in collaboration with the International Organization for Migration (IOM) report that exploitation and human trafficking often occur in the fishing industry (International Organization for Migration, 2016). Cases of exploitation of fishers in the fishing industry involve employing fishers exceeding 20 hours of work per day for 7 consecutive days a week. From the IOM report (2016) it was also reported that fishers also experienced violence perpetrated by ship owners or senior crew members. Meanwhile, cases of human trafficking in the fishing industry, including falsification of documents and transshipment, often pass without law. Adequate education and skills are really needed by working fishers so that they can escape exploitation and the snares of fishing entrepreneurs or investor fishers or ship owners. Knowledge about legal protection and fulfilling their rights as dignified human beings is very important and crucial for improving their welfare. The ILO study (International Labor Organization, 2020) reports that strengthening the legal framework, including laws and regulations, is important to protect fishers. Additionally, paralegals play an important role in preparing and organizing the necessary documents so that fishers can be protected from human trafficking.

From the explanation above, it is very important to carry out studies related to the description of the vulnerability of traditional fishers from exploitation and human trafficking. Apart from that, it is also very important to obtain important information to provide recommendations to various parties to improve the well-being of traditional fishers. It is the objective of this study, to give an overview on the vulnerability of traditional fishers from exploitation and human trafficking. In addition, this study is intended to give recommendation for various parties to improve the wellbeing of fishers.

Method

The study location was in Tegal fish port, Central Java and Bitung fish port North Sulawesi. This study is a qualitative study that implement series of Focus Group Discussions (FGDs) and Key Informant Interviews (KII). In each study location FGDs were carried out with group of fishers, group of wives of fisherman, group of NGOs working for fishers, and group of paralegals. Each FGD was participated by 8-10 participants. Key informant interviews were carried out with boat owner, port chief, local office of maritime and fisheries. Informed consent was provided for each FGD and KII participants for their willingness to participate in this study.

FGD and KII protocol were used as instruments for data collection. Including in the FGD and KII protocol are questions on the following issues:

1. What is some problems face by fisherman? How does the Covid-10 Pandemic influence the fishers' life?
2. What problems do fishers face in their working conditions, including hours of work and payment?
3. What do you understand about the rights of fishing workers? How did you gain this understanding?
4. Are you aware of exploitative conditions among fishery workers? What about forced labour (explain with examples) and situations that amount to trafficking in persons? What are some of the reasons fish workers are involved in these types of exploitative conditions? What needs to be done to improve and protect fishers' working rights?

5. What are the roles of wife when fishers have problems (e.g.: sick during fishing or victims of human trafficking, etc.)? How were gender issues addressed?
6. Please explain about your department/organization and role in protecting fishers' rights?
7. Please explain about regulatory and policy framework to combat labour exploitation on fishing vessels and the quality of labour-inclusive inspections on fishing vessels?
8. Please explain about your understanding among government, private sector, local communities, and fish workers of acceptable work conditions in the fishing industry?
9. Please explain the ability to fish workers and their families to report exploitative working conditions on fishing vessels.

Findings and Discussion

Problems face by fisherman and the influence of Covid-19 pandemic

The Covid-19 pandemic was declared to have spread in Indonesia in March 2020, and this research was conducted in 2022 where Covid-19 has not yet finished. Anna et.al. (2021) and Sari, et.al. (2021) reported that the fishers' income decreased by 20-30 percent per trip. As consequence, they reduce the number of trips to avoid losses. From the results of FGDs with fishers in both research locations, it was revealed that the Covid-19 pandemic did not disrupt their fishing activities at sea. One of the factors that causes them not to feel disturbed by Covid-19 is because they are mostly at sea.

"Kami banyak di laut, udara terbuka...jadi tidak ada Covid.... kami aman saja"
(We are in the sea a lot, in the open air...so there is no Covid.... we're safe) (FGD with fishers in Bitung)

"udara di laut itu sangat bagus karena tidak ada Covid, mungkin kalau kami di darat kami bisa kena Covid" (The air at sea is very good because there is no Covid, maybe if we were on land we could get Covid)(FGD with fishers in Tegal)

According to fishers, those who have problems with Covid-19 are those on land. This is shown by the reduction in buyers of fishers' catch when it reaches land. Not only has the number of buyers decreased but also consumer purchasing power. Apart from that, the number of wholesale buyers who will resell to the company has also decreased.

"Jumlah orang-orang yang membeli hasil tangkapan kita berkurang. Mereka juga gak mau beli dengan harga mahal" (The number of people buying our catch is decreasing. They also don't want to buy at high prices) (FGD with fishers in Tegal).

Jumlah orang yang beli dalam partai besar juga berkurang. Mereka biasanya beli dengan jumlah besar untuk dijual Kembali ke Perusahaan pengalangan. ...tapi jumlah yang mau beli sedikit" (The number of people buying in bulk has also decreased. They usually buy in large quantities to sell back to canning companies. ...but the number of people willing to buy is small) (FGD with fishers in Tegal)

Problems face by the fisherman in their working conditions

Referring to International Labor Organization Standard on Fishers. Fishers work by using simple or complex dangerous machinery to catch, sort and store fish. They also work full time on fishing boat, involves long hours in challenging marine environment. Injury are much higher, and when injury or illness at sea they might be far from professional medical care and must rely on others on board <https://www.ilo.org/global/standards/subjects-covered-by-international-labour-standards/fishers/lang-en/index.htm> To go to sea, fishers must complete various documents and work contracts. Fishers often ask for money before

going to sea, because this money is needed for family life while the fishers go to sea to fish. What often happens is that the catch is not much even though fishers must pay their debts. So, they often fall into debt with companies or brokers and loan sharks.

Sea conditions affect the presence of fish. Currently fishers, especially Tegal fishers, will go to longer distances, because fish are rare in Javanese sea waters. With a longer distance, they also spend longer at sea. Therefore, they need an advance from their fees/salaries so that the family at home can carry out their lives.

“Ikan di Laut Jawa sekarang jarang ada...mungkin karena laut sudah tidak nyaman bagi ikan untuk hidup. Ikan di Laut Jawa kecil-kecil dan kualitas tidak bagus sehingga harga jualnya juga murah. Untuk dapat ikan yang berkualitas bagus, kita harus berlayar sampai Maluku dan berarti butuh waktu yang lebih Panjang. Jadi kita minta uang muka ke Perusahaan supaya keluarga yang ditinggal bisa hidup....cuman Ketika sampai Kembali ke darat, ternyata hasil tangkapan sedikit, jadi bayaran yang kita terima lebih rendah. Jadi...ya kita hitungannya berhutang” (There are rarely any fish in the Java Sea now... perhaps because the sea is no longer comfortable for fish to live in. The fish in the Java Sea are small and the quality is not good, so the selling price is also cheap. To get good quality fish, we must sail to Maluku and that means it takes a longer time. So, we asked the company for a down payment so that the families left behind could live... but when we got back to land, it turned out that the catch was small, so the payment we received was lower. So, yes, we are counting on debt.” (FGD with fishers in Tegal).

In the FGD, the fishers also revealed that the situation is more difficult if the activity is catching squid, because the schedule for catching squid is at night. Fishers must work at night, and during the day they sleep. So, their life cycle changes and will disrupt health. They feel like they have never seen the sun.

“Yang agak sulit kalua tugas menangkap cumi, karena kita menangkap cumi di malam hari. Jadi kalua siang kita tidur, dan malam kerja...gak pernah lihat matahari” (The task of catching squid is a bit difficult, because we catch squid at night. So, during the day we sleep, and at night we work... we never see the sun). (FGD with fishers in Tegal)

Fishers are also vulnerable to accidents at work. They are vulnerable to drowning, getting entangled in nets, or being injured by sharp fishing hooks. When they go to sea, they also don't get enough nutritious food. In general, what is provided while they are at sea is instant noodles.

“kecelakaan kerja yah... sering juga terjadi, misalnya tenggelam, atau terlilit jarring ikan atau luka karena kena mata pancing” (work accidents often happen, for example drowning, or getting entangled in fishing nets or getting injuries from fishing hooks. (FGD with fishes in Bitung)

“kita biasanya makan mi instan, gampang masaknya dan enak...kalau gak makan nanti masuk angin kena angin laut” (We usually eat instant noodles, they're easy to cook and delicious...if you don't eat then you'll catch a cold from the sea breeze (FGD with fishers in Tegal)

Understanding about the rights of fishing workers

Fishing rights are an important way to ensure the fulfillment of human rights for the fishery worker community (Song & Soliman, 2019). Referring to the results of FGDs with fishers and paralegals as well as interviews with NGOs working in the fishing sector, it was revealed that fishers do not yet understand their rights. In general, fishers only know that they catch and look for fish in the sea. Fishers also only know that for going to sea, the ship and all the necessities while at sea have been provided by the ship owner. Therefore, according to fishers, it is appropriate for ship owners to receive a larger share of the fish catch. This is probably because fishers generally have low education so they cannot access various important information that is useful for their lives.

“Hak sebagai nelayan...ya pembagian hasil tangkapan. Pembagian nya 60 - 40. 60 itu untuk pemilik kapal, kalua nelayan 40 dibagi berapa jumlah anak kapalnya”. (Rights as a fisherman... yes, sharing the catch. The division is 60 - 40. 60 is for the boat owner, for fishers it is 40 divided by the number of crew members) (FGD with fishers in Bitung).

“Pendidikan nelayan sangat rendah, adapula yang tidak bisa baca dan menulis, sehingga ketika diberi surat kontrak mereka tidak paham tentang apa yang menjadi hak mereka” (Fishers' education is very low, some cannot read and write, so when they are given a contract letter they do not understand what is their right) (FGD with NGOs working for fishers)

It is very essential for the fishers to understand their rights as a fishing worker. Education and socialization that improve their knowledge is then very important and needed.

Awareness of the exploitative conditions among fishery workers

In general, fishers work as requested by the boat owner. not realizing that there is exploitation of them. Regarding the distribution of the catch, they also receive as determined. They are worried that if they do not agree and demand what has been decided by the boat owner then they will no longer be involved in the work which means they will have no income.

“Pada umumnya para nelayan menerima apa yang sudah ditetapkan oleh pemilik kapal, termasuk pembagian yang diberikan untuk hasil tangkapan mereka. Mereka khawatir kalau mereka menuntut maka mereka tidak diajak lagi dalam pelayaran berikutnya. Kalau tidak diikuti berarti mereka akan kehilangan penghasilan mereka” (In general, fishers accept what has been determined by the boat owner, including the share given for their catch. They worry that if they bring a claim then they won't be invited back on the next trip. If they are not included, it means they will lose their income) (FGD with NGO working with fishers in Bitung).

“Nelayan merasa sebagai orang yang tidak berdaya dan miskin, sehingga mereka tidak dapat mengajukan tuntutan apabila terjadi ketidakadilan dalam pembagian hasil” (Fishers feel that they are helpless and poor, so they cannot make demands if there is injustice in the distribution of profits) (FGD with NGO working with fishers in Tegal).

“Mereka pada umumnya sadar dan tidak puas atas pembagian hasil tangkapan, tapi merasa tidak berdaya” (They are generally aware and dissatisfied with the distribution of the catch, but feel helpless) (FGD with NGO working with fishers in Tegal).

Roles of Wife and the family to generate income.

To help family economy, there are several fishers' wives who open grocery stores or sell food. There are also those who help the household economy by selling clothes on credit. However, there are also those who do not have activities to support the family economy because they do not have the capital to trade. In Bitung, several fishers' wives work in sub-districts office to help the PKK (mothers' organization).

“Saya berdagang sembako di rumah, untuk bantu keuangan keluarga (I sell necessities at home, to help my family financially) (FGD with Wives in Bitung)

“Saya buat masakan untuk di jual ke tetangga yang tidak masak (I make food to sell to neighbors who don't cook (FGD with Wives in Bitung)

“Jual baju anak dan baju Perempuan dengan cara kredit (Selling children's clothes and women's clothes on credit) (FGD with Wives in Bitung)

“Untuk jualan butuh modal, kami tidak punya modal” (To sell something you need capital, we don't have capital (FGD with Wives in Bitung)

“Saya ketua program PKK di kelurahan jadi sudah sibuk dengan berbagai aktivitas untuk para ibu”(I'm the head of the PKK program in the sub-district so I'm already busy with various activities for mothers) (FGD with Wives in Bitung)

Awareness of the exploitative condition among fishers should be improve not only for the fishers but also the community, the boat owners as well as the government. Socialization, campaign and education can help for raising awareness on the exploitative conditions among fishers.

The importance of IEC materials

Low education is one of the characteristics of fishing communities. Various information should be conveyed through Information Education and Communication materials (IEC materials), so that fishers and their communities understand various important and relevant information needed for their lives. IEC material related to debt bondage, the rights of fishers and sea workers, women's empowerment, as well as clean and healthy behaviour are important for the well-being of fisherman and their community.

“Mereka butuh banyak penyuluhan dan diberikan materi KIE mengenai berbagai aspek kehidupan yang penting untuk kesejahteraan mereka. Misalnya jeratan hutang, hak para nelayan” (they need a lot of socialization and are given IEC material regarding various aspects of life that are important for their well-being. For example, debt bondage, fishers's rights, (FGD with paralegals in Bitung).

“Penyuluhan tentang pemberdayaan kaum perempuan untuk hidup bersih dan sehat, income generating, parenting juga sangat penting bagi komunitas nelayan terutama untuk kaum ibu” (Socialization about empowering women to live in a clean and healthy life, generating income, parenting is also very important for the fishing community especially for women) ((FGD with NGO working with fishers in Tegal).

IEC materials are important as tools are media for education, especially for those in low education. However, it is important to develop IEC materials that are relevant to the needs and the characteristics of the community.

The important roles of Paralegals

The paralegal's job is to study the case at hand, prepare the required documents, obtain data from the client and witnesses regarding the case at hand, and accompany the client during the trial. Paralegals are trained to help lawyers because lawyers are generally busy and do not have enough time to quickly help with the problems faced by fishers. Paralegals are not admitted to practice law, and they are under supervision of a lawyer. There is an increased use of paralegals in the delivery of legal services <https://www.robertwalters.com.au/insights/career-advice/blog/the-role-of-a-paralegal.html>

"Kami melatih paralegals untuk membantu lawyers dalam mengatasi permasalahan yang dihadapi oleh nelayan. Dengan adanya paralegals, kami sangat terbantu karena nelayan tinggal di seberang pulau dan tidak selalu ada kapal menyeberangi pulau tersebut" (We train paralegals to help lawyers in overcoming problems faced by fishers. Having paralegals helps us a lot because the fishers live on the other side of the island and there are not always boats crossing the island (KII with lawyers in Bitung).

"Kami paralegals melakukan kegiatan ini tanpa di bayar tetapi tetap senang karena dapat membantu rekan-rekan kami para nelayan yang menghadapi masalah" (We paralegals carry out this activity without being paid but are still happy because we can help our fellow fishermen who are facing problems (FGD with paralegals in Bitung)

"Diharapkan semakin banyak orang yang dilatih menjadi paralegals untuk membantu masyarakat dalam menghadapi persoalan ketika berbenturan dengan masalah hukum (It is hoped that more people will be trained to become paralegals to help people deal with problems when they encounter legal issues (FGD with paralegals in Tegal)

The explanation above shows that paralegals have an important role, especially in helping fishermen who are not reached by lawyers. Paralegals provide free services, apart from that paralegals are also in the community, so that fishermen can more easily access them to help with their legal problems.

The role of boat owner and government in protecting fishers from exploitation and human trafficking

From the results of KII with boat owners and the government, several recommendations were given as below:

"Masalah utama dari para nelayan adalah mereka tidak ada asuransi untuk kesehatan mereka. Padahal bekerja sebagai nelayan itu penuh risiko. Jadi penting untuk para pemilik kapal untuk memberikan asuransi BPJS kepada mereka. Namun demikian kendala yang terjadi adalah BPJS tidak diberikan hanya untuk pekerja yang bekerja jangka pendek. Jadi pemerintah seharusnya bisa secara khusus memberikan asuransi BPJS kepada para nelayan" (The main problem with fishers is that they have no insurance for their health. Even though working as a fisher is full of risks. So, it is important for ship owners to provide BPJS insurance to them. However, the problem that occurs is that BPJS is not provided only to workers who work short term. So, the government should be able to specifically provide BPJS insurance to fishermen (KII with boat owner in Tegal).

“Peraturan pemerintah sudah ada dan sudah baik karena memperhatikan dan memberikan perlindungan kepada awak kapal dan nelayan. Yang menjadi persoalan adalah implementasi dari peraturan pemerintah tersebut yang seringkali tidak tepat. Oleh karena itu harus dimonitor supaya hal-hal yang tidak tepat dapat segera ditindaklanjuti”. (Government regulations already exist and are good because they pay attention to and provide protection for ship crews and fishers. What is problematic is the implementation of government regulations which are often inaccurate. Therefore, it must be monitored so that anything that is not appropriate can be followed up immediately (KII with local government in Tegal.

“Kerjasama antar pihak terkait, pemilik kapal, NGO yang bekerja untuk nelayan, dan serikat pekerja para nelayan sangat penting untuk memberikan advocacy kepada pemerintah agar nelayan dapat terus terlindungi dan tidak mengalami eksploitasi dan human trafficking”. Collaboration between related parties, boat owners, NGOs that work for fishers, and fishers’ labour unions is very important to provide advocacy to the government so that fishers can continue to be protected and not experience exploitation and human trafficking (KII with chief port in Bitung)

From the explanation above, it shows that the government and ship owners have paid sufficient attention to the welfare of fishers. This is demonstrated by the existence of government policies and regulations that protect fishers from exploitation. However, the implementation of government regulations and policies must be monitored and evaluated so that the intended objectives of the can be achieved and be realized.

Conclusion

This research proves that traditional fishers in both research locations are vulnerable to exploitation and human trafficking. They realize that there is injustice in the treatment of ship owners, especially in the distribution of catches, but because they feel lack of knowledge, lack of skills and poor, they are powerless to protest this injustice. It is important therefore, to oversee the implementation of Government Policies related to the Protection of Fishing Vessel Crews both at the Local and Central level (Regulation Minister of Marine Affairs and Fisheries No. 42/permen-kp/2016 about sea work agreement for fishery vessel crews, provides life and social protection programs (Employees Social Security System/BPJS), change in private sector practices is crucial in preventing the labor exploitation of fishers, provides gender empowerment program, development of Information, Education and Communication (IEC) materials to educate fishers and their families so that they are not involved in debt bondage, exploitation and human trafficking, and the importance of empowerment for paralegals to help fishers resolve problems related to their abuse legally.

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THE CONTRIBUTIONS OF MINOR CHARACTERS TO PRESERVE ENVIRONMENT IN JOSTEIN GAARDER'S *THE WORLD ACCORDING TO ANNA*

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Abstract

Concerns about the environment have been a big topic of conversation, including in literature. Jostein Gaarder's novel entitled The World According to Anna addresses this issue. Since environmental perseverance needs to be done collectively, this article analyzes the minor characters' contributions toward the main character's motivation to preserve the environment. The writers used the theories of motivation and behavior. The New Criticism approach is applied in this study along with the close reading method. The writers found that three (3) minor characters significantly contributed to the main character's motivation in persevering the environment. They were Dr. Benjamin, Jonas, and Nana. Dr. Benjamin, an eccentric psychiatrist, helped Anna provide factual information about the environment and he suggested setting up a pressure group. Jonas as an intelligent student, helped Anna answer her question and propose an idea for the green machine. As a calm and mysterious grandmother, Nana helped Anna by providing an image of a future. In conclusion, the contribution of many people including minor character is needed to preserve environment. In other words, it is a collective movement that needs to be sustained.

Keywords: contribution, environment, minor character

Abstrak

Kepedulian terhadap lingkungan hidup menjadi topik perbincangan besar, termasuk dalam bidang sastra. Novel Jostein Gaarder yang berjudul The World Menurut Anna merupakan karya sastra yang membahas permasalahan tersebut. Artikel ini menganalisis kontribusi tokoh minor terhadap motivasi tokoh utama dalam melestarikan lingkungan. Penulis menggunakan teori motivasi dan perilaku. Pendekatan Kritik Baru diterapkan dalam penelitian ini bersama dengan metode close reading. Penulis menemukan bahwa tiga (3) tokoh minor memberikan kontribusi signifikan terhadap motivasi tokoh utama dalam menjaga kelestarian lingkungan. Mereka adalah Dr. Benjamin, Jonas, dan Nana. Dr Benjamin, seorang psikiater eksentrik, membantu Anna memberikan informasi faktual tentang lingkungan dan dia menyarankan untuk membentuk kelompok penekan. Jonas sebagai siswa yang cerdas, membantu Anna menjawab pertanyaannya dan mengajukan ide untuk mesin ramah lingkungan. Sebagai nenek yang kalem dan misterius, Nana membantu Anna dengan memberikan gambaran masa depan. Kesimpulannya, kontribusi banyak pihak termasuk tokoh kecil sangat dibutuhkan untuk menjaga kelestarian lingkungan. Dengan kata lain, ini adalah gerakan kolektif yang perlu dipertahankan.

Kata kunci: karakter minor, kontribusi, lingkungan

Introduction

When reading literature, the reader encounters many interesting people from many walks of life. Most people tend to be more interested in the more renowned personalities, but sometimes they pay some attention to the lesser-known ones as well, in this case it refers to minor characters. The minor character has a crucial role in the events that take place. Every single minor character, even the most insignificant ones, plays an important part. They might play a part in assisting the main character, influencing the main character's thoughts, or even playing a role that prevents the main character from accomplishing his goal by standing in the path of that character's progress.

Every character in the novel is driven by a different reason, such as the desire to earn wealth, find happiness, make some friends, experience joy, or pursue a career. These incentives can make the narrative more engaging for the reader. According to Abrams, motivation is defined as the reasons that may be found in the characters' temperament, desires, and moral nature that cause them to speak and behave the way that people do. The author believes a character's desire to be involved in anything is their motivation. It may be a desire to love, to be wealthy, to gain a specific position, or to save the environment. Since this book discusses not only characters but also environmental issues, it is vital to provide an in-depth explanation of environmental concerns.

From time to time, environmental issues have become important in the relationship between humans and nature. One of them is climate change. According to the findings of the research that were carried out by Raia, et al. (2020), climatic change had a significant part in the extinction of two extinct human species in the past. The research concluded that our predecessors were unable to withstand the effects of climate change and that the situation became even more severe as a consequence of the fact that all living creatures were engaged in a struggle to maintain their own existence. "It was abundantly evident, for the extinct species and only for them, that climatic circumstances were simply too harsh shortly before extinction and only at that exact point". In addition, both research and the press have indicated that there has been a significant amount of environmental damage recently. For example, research conducted by NASA (the National Aeronautics and Space Administration) indicates that a rise in sea level is occurring because glaciers are melting as a result of higher temperatures.

In addition to this, Brennan (2020) of NASA's Jet Propulsion Laboratory states that 2019 set a new record for the amount of ice that Greenland lost. This is a big quantity that has been documented since at least 1948, and it indicates that the massive ice sheet that covered Greenland has melted, causing a loss of 532 billion tons and a potential rise in sea level of 1.5 millimetres.

In *the World According to Anna*, the main character is concerned about environmental issues. Since the story covers a wide range of environmental issues, the question on how to solve these problems becomes increasingly important as the story goes on. In this study, an attempt will be made to analyse the contributions of minor characters toward Anna's environmental perseverance motivation. In this book, there are a lot of critical minor characters who help the story move along. These minor characters are depicted using a variety of perspectives, figures, and characters, each distinct from the others. Their purpose is to construct a narrative, each with unique qualities that set it apart. The fact that minor characters play such a significant role in the plot via their actions is the essential aspect.

To a large extent, *the World According to Anna* is a story about Anna Nyrud, who, in the year 2082, is tasked with seeking answers to the problems that threaten the environment. As she travels through the novel searching for the answer, she comes across a few interesting characters who will be helpful to her later on. The final concerns with minor characters' contributions to Anna's environmental protection may be sought to answer the questions. This can be done by discovering the characterization and motives of the minor characters. Additionally, this study can potentially be an essential component that will enhance future research in the same area.

Motivation and Behaviour

According to Abrams (1999, p. 33), a character's motivation is the reasons that may be found in their temperament, desires, and moral nature that account for their words and acts. A person is thought to be uninspired if that person does not have any impulse or inspiration to take action, while someone who is energized or stimulated toward the achievement of a goal is said to be motivated.

Additionally, Ryan and Deci (2000, p. 54-67) have categorized the many sorts of motives based on the various reasons or aims that give rise to an action. There are two sorts of motivation: intrinsic motivation, which refers to doing something because it is fascinating or pleasurable in and of itself, and extrinsic motivation, which refers to doing something because it will lead to a different consequence in the future.

The following is an explanation of the difference between intrinsic and extrinsic motivation according to Ryan and Deci. The act of engaging in a task for the sake of the satisfactions that are directly associated with that task, as opposed to the pursuit of some other outcome specifically, is an example of what is referred to as "intrinsic motivation." A person is said to be "intrinsically motivated" when pushed to act more by the enjoyment or difficulty of the task at hand than by external prods, pressures, or incentives. Intrinsic motivation can be defined as a desire to do something and acting on that desire to complete tasks. Interest, curiosity, and eagerness are all behaviours driven from the inside out by a person's innate drive. Because of this drive, the activity will feel joyful to the individual doing it.

The idea of being motivated by something outside of oneself, or extrinsically, is a concept that may be used when an action is carried out to get a particular result. In this way, extrinsic motivation may be contrasted with intrinsic motivation, which refers to engaging in an activity for no other reason than the sheer pleasure of the action in and of itself rather than for the value it provides in some different context. The effort that occurs outside of a person to accomplish something, to get a reward, or to come closer to a desirable objective is known as extrinsic motivation.

According to Edward Murray, the relationship between motivation and behaviour is that a specific cause impacts behaviour. In the book, all minor characters have reasons for assisting Anna. If these people had not had reasons, Anna would have given up and left alone by her imagination and fantasies alone.

The World According to Anna

The object of the study is a novel entitled *the World According to Anna* by Jostein Gaarder, a Norwegian author born in Oslo in 1952. The novel was first published in 2014 with the original title *En Fabel Om Klodens Klima Og Miljø* (Anna. A Fable About the Earth's Climate and Environment). This novel has 228 pages and consists of 23 chapters.

The World According to Anna is a story about Anna, a sixteen-year-old Norwegian girl who is passionately worried about climate change and its disastrous consequences. Anna and Jonas are attempting to raise awareness in their school community when she realizes that she is receiving dreams from a reliable source. Her great-granddaughter Nova, who lives in the year 2082, does not interact with the species that the rest of human beings take for granted in everyday life. During the time of Nova, only a bit less than one billion people were living in their world. In this terrifying, compelling, and impactful story, Anna and Nova attempt to combat the impending calamity from two different angles.

This study refers to three previous studies that have been conducted. First is Akbar's study (2016). He used ecocriticism as the main theory and new criticism as the supporting theory. The descriptive qualitative approach, which consists of the following phases, is also used in this thesis. The steps are to read the novel, to collect the essential parts related to this thesis's issues, to analyse the data; and to draw a conclusion.

According to the findings of this thesis, Anna, in her role as an environmentalist, has particular qualities such as enthusiasm, intelligence, diligence, and wisdom to rescue the environment by implementing her proposal. People are starting to respect the environment

and use Green Machines to conserve it, which is the most significant achievement that this concept and its repercussions have brought about.

The second study is conducted by Azizah (2016). She adopted ecocriticism and polysemy to disentangle the problems and concentrate on the environmental issues. Then she discovered that several environmental issues appeared in the book. These are predictions about how oil reserves will run out, plant and animal species will go extinct, people will starve, and there will be droughts. Gaarder uses a satirical story to convey the problems that face the environment. He links it not only to the political but also to the economic system. Several meanings may be derived from reading this book, each of which has the potential to define it.

To begin, Gaarder seems susceptible to Orientalism in his beliefs. It is presented in the way he depicts Europe and the Middle East. In addition to that, he offers a letter with an ethical message. The argument is made that maintaining biological variety is a responsibility that must be fulfilled since it will be passed on to subsequent generations. It is thus impossible to deny that humans, in whatever form that may take, are a component of this cosmic whole.

The last study comes from Amalia (2021). The analysis's findings are as follows; the narrative's plot is determined first. The first scene presents the main protagonists, Anna and Nova, who are sixteen years old at the beginning of the story. This story evolves into problems, namely conflicts that occur as a consequence of the harm that the young Anna's generation caused, which in turn caused Nova's generation to suffer from the devastation of the world. These conflicts are the outcome of the young Anna's generation's actions. As the increasing action progresses, the harm that is done makes the lives of Nova's generation unpleasant, which in turn irritates Nova about the generations who came before her.

The climactic moment occurs when Nova confronts her great-grandmother, Anna, and holds her accountable for the devastation caused by her great-grandmother's generation. Most of the problems in the story come from the damage done by Anna's generation. This damage leads the subsequent generation to suffer since the natural environment on earth has been harmed and is no longer desirable. The resolution reveals that Anna discovers her world and is given a second opportunity to come back to life and prosper anew with the use of a conservation tool developed by Jonas.

Based on the three objectives of the study, they are to find out the characteristics of the minor characters, motivation drives the major characters in connection to preserving the environment, and contributions the minor characters bring toward the main character's motivation in preserving the environment. It is crucial and required to complete the analysis and evaluation in this study using some of the theories discussed in the previous sections.

This study applies the theory of character that Abrams, Stanton, and Henkle explored to analyse the first issue, which focuses on the characteristics possessed by the characters in the book. The characterization theory mentioned by Koesnosoebroto, Holman and Harmon, Murphy, and Perrine was also used in this work. It is necessary to pay great attention to the characters being analysed to get a more concise description of the minor characters. This can be accomplished by attempting to comprehend the minor characters' words through dialogue or conversation and using language in their speech. By doing so, it is able to get a better perception, description, and knowledge of the minor characters, and as a result, it is possible to assess and evaluate the characteristics of the minor characters.

The subsequent analysis focuses on determining what drives the major characters in connection to the preservation of the environment. This study utilizes theories on motivation and behaviour to show the motives that motivate the main characters to preserve the environment. It is intended that through examining and assessing the reasonableness of the major characters regarding the preservation of the environment, this study would be able to serve as a satisfactory response to the final issue.

Lastly, to determine what contributions the minor characters give to the main character's motivation in preserving the environment, this study employs using the same theory, which is theories of motivation and behaviour, to uncover the minor characters' motives that drive the main character's desire to protect the environment. It is intended

that by examining and assessing why the minor characters support the main character in preserving the environment, it would be possible to demonstrate the genuine contributions made by the minor characters to the main character. In reviewing and studying the novel, this study adopts the New Criticism Approach and close reading method as its method of inquiry. Because the writers solely discuss the work, *The New Critics* is an appropriate source to consult while researching a literary work. With the use of this strategy, it is anticipated that the reader finds this study to provide an analysis that is easy to comprehend.

Method

To analyze and evaluate a literary work, it is important to apply the appropriate literary criticism to the selected work. This literary criticism aids in the analysis of the work, and the outcome is easily comprehended by the reader. Regarding literary criticism, the writer employs the New Criticism approach to study the issue since it is well suited to determining the solution to the problem formulation provided in the first chapter. The writer also employs a close reading method to analyse the solution to the problem thoroughly.

In his book, Wilfred L. Guerin stated that the New Criticism solely concentrates on elements that are included inside the work and puts any element that is external to the work out of consideration. This can be seen:

They supported a style and tone that inclined toward irony; they stressed on the existence inside the work of everything essential for its interpretation; and they called for an end to the preoccupation by critics and instructors of English with topics beyond the work itself, such as the biography of the author, the history of his times, or the social and economic implications of the literary work. In a nutshell, they redirected the focus of educators, students, reviewers, and readers to the central problem, which is that what the work says and how it communicates it are two distinct and independent concerns (1992, p. 81). The importance of form and the focus on the artwork itself as an object are two of important aspects of New Criticism.

Findings and Discussion

There are two parts in this section. The first deals with the main character's motivation and the second underlines the contributions of minor characters to main character.

The Main Character's Motivations in The World According to Anna

An individual must have an internal motivation to engage in an activity simply for the pleasure of it. All of the motivations for participating in the behaviour originate inside the individual rather than stemming from a desire to obtain external rewards, such as trophies, money, or recognition. Anna's first motivation is due to her biggest fear, which is global warming. Due to this, she is afraid that she will endanger her surroundings without considering the impact her actions might have on future generations. Thus, the argument is also supported by Anna's realization for the future generations that she is the one who has to do something for the environment and be responsible for it.

Anna's fear of global warming is palpable as she expresses her concerns to the psychiatrist. She immediately identifies it as the source of her fear when asked about her fears, surprising even the experienced doctor with her response (p. 17). Anna's deep-seated worry goes beyond just her own lifetime, as she realizes that the responsibility for addressing climate change has fallen on her generation. She shares her realization with Jonas, acknowledging that the roles have been reversed from her dream, and she is now the one who must take action to save the planet for future generations.

She speaks with a sense of urgency, knowing that she has a responsibility towards her great-grandchild and the generations to come. Anna's commitment to environmental stewardship is evident as she declares that if she fails to do her part, she would have written her own epitaph (p. 129-130). Her fear of global warming and her sense of responsibility for

the environment highlight her deep concern for the planet and the need for action to address climate change.

The second motivation is that she is interested in expanding her environmental knowledge. She is continuously driven to investigate the most recent information that has been released about the environment. She is led to the realization that there are numerous indicators of the environment's deterioration, such as oil extraction, deforestation, climate change, and the threat of the extinction of plants and animals. Anna feels both upset and enraged by the fact that those things took place in a more rapid manner.

Anna's motivation to expand her environmental knowledge is fuelled by her deep concern for the deteriorating state of the environment. She is determined to stay informed about the most recent information regarding the environment, as evidenced by her discussions with Jonas about the carbon balance (p. 20). Anna's curiosity and drive to understand the severity of the situation are further evident as she immerses herself in books and articles on extinct animals and threatened plants and animals, such as the dodo bird from Mauritius (p. 77-78).

She is distressed by the alarming rate at which species are becoming critically endangered, endangered, or vulnerable, and is troubled by humanity's role in destroying other forms of life (p. 79-80). Anna's motivation to expand her environmental knowledge is driven by a combination of sadness, anger, and a desire to understand the reasons behind the environmental degradation caused by factors such as oil extraction, deforestation, and climate change. She is determined to educate herself and take action to address these issues for the betterment of the environment and future generations.

The last motivation that comes from Anna is that she has a significant concern for environmental problems. This is seen in her attitude when she acknowledges the potential devastation that humanity may inflict in the year 2082. Knowing the fact that this thing would happen eventually, Anna is trying to prevent it as soon as possible by taking action on how to save 1001 species of plants and animals.

Anna's concern for environmental problems is evident in her attitude towards the potential devastation humanity may inflict on the planet in the future. When she reflects on the immense, mysterious cosmos of which humans are an essential part, she realizes that maintaining life on Earth is not just a global responsibility, but also a cosmic responsibility (p. 90).

Anna's sense of urgency is further highlighted when she approaches Jonas for help in solving a problem related to saving 1001 species of plants and animals (p. 92-93). While not directly associated with any pressure group, Anna is determined to take action and prevent the impending destruction she dreamed of, indicating her proactive approach towards environmental conservation. Anna's deep-seated concern for the environment and her unwavering commitment to finding solutions highlight her dedication to preserving the planet for future generations. The above explanation offers a clear explanation of why Anna's inner enthusiasm for the environment has driven her to deliver her doing anything for a better future for the environment.

It was mentioned to Anna at the beginning of the story that she had an active imagination. If someone had asked her what she was thinking, she would have responded with a never-ending string of stories, and nobody would have questioned whether or not this was a positive trait (p. 14). Anna's parents have been trying to get her to consult with a mental health professional. Throughout the whole consultation, Anna and the psychiatrist did nothing but chat. The psychiatrist asked Anna many exciting questions, and the conversation was so fun that Anna even asked the psychiatrist a few questions in return. Eventually, the psychiatrist concluded that Anna did not have any mental illness. She only has a vivid imagination and a fantastic ability to picture things she has never seen or done.

The psychiatrist told Anna that he could not treat people concerned about global warming, which is one of Anna's biggest worries (p. 16). The psychiatrist then told Anna and Jonas to start a pressure group in their village. Dr. Benjamin's advice to Anna and Jonas to start a pressure group in their village is seen as a proactive approach towards addressing their concerns about the environment. As a psychiatrist, Dr. Benjamin understands the

negative impact that worries can have on one's mental health, and he encourages Anna and Jonas to take action instead of becoming consumed by their concerns (p. 23). This advice inspires Anna and Jonas to visit the Ecology Centre in Grensen, where many of Norway's environmental pressure groups are based, and they make plans for their own group on the train ride home (p. 24).

Dr. Benjamin's suggestion to create a pressure group empowers Anna and Jonas to channel their concerns into tangible action, allowing them to proactively make a difference in their village and work towards environmental conservation. The above description makes it quite evident that what Dr. Benjamin had to say during the appointment was the motivation for Anna's actions. After spending the day at the Ecology Center, Anna and Jonas spent a little time coming up with a strategy for her group to execute later that evening.

Later that evening, once Anna and Jonas returned home from the Ecology Centre, she went straight to her room to rest. She was dreaming while she was sleeping. In her dream, she became a girl named Nova. Nova has a terminal that is constantly updated with the most recent information on every country's ecosystem and the wide range of plant and animal species that were extinct in 2082. She was taken aback by the fact that the terminal was continually coming to life and displaying the most recent examples of species and ecosystems that had been extinct, like those that had been destroyed by human activity. She felt irrationally angry and sad while being aware that there was nothing, she could do to change the situation.

Nova's terminal, which is constantly updated with the latest information on the world's ecosystems and the extinction of various plant and animal species, serves as a stark reminder of the devastation caused by human activity. Nova had installed the Lost Species app a long time ago, and while she could easily uninstall it, she feels it's her duty to acknowledge the dying out of Earth's species and habitats (p. 28). The continuous updates on the terminal, displaying the most recent examples of extinct species and destroyed ecosystems, leave Nova taken aback and feeling irrationally angry and sad (p. 86-87).

Despite her strong emotions, Nova is aware that there is nothing she can do to change the situation, which further adds to her frustration. However, she refuses to allow those responsible for destroying her planet to take pleasure in her tears and sadness. She resolves to pull herself together and not let her emotions dictate her actions moving forward, determined to find ways to make a difference and prevent further destruction of the environment.

After she had seen a lot of news about the environment on her terminal, suddenly there was a knock at the door, and then a person seemed to float into the room. When Nova turns around, she realizes her great-grandmother, Nana, is standing there. Nana has a ruby ring on her finger, and Nova cannot stop wondering whether or if there is some correlation between that ring and the potential damage it may do to the natural world. When Nova's great-grandmother began to speak about the species that existed in her generation, Nova became enraged because she had just realized that there was nothing she could do to bring back the generation that came before her and that it was impossible to alter the past.

As Nova listens to her great-grandmother, Nana, speak about the past and the species that existed in her generation, she cannot help but be intrigued by the ruby ring on Nana's finger and wonder if it has any correlation to the potential damage, it may have caused to the natural world (p. 41). As Nana's words sink in, Nova becomes increasingly enraged, realizing that she cannot bring back the species that were lost and that it is impossible to change the past (p. 42).

Nova's frustration and sadness are palpable as she expresses her desire for a million plants and animals to come back from extinction, for clean water straight from the tap, and for an end to the current unfavourable weather. However, her momentary glance at Nana's quivering and frightened eyes suggests that she also understands the limitations of what can be achieved. Despite her initial outburst, Nova quickly dismisses her own words as "rubbish," recognizing the impossibility of changing the past and questioning if there is a genie of the lamp that can help them, indicating her realization of the futility of such wishes (p. 42).

Nova's internal conflict between her desire to make a difference and the harsh reality of the situation adds depth to her character and underscores the challenging nature of the environmental issues she is grappling with.

Nana spoke to Nova, who may be understood to represent Anna in this context, in a different tone about the possibility of establishing communication with the people who had inhabited Earth before them. Nana forewarned Anna that this would be her very last chance to preserve the environment and that Nana and Anna would see one another again in seventy years.

During Anna's attempt to preserve the environment, she never stopped daydreaming about what the future may hold regarding the environment. Anna constantly alternated back and forth as Nova in her dream. In the year 2082, a lot of things took place, such as whole continents, nations, and areas losing their native species and attractiveness. There is no longer any ice in the Arctic Ocean, and where the land used to be, only buoys can be seen in places like the Maldives, Kiribati, and Tuvalu. Many of the older coral islands have already been submerged beneath the water. In the area once known as the African Savannah, no one alive today has seen a herd of antelopes, gnu, or giraffes for an entire generation. Now that the herbivores are gone, the carnivores there before have also disappeared. Some of the species have been preserved in zoos for longer, but even those are in danger of extinction presently.

Living her life as Nova in 2082 and witnessing the profound changes that have occurred on the planet over time, Anna feels compelled to take action. The realization that she has been given a unique opportunity to restore the world to how it was when her great-grandmother was sixteen fills her with a sense of purpose (p. 131). Along with Jonas, she has been working tirelessly on various ideas to address the environmental crisis. One of their ambitious plans involves utilizing the green machine that Jonas has constructed to save 1001 different species of plants and animals, a bold undertaking aimed at restoring biodiversity and healing the planet's damaged ecosystems. Anna's determination to make a positive impact and her collaborative efforts with Jonas highlight her proactive and solution-oriented approach to tackling the challenges facing the natural world in the future.

The Contributions of the Minor Characters to Major Character

Dr. Benjamin is a psychiatrist with a pervasive skill set and knowledge base. His knowledge and experience, in addition to his concern for the well-being of individuals, include a concern for environmental problems. His similar concern for environmental problems is one of the reasons why Dr. Benjamin wanted to help Anna to save the environment. During Anna's first appointment, Anna asked the psychiatrist how many billions of tonnes of carbon dioxide humans have emitted into the atmosphere over the last ten years; the psychiatrist answered her question without missing a beat, which surprised Anna. Anna was amazed by Dr. Benjamin's response since not many people had that type of answer at their fingertips, and on top of that, he is a psychiatrist and not an environmental activist. This answer left Anna feeling as if Dr. Benjamin was knowledgeable and could give valuable facts to support Anna's environmental perseverance movement.

'Do you know how many billions of tonnes of carbon dioxide we've released into the atmosphere over the last ten years?

To Anna's surprise, the psychiatrist didn't miss a beat. 'I think today there's about forty per cent more carbon dioxide in the atmosphere than there was before we seriously started burning oil, coal and gas, cutting down forests and farming intensively. It's more than 600,000 years since the CO₂ level was so high, and the problem is man-made.' (p. 17).

Another question proposed by Anna during their conversation is about carbon balance. Anna had been engrossed in discussions about the carbon balance with her boyfriend recently, delving into the intricacies of how it worked and its significance for the planet's health. Her curiosity was piqued, and she found herself eager to learn more about this fundamental ecological concept (p. 21). When she had the opportunity to speak with Dr. Benjamin, her heart leapt with anticipation. As he began explaining the carbon cycle in a clear and concise manner, Anna's fascination grew.

She was captivated by the delicate balance that had existed for hundreds of thousands of years, where plants absorbed carbon dioxide from the air through photosynthesis and carbon was released back into the atmosphere through natural processes like breathing and organic decomposition. However, she also realized with a pang of concern that this balance had been disrupted by human activities, specifically the burning of fossil fuels, which released excess carbon dioxide into the atmosphere. Anna's heightened understanding of the carbon balance deepened her commitment to taking actions that would help restore and protect the delicate equilibrium of Earth's ecosystems.

The more CO₂ there is in the earth's atmosphere, the warmer it gets. Then the ice melts and the glaciers too, and that makes matters worse because snow and ice reflect sunlight, but sea and mountains don't. So, the earth gets even warmer which can cause the tundra to melt. Methane and CO₂ are released into the atmosphere. Methane is also a powerful greenhouse gas, and the earth just continues to heat up. There's more and more steam in the atmosphere, and it gets warmer and warmer (p. 22).

As Anna and Dr. Benjamin concluded their discussion, he offered some advice that struck a chord with her. Dr. Benjamin, being both a psychiatrist and an environmentalist, could see the fervor and concern that Anna possessed for the environment (p. 23). He suggested that she and her boyfriend, Jonas, take action by setting up a pressure group in their village. The idea resonated with Anna, as she had been feeling a growing sense of urgency to make a difference in her community and beyond.

Dr. Benjamin's words inspired her, reaffirming her belief that mere worry without action would not lead to meaningful change. She felt a renewed determination to channel her passion into tangible efforts, and the idea of setting up a pressure group seemed like a promising avenue to make a positive impact. Anna and Jonas eagerly embraced the idea, excited to take concrete steps towards advocating for environmental conservation and spreading awareness in their village and beyond.

Jonas's impact on Anna's motivation is virtually always there in each chapter of the novel. The reason why Jonas wanted to help Anna lies in his background. Anna stated that Jonas is also learning about the world because he takes physics, chemistry, and biology during her conversation with Dr Benjamin (p. 20). Jonas's involvement began when Dr Benjamin suggested that Anna start a pressure group in her village. Jonas agreed to form the group with her, and he would be in charge of the recruitment.

On the train home that night they made plans for their own group. Jonas had agreed to form one with her. He would be in charge of recruitment. Anna had suggested this because Jonas was the most popular boy at school, and he could sign up the girls without even trying.

He laughed: 'But I didn't realize it was a girls' group.'

'No, of course not. But if you sign up the pretty girls, the cool boys will follow.' (p. 25).

Another contribution the writer has discovered is that Jonas helps Anna answer her question on how to save 1001 species of plants and animals. Jonas, always known for his innovative and forward-thinking mindset, was determined to help Anna find an answer to her question on how to save 1001 species of plants and animals. He had been working tirelessly on an essay titled "How are we going to save 1001 species of plants and animals?" (p. 142), As she read through the seven pages of essay, she was amazed by Jonas' invention - the green machine. His idea involved a pay-per-view system where people could sponsor a species by swiping a card and entering a code, and then a video of that species would appear on the screen, creating a form of "game-ification" to raise awareness and funding for conservation efforts (p. 157).

Anna was taken aback by the ingenuity of Jonas' idea and how it aligned with her own passion for environmental conservation. She realized that Jonas had already turned his dream into a reality in the year 2082, as she recalled their past conversations where he had mentioned similar concepts. The essay outlined Jonas' detailed plan on how the green machines could be implemented globally, including in airports, street corners, and underground stations (p. 157). Anna was in awe of Jonas' creativity and dedication to finding

solutions to save endangered species. His invention gave her renewed hope to make a real difference in the preservation of plant and animal species for future generations. She stared at Jonas with a distant look in her eyes, realizing the impact of his invention and feeling inspired by his visionary thinking.

Anna was stunned when she received a letter from herself in the year 2082. As she read through the letter, she was overcome with a sense of sadness and urgency. Her future self detailed the devastating impacts of climate change, the destruction of the natural world, and the extinction of various plants and animals (p. 186). However, amidst the dire situation, Anna's future self also mentioned Jonas' green machines that had been installed all over the globe. This gave Anna a glimmer of hope, knowing that Jonas' invention had made a positive impact in addressing the environmental crisis.

Fueled by her passion for the environment and her determination to make a difference, Anna sought out Jonas to discuss their shared vision of giving planet Earth a second chance. She asked Jonas if he would be willing to join forces with her to continue working towards conservation efforts using his green machines as a tool for raising awareness and funding (p. 186). Jonas, who shared Anna's passion and concern for the environment, readily agreed to help her in this crucial mission.

With renewed determination and Jonas by her side, Anna was inspired to take action and work towards a better future for the planet. They envisioned green machines installed in various locations, including mountains, forests, market squares, street corners, underground stations, and airports, becoming a symbol of hope and a catalyst for positive change (p. 186). Anna and Jonas were determined to use their combined efforts to fight against climate change, protect the natural world, and prevent further extinctions, giving planet Earth a second chance at survival.

*'Jonas, do you promise me that we'll give this planet a second chance?
And that we'll get lots of people to join us?'*

'I do.'

*'Do you really believe in this, Jonas? I want you to believe in what we're
doing.'*

'Yes...' (p. 197).

It is abundantly apparent, in light of all the evidence that the writer has shown, that Jonas's contribution is rather considerable in terms of its impact on Anna's motivation to assist her in preserving the environment.

The writer goes on to analyze the next character, named Nana. The story pictures Nana as Anna in the year 2082, and she had a great-granddaughter who went by the name Nova, which is Anna in the present time. Anna's dream is the only way the writer becomes aware of Nana's presence. Nana's contribution significantly aids Anna's journey toward the preservation of the environment since Nana is also interested in the environment, and she can give vivid pictures of the planet earth in the year 2082.

Anna's very first dream was the origin of her very first contribution. In her dream, Anna (Nova) is astounded by the rapid extinction of almost every animal and plant species on the planet. This occurs within a concise amount of time. The realization that the environment is deteriorating with time not only makes Anna very depressed but also highly enraged. Anna subsequently placed the responsibility for this catastrophe on Nana and the generation that came before her.

Nana, Anna's great-grandmother, shared a mysterious plan with Anna, explaining how they could give a second opportunity to bring back all the animals and plants that once inhabited the planet (p. 43-44). Nana emphasized that this was the very last chance, and there would be no more chances afterward. Nana told Anna that in order to make this happen, Anna would need to swear that she would take care of the restored nature with utmost responsibility.

Anna was captivated by Nana's idea and asked if Nana was planning to make contact with the people who lived on Earth before them to warn them about the future consequences of exploiting nature (p. 43-44). Nana's smile was bewitching as she nodded mysteriously, leaving Anna intrigued about the possibility of this supernatural plan to restore nature. However, Nana also expressed concerns about the damaged state of nature, stating that they may have already passed the point of no return (p. 43-44).

Nevertheless, Anna was determined to fulfill her great-grandmother's plan and swore to take care of the restored nature, knowing that this was the last opportunity to make a positive change for the planet.

Then she speaks in a solemn voice. She sounds almost like a sorcerer: Soon you shall have the earth back the way it was when I was your age, but you must promise me you will look after it. For this is our very last chance. From now on we should always be on our guard. There will be no more chances.' But she wasn't finished: 'And so we shall meet again in seventy years' time. Then it will be you who is called to account.' (p. 46).

The following contribution relates to the letter that was sent to Anna. Nana's letter to Anna depicted a bleak picture of the world in 2082, where the natural world had suffered severe damage and deterioration (p. 187). Despite the uncertain future, Nana expressed her determination to be a part of creating a better world and extended her best wishes to Anna and the world she would grow up in (p. 187). Inspired by her great-grandmother's letter, Anna sought Jonas' support in her mission to give the planet a second chance (p. 198). Anna asked Jonas if he was willing to be part of the fight to restore nature and make a positive change, to which Jonas responded that Anna could persuade him to do anything (p. 198).

Anna was determined to hold Jonas to his words and urged him to join her in the fight for a better future (p. 198). The exchange between Anna and Jonas reflected their shared resolve to not give up hope and to take action to combat the challenges posed by climate change and the destruction of nature. Given the information provided on the contributions that Nana has made, it is clear that the presence of Nana in Anna's life has motivated Anna to start a plan for the preservation of the environment. Nana can give a vivid picture of what the Earth and its surroundings may be like in the future, which makes Anna is prompted to do something to prevent it.

Conclusion

The minor characters are Dr. Benjamin, Jonas Heimly, and Nana. Dr. Benjamin, an eccentric psychiatrist and also an environmentalist, provides Anna with some valuable information related to the environment that can support her movement regarding environmental perseverance, and he also suggests Anna start a pressure group in her village with Jonas. The next character is Jonas. Jonas is depicted as an intelligent and generous person. The contribution made by Jonas was shown when he accepted Anna's invitation to form a pressure group together. In addition, he is helping to respond to Anna's inquiry by providing an answer, and he is the one who suggested making a green machine. As the last minor character, Nana plays her contribution as someone who gives a picture of what the planet earth might be like in the year 2082 alongside Nova's terminal. She is also the one who gives Anna a second chance to save planet earth. Her demeanour is described as serene, and she exudes an aura of mystery. In a nutshell, the contribution of minor character as a collective movement needs to be sustained to preserve environment.

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THE ROLE OF CHARACTER EDUCATION AND ENVIRONMENTAL KNOWLEDGE IN STUDENT AWARENESS SUPPORTING SUSTAINABILITY INITIATIVES IN A UNIVERSITY CONTEXT

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Abstract

The increasing pace of global transformations has brought about a heightened awareness of the importance of sustainability initiatives in educational institutions. Universities assume a crucial role in developing the values and viewpoints of forthcoming generations. The aim of this study is to examine the influence of character education and environmental knowledge on students' awareness and support for sustainability initiatives in a university environment. The research employs a quantitative methodology to collect data from a range of student cohorts enrolled in different academic programs at Sanata Dharma University. The study utilizes a questionnaire survey as the data collection tool to assess the major variables being investigated. The poll used a Likert scale to evaluate the extent to which pupils have been exposed to character education, specifically through the Formasi Cerdas Humanis curriculum. Additionally, it assesses their proficiency in environmental knowledge and their awareness of the importance of fostering sustainability within the context of the university. The study population consists of 280 individuals who are enrolled at Sanata Dharma University. The data analysis procedure entails the application of multiple linear regression analysis, which is executed through the employment of SPSS software. The research findings indicate that there exists a moderately positive correlation between character education, environmental comprehension, and student consciousness regarding the endorsement of sustainability initiatives within the institution. Additionally, the dominance test conducted in this study indicates that environmental information exerts a marginally greater impact on student awareness and endorsement of sustainability programs compared to character education.

Keywords: character education, environmental knowledge, student awareness

Introduction

In the current context, there is a growing and pressing need to tackle the complex and diverse difficulties presented by sustainability (Duvnjak & Kohont, 2021; Iqbal & Ahmad, 2021; Mc Kinsey, 2021). Educational institutions play a crucial role in addressing this urgent issue, as they are tasked with the important task of both imparting information and driving social change (Cook, 2014; Pauw et al., 2015; Vukelić & Rončević, 2021). In the present broad context, our study endeavors to undertake an investigation into the complex interrelationship between character education and environmental knowledge. We aim to examine how these components intersect to influence the awareness and engagement of

university students (Fridayani, Riastuti, et al., 2022), specifically in relation to sustainability activities.

The research we are conducting has great importance due to the complex interplay of various factors that impact student engagement in sustainability initiatives (Müller & Kühn, 2023). In the contemporary era, marked by extensive global interconnectedness and the increasing threat of environmental crises, comprehending the intricate mechanisms through which character education and environmental knowledge impact student awareness assumes an undeniable and pivotal significance (Sahin & Teksoz, 2012). The ramifications of this level of understanding extend beyond the confines of academic discourse, influencing various aspects of society (Fridayani, 2022b; Setyowati, 2015). By conducting a thorough analysis of these complex variables, our objective is to uncover useful knowledge that can form the foundation for fostering a generation characterized by environmental awareness and a deep commitment to civic duty.

To enhance the credibility and scholarly rigor of our research, this introductory section conducts a thorough and painstaking examination of relevant literature. In this endeavor, we heavily rely on a wealth of contemporary scholarly publications from worldwide journals that encompass the fluid and progressing dialogue surrounding sustainability, education, character formation, and environmental consciousness (Biancardi et al., 2023; Nada et al., 2021; Pane & Patriana, 2016a). The act of providing scholarly context is not a superficial or routine task, but rather a purposeful action aimed at strategically situating our study within the extensive body of existing knowledge. (Fridayani, 2022a)

It is important to acknowledge that previous study efforts have primarily concentrated on individual aspects of sustainability education, character development, or environmental awareness, sometimes in a disconnected manner (Piscitelli & D’Uggetto, 2022). Nevertheless, the primary distinguishing feature of our research is in its unwavering dedication to directly uncovering the combined impact of character education and environmental awareness. In this analysis, we examine the influence of this alliance on the framework of student backing for sustainability endeavors, situated inside the complex fabric of a university's scholarly environment. The inclusion of this nuanced perspective is crucial, as it fills a significant gap in the current scholarly literature. Traditionally, the focus has been on examining isolated aspects of sustainability education or character development, without adequately considering their interconnected nature (Fridayani, Kusuma, et al., 2022)

The primary objective of our study is to examine the complex correlation between character education, specifically through the implementation of the "Formasi Cerdas Humanis" curriculum by Sanata Dharma University, and environmental knowledge. This program is compulsory for all students in their first and second semesters, and in its most recent version, it spans a duration of five semesters. Our objective is to elucidate the interplay of these elements in shaping student understanding and support for sustainability initiatives. Located within the unique context of a university environment, our research aims to establish a correlation between theoretical principles and real-world implementations.

The Sanata Dharma University-run "Formasi Cerdas Humanis" program is crucial in raising students' awareness of environmental and sustainability issues. This program, which encompasses a substantial phase of a student's first academic trajectory, endeavors to cultivate not only scholastic expertise but also a robust moral compass and commitment to societal obligations. By a meticulously designed curriculum, this educational program incorporates environmental education and character development, promoting a comprehensive approach to sustainability.

All entering students are required to participate in this program during their initial and subsequent semesters. The recent extension to a duration of five semesters highlights the university's dedication to integrating sustainability ideas extensively into the educational journey. The purpose of providing children with prolonged exposure to character education and environmental knowledge is to shape them into individuals who are ecologically sensitive and socially responsible. In accordance with Kusuma & Fridayani, (2022) theoretical

framework, this initiative is an organizational endeavor aimed at engaging its members to actively participate in alignment with the organization's objectives.

Through an examination of the "Formasi Cerdas Humanis" program in the university setting, our study aims to investigate the influence of this style of character education, in conjunction with environmental information, on the development of student consciousness and the promotion of sustainability endeavors. Our objective is to provide valuable insights that enhance the current body of knowledge on sustainability education and offer a nuanced comprehension of the impact of character education programs, such as "Formasi Cerdas Humanis," in fostering environmentally conscious students who actively promote sustainability.

The research referenced in the search results mostly concentrate on examining the impacts of sustainability education and eco-character development on different aspects of students' cognitive domains. These studies are relevant and significant in their scope and analysis. This encompasses various facets, such as the acquisition of knowledge, the dynamics of their interaction with the environment, and the underlying motivations that drive people to engage in pro-environmental actions. In the context of this complex framework of inquiry, our aim is to provide insightful contributions to the continuing dialogue surrounding sustainability education. We suggest that these insights possess the capacity to function as guiding principles, shedding light on the trajectory towards the creation of more effective educational practices and policies. By doing so, individuals may provide future leaders and citizens with the necessary skills and knowledge to passionately advocate for and successfully implement sustainable practices in an ever more intricate and interconnected global context.

Methodology

The methodology employed in this study refers to the systematic approach and set of procedures used to collect. This study article utilizes a quantitative methodology to examine the impact of character education and environmental knowledge on student consciousness and endorsement of sustainability projects in a university setting. The methodology section is organized in a manner that offers a thorough outline of the research design, methods employed for data collection, and procedures for data analysis.

The chosen methodology for this study is a quantitative research approach. Positivist research methods are used in this study to find out if there is a link between the independent factors, such as character education and environmental knowledge, and the dependent variable, which is students' awareness of and support for sustainability projects. The positivist paradigm is highly suitable for conducting quantitative research to analyze the influence of particular variables on student behavior and attitudes.

The first step in data collection involves the development of the instrument. With the intention of measuring character education, Sanata Dharma University has developed a survey tool to assess the effectiveness of its "Formasi Cerdas Humanis" program. This test encompasses components pertaining to the program's content, delivery, and perceived influence on the character development of pupils. In order to test students' environmental knowledge, we utilize questions that evaluate their comprehension of sustainability principles and environmental concerns.

Sampling is a fundamental technique used in research to select a subset of individuals or items from a larger population. It allows researchers to make The sample comprises 280 students enrolled in different academic programs at Sanata Dharma University, thereby ensuring a diverse representation of educational backgrounds.

The methodology employed for data collection in this study is described in this section. The collection of data will be facilitated through the utilization of self-administered questionnaires. The participants will receive comprehensive information regarding the objective of the research, and their involvement will be entirely voluntary and treated with the utmost confidentiality.

The surveys will be disseminated via electronic means, ensuring that participants are afforded sufficient time to complete them. The concepts of validity and reliability are crucial in research and measurement (Sugiyono, 2021). Validity refers to the extent to which a study or measurement accurately measures what it intends to measure. It ensures that the results obtained are meaningful and The survey instrument underwent a comprehensive process of validation and reliability testing in order to assure its robustness. The assessment of validity was conducted by expert reviewers, while the measurement of reliability was accomplished by the utilization of internal consistency metrics, specifically Cronbach's alpha.

The first type of analysis conducted in this study is descriptive analysis. The demographic characteristics of the participants and the important factors of interest, such as character education, environmental understanding, and student awareness, will be summarized using descriptive statistics.

Hypothesis Testing: Before performing multiple linear regression analysis, it is necessary to assess various fundamental assumptions, which include examining the normality of the data distribution, evaluating multicollinearity, and assessing heteroscedasticity. The administration of these tests is of utmost importance in order to ascertain the veracity of regression findings.

Multiple linear regression is a statistical technique used to model the relationship between multiple independent variables and a dependent variable. It is an extension of simple linear regression, which only considers one independent variable. Multiple linear regression allows for In order to examine the associations among character education, environmental knowledge, and student awareness and support for sustainability activities, a statistical technique known as multiple linear regression analysis will be utilized. This methodology enables the evaluation of the distinct impacts of individual independent variables while accounting for any confounding effects.

The subject of discussion is software. The data analysis will be conducted using the Statistical Package for the Social Sciences (SPSS) software. The SPSS offers the essential tools for doing regression analysis and running tests to assess the assumptions underlying the study.

The utilization of quantitative data collection and analysis methodologies will facilitate an examination of the complex interconnections among character education, environmental knowledge, and student awareness and support for sustainability initiatives. This research endeavor will yield significant contributions to the field of sustainability education within the university setting by providing valuable insights.

Results and Discussion

This section provides an overview of the findings obtained from the analysis of the data and examines their significance in relation to the study objectives and relevant studies outlined in the introduction. Furthermore, the analysis has been strengthened by providing a comprehensive account of the results obtained from instrument data testing, which encompasses assessments of validity and reliability as well as classical assumption tests. This meticulous approach ensures the robustness and credibility of the research.

The purpose of this study is to conduct instrument data tests.

The validity test is a method used to assess the accuracy and soundness of a certain concept, theory, or measurement tool. The validity test was conducted to assess the validity of all items in the questionnaire. The results indicated that the significant values for all items were below the threshold of 0.05, thereby confirming their validity. Table 1 shows that this finding suggests that the items are successful in accurately assessing the intended construction. The instrument underwent a thorough validation process, including expert

evaluations, to confirm its ability to appropriately measure the complexities of character education and environmental knowledge.

Table 1. Validity Test Results

Items	r value	Sig.
X1.1	0,727	0,000
X1.2	0,740	0,000
X1.3	0,730	0,000
X1.4	0,632	0,000
X1.5	0,669	0,000
X2.1	0,793	0,000
X2.2	0,789	0,000
X2.3	0,734	0,000
X2.4	0,710	0,000
X2.5	0,793	0,000
Y1	0,785	0,000
Y2	0,843	0,000
Y3	0,846	0,000

The reliability test is a method used to assess the consistency and stability of a measurement or instrument. All variables exceeded the suggested threshold of 0.6, according to the Cronbach's alpha reliability assessment, demonstrating a high level of internal consistency and reliability for the questionnaire. This suggests that the questionnaire items exhibit consistent measurement of the characteristics both longitudinally and across diverse samples.

Table 2. Reliability Test Results

Variable	Number of Items	Cronbach Alpha
Environmental knowledge	5	0,713
Character education	5	0,821
Students awareness	3	0,764

The topic of discussion pertains to classical assumption tests.

The normality test is a statistical procedure used to assess whether a given dataset follows a normal distribution. The data had a normal distribution, as evidenced by the results of a one-sample Kolmogorov-Smirnov test. The test yielded a significance value of 0.200, surpassing the predetermined threshold of 0.05. This indicates that the condition of normalcy is satisfied, hence confirming the suitability of parametric tests.

The multicollinearity test is a statistical procedure used to assess the presence of multicollinearity in a regression model. The tolerance and variance inflation factor (VIF) values for character education and environmental awareness were looked at as part of the assessment of multicollinearity. The tolerance values of 0.677 and VIF values of 1.478 suggest the absence of multicollinearity concerns. Tolerance values greater than 0.1 and VIF values less than 10 suggest the absence of multicollinearity. This assures that the independent variables are mutually exclusive and do not exhibit any form of collinearity.

The Heteroscedasticity Test is a statistical procedure used to assess the presence of heteroscedasticity in a dataset. The scatter plot analysis revealed a distribution of data points that were dispersed, suggesting a lack of heteroscedasticity within the dataset. This

suggests that the residual variance remains constant throughout the whole range of expected values.

Feasibility Analysis

The practicality of the model was assessed by examining the adjusted R-squared value, which was determined to be 0.494. These findings suggest that the integration of environmental knowledge and character education can account for 49.4% of the variability observed in student awareness and endorsement of sustainability activities. The remaining 50.6% is attributed to additional variables that have not been thoroughly investigated.

Furthermore, the analysis of variance (ANOVA) table revealed a substantial F-statistic of 136.449, accompanied by a significance level of 0.00. This indicates that the combined influence of the independent factors effectively accounts for the variations observed in the dependent variable. This finding indicates a high level of goodness-of-fit for the model. The elevated adjusted R-squared value suggests that the model exhibits a strong ability to elucidate the fluctuations in student awareness and support for sustainability activities.

The topic of interest in this study is hypothesis testing.

Table 3. Multiple linear regression analysis

Variable	B	t	Sig.
Environmental knowledge	0,274	-0,075	0,940
Character education	0,251	6,665	0,000

Dependent Variable: Students awareness

Hypothesis 1 posits a relationship between environmental knowledge and student awareness of sustainability initiatives.

The initial hypothesis postulated that there exists a strong and positive relationship between environmental knowledge and the level of student awareness and support for sustainability activities implemented on campus. The findings of our investigation provide robust support for the aforementioned concept.

The p-value linked with environmental knowledge was determined to be 0.000, indicating a substantial deviation from the standard significant threshold of 0.05. The aforementioned observation suggests a strong and statistically significant correlation between individuals' level of environmental knowledge and their awareness of and endorsement of sustainability programs. As students' level of environmental knowledge rises, there is a corresponding increase in their awareness of sustainability challenges and their propensity to endorse and engage in associated projects.

This discovery aligns with the extensive collection of scholarly works that repeatedly emphasize the influence of information acquisition on the development of pro-environmental attitudes and behaviors (Ahmad et al., 2015; Estrada-Araoz et al., 2023; Firmanshah et al., 2023). Students who possess a more profound comprehension of environmental matters are inclined to acknowledge the importance of sustainability endeavors and actively participate in their promotion. This statement is in accordance with the concept that people who possess knowledge and understanding are more capable of recognizing the significance of sustainable practices and implementing effective measures to tackle environmental issues.

Hypothesis 2 posits a relationship between character education and students' awareness of sustainability initiatives.

The second hypothesis posits that character education has a substantial and beneficial impact on students' awareness of and endorsement of sustainability activities. The theory in question also receives robust empirical support based on our investigation.

The statistical analysis revealed that the significance value attributed to character education was determined to be 0.000, which is significantly lower than the predetermined significance threshold of 0.05. These findings suggest a substantial and favorable impact of character education on students' level of awareness and endorsement of sustainability activities. Fundamentally, as pupils engage in character education programs, their comprehension of sustainability matters is heightened, along with their inclination to actively endorse sustainability endeavors.

The observed result aligns with the theoretical underpinnings of character education, which prioritize the cultivation of values, ethics, and a commitment to societal obligations (García-Álvarez et al., 2023; Pane & Patriana, 2016b). Character education programs, such as the "Formasi Cerdas Humanis" initiative implemented at Sanata Dharma University, aim to cultivate attributes such as empathy, ethical decision-making, and a dedication to the betterment of society and the environment. When students participate in character education, there is an increased likelihood that they will internalize these principles, leading to a greater inclination to actively participate in sustainability projects.

In conclusion, the empirical data provides robust support for both hypotheses, confirming the substantial and favorable associations between environmental knowledge, character education, and student awareness of and endorsement of sustainability activities. The aforementioned findings highlight the significance of fostering knowledge and character growth in order to cultivate environmentally aware and socially accountable university students who actively engage in sustainability initiatives within the campus community. The views expressed are in accordance with existing scholarly works and emphasize the capacity of educational institutions to have a profound impact on fostering upcoming leaders and citizens who possess a strong dedication to sustainability ideals.

The dominance test

The dominance test is a method used to assess the level of dominance exhibited by an individual or group in a given situation. (Ghozali, 2018). The dominance test is a useful tool for determining the relative impact of different variables on the dependent variable. The findings of this study indicate that environmental awareness has a significant role in shaping students' involvement in sustainability initiatives. The beta coefficient for environmental knowledge (0.274) was bigger than the beta coefficient for character education (0.251), which means that environmental knowledge has a bigger effect on students' awareness of and support for sustainability measures on campus. This result highlights the crucial significance of acquiring knowledge in promoting environmental awareness and encouraging pro-sustainability actions among students.

In summary, the findings of this study offer empirical evidence that highlights the significant influence of environmental knowledge and character education on the development of student consciousness and endorsement of sustainability endeavors within a university setting. The conclusions are ensured to be robust through rigorous validation and reliability testing, adherence to classical assumption requirements, and model feasibility analysis.

Moreover, the recognition of environmental knowledge as the prevailing determinant underscores the significance of disseminating knowledge to enhance the understanding and engagement of sustainability among college students. The aforementioned discoveries make a valuable contribution to the wider conversation surrounding sustainability education. They highlight the importance of using both knowledge-based and values-based methods in order to cultivate individuals who are ecologically aware and accountable.

Conclusion

In short, the main goal of this study was to look at how teaching about the environment and building good character, especially through the "Formasi Cerdas Humanis" program, affects students' level of awareness and support of sustainability efforts in a university setting. The results of this research provide insight into the intricate dynamics between these variables and their influence on student conduct and perspectives.

The research conducted yielded a number of significant findings:

Initially, it was determined that possessing environmental knowledge had a notable and favorable correlation with students' level of awareness and endorsement of sustainability endeavors within the university setting. As the level of environmental knowledge among students improved, there was a corresponding rise in their awareness of sustainability issues and their inclination to actively support projects linked to sustainability. This highlights the significance of acquiring information in promoting environmental awareness and engagement among university students.

Additionally, the "Formasi Cerdas Humanis" program was found to be a substantial and positive factor in fostering student understanding and promoting support for sustainability measures. Character education programs have been crucial in changing students' attitudes and behaviors towards sustainability by fostering the development of values, ethics, and a sense of social responsibility.

Furthermore, the results of the dominance test indicated that environmental knowledge exerted a marginally more significant influence on student engagement in sustainability initiatives compared to character education. This suggests that approaches centered around knowledge may possess a slightly larger impact within the specific parameters of this research.

The aforementioned findings highlight the significant importance of education in fostering environmentally aware and socially accountable university students. Additionally, there is an emphasis on the necessity of adopting a comprehensive approach to sustainability education, which involves the integration of knowledge dissemination and the cultivation of character development.

Given the aforementioned findings, it is recommended that future research initiatives delve into the precise processes through which character education and environmental information intersect, hence exerting an influence on student attitudes and behaviors. Furthermore, doing research on the enduring impacts of sustainability education on students as they advance in their academic trajectory and transition into their careers has the potential to provide significant and meaningful findings.

In summary, this study makes a valuable contribution to the continuing scholarly conversation surrounding sustainability education in higher education institutions. It underscores the importance of acquiring knowledge and developing personal attributes in order to cultivate a cohort of students who actively advocate for and participate in sustainability endeavors (Fridayani et al., 2023). Educational institutions can enhance their potential to equip future leaders and people with the necessary skills to effectively tackle global sustainability challenges by comprehending the intricate interplay between these dimensions.

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ASSESSING STUDENT DEDICATION IN ESTABLISHING A SUSTAINABLE CAMPUS: EXPLORING THE INFLUENCE OF ATTITUDES AND BEHAVIOR

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Abstract

The objective of this study is to investigate the impact of students' attitudes and behaviors on the advancement of sustainability within a university setting, specifically in relation to sustainability concerns. The study will place particular emphasis on the students' engagement in promoting a sustainable campus environment. In addition to the aforementioned, this study also conducted many assessments on each component pertaining to attitudes, behaviors, and involvement, specifically focusing on male and female students. The employed study technique adopts a quantitative approach, wherein questionnaires serve as the primary instrument for data gathering. The analytical methodologies employed encompass nested linear regression analysis and the independent sample t test. The research sample comprised 116 male students and 116 female students enrolled at Sanata Dharma University. The findings of the study indicate that attitude does not have a significant impact on student involvement, while behavior does have a partial impact on student involvement. Additionally, the statistical analysis reveals that there is not significant difference between male and female students in terms of their attitudes, behaviors, and involvement in sustainability actions within the campus environment.

Keywords: attitudes, behavior and involvement of students in sustainability issues on campus

Introduction

In recent times, the endeavor to achieve sustainability has transformed into a worldwide necessity, surpassing geographical limits and infiltrating diverse domains of society (Amui et al., 2017; Ketprapakorn & Kantabutra, 2022; Suriyankietkaew et al., 2022). Significantly, the dedication to sustainability has expanded its influence within institutions of higher education, wherein universities, acknowledged as hubs for the creation and distribution of knowledge, currently assume a crucial function in promoting sustainability principles. These educational institutions are progressively committed to not only imparting knowledge and skills to the upcoming cohort of leaders but also showcasing responsible management of resources and the environment within the boundaries of their campuses. (Fridayani, 2022)

This study undertakes an investigation of the concept of university sustainability, focusing particularly on the significant contribution of students to fostering sustainable campus environments. The motivation for this study stems from the increasing recognition

that student attitudes and behaviors have a significant impact on the sustainability measures implemented by universities. Considering that students are the main members of academic institutions, their active involvement in establishing sustainable practices within the campus community has become extremely important. This pertains to the notion of institutions and organizations, wherein the viability of their operations is contingent upon the presence of a robust commitment among their members. (Kusuma & Fridayani, 2022)

The significance of this subject has been highlighted in the global academic sphere, as multiple research studies have explored the complex interrelationships of student attitudes and behaviors and their engagement in sustainability initiatives within educational environments (Cook, 2014; Filho et al., 2023a; Piscitelli & D’Uggento, 2022; Şemin, 2019). By conducting a complete analysis of these scholarly inquiries, our objective is to ascertain observable trends, identify areas of knowledge that require more exploration, and achieve a comprehensive understanding of the complex dynamics involved.

A recent scholarly study highlights the need to evaluate the interaction between student attitudes and practices and their impact on promoting sustainability on college campuses (Azhar et al., 2022; Filho et al., 2023b; Holison, 2023; Mohammadi et al., 2023). A number of these studies have utilized quantitative approaches, employing instruments such as surveys and statistical analysis to investigate these correlations. Although significant insights have been gained from these efforts, there is still a necessity for additional investigation, specifically within the distinctive cultural and institutional framework of Universitas Sanata Dharma.

What sets this study apart from other research is its specific emphasis on the context of Universitas Sanata Dharma, examining the impact of student attitudes and behaviors on sustainability activities within this unique academic environment. Moreover, the present study aims to provide a scholarly contribution by examining potential gender-related differences in student attitudes, behaviors, and involvement in sustainability initiatives.

The primary objective of this study is to examine the influence of student attitudes and actions on their active advocacy for sustainability within the school setting. Our objective is to fill a current void in research and offer valuable perspectives that can assist university administrators, educators, and policymakers in their efforts to create and maintain ecologically sustainable campuses.

In the following parts, we will go into the complexities of the research methodology, data analysis, conclusions, and subsequent consequences of this study. The primary goal of our study is to contribute to the existing body of knowledge on campus sustainability, specifically focusing on the complex relationship between student attitudes and behaviors in this context.

The attitudes and behaviors exhibited by university students have a substantial impact on the promotion and maintenance of sustainability initiatives within the campus environment. The following are a few ways in which they exert influence on the sustainability of the campus:

The sustainable activities of college students are significantly and positively associated with their attitudes towards the environment (Kirby & Zwickle, 2021a). Environmental education programs have been found to enhance students' knowledge and foster favorable attitudes towards sustainability (Sahin & Teksoz, 2012). According to research findings, university students have a higher frequency of engaging in sustainable activities, possess more pronounced attitudes towards sustainability, and demonstrate a greater level of knowledge in comparison to the general public (Chandler, 2020). The views and actions of students toward sustainability and climate change have an impact on their environmental behaviors (Fernández et al., 2020). According to previous research (Franzidis et al., 2023), several factors have been identified as influential in shaping the recycling intentions and behaviors of college students on campus. (Cho, 2019)

These factors include self-determined motivation, attitude towards recycling, perceived behavioral control, and negative anticipated emotion. Universities must actively foster sustainability knowledge and facilitate the transformation of students' ecological

footprints, as well as their connection with nature and pro-environmental attitudes (Cho, 2019). In general, it is imperative for universities to prioritize the dissemination of sustainability knowledge and the cultivation of pro-environmental attitudes and behaviors among students in order to establish a campus that is sustainable in nature.

Using the results of previous academic studies, our research aims to learn more about the unique environment of Universitas Sanata Dharma in order to understand how student attitudes and behaviors affect their participation in sustainability projects in this particular academic setting. By undertaking this endeavor, our objective is to provide significant perspectives that help enlighten university administrators, educators, and policymakers in their endeavors to cultivate sustainability within the campus community.

In the following parts, we will explore the methodology, data analysis, findings, and implications of this study, aiming to contribute to the existing discourse on campus sustainability and its complex relationship with student attitudes and behaviors.

Methodology

The chosen methodology for this study is a research approach. A quantitative methodology was chosen to address the research inquiries. This methodology was considered appropriate as it sought to assess the associations between variables under scrutiny within an extensive dataset, comprising the entirety of the student body at Sanata Dharma University. The quantitative technique facilitates a comprehensive statistical examination of the gathered data. (Sugiyono, 2021)

The concepts of population and sample are fundamental in research and statistical analysis. The population refers to the entire group of individuals or objects that are of interest to the researcher. The study sample consists of the entire student population at Sanata Dharma University. Nevertheless, as a result of limitations in resources and time, a representative sample was selected from the aforementioned population. The research sample included 116 male and 116 female students. To guarantee equitable representation of both genders, this sample was selected in a random manner.

The process of gathering and acquiring data By giving questionnaires to the people who make up the research sample, this study was able to collect the data it needed. The questionnaire was meticulously designed to assess the attitudes, behaviors, and level of engagement of students about sustainability matters within the university setting. The questionnaire comprises pertinent inquiries and has undergone rigorous validation testing prior to its implementation.

The field of data analysis involves the examination and interpretation of data in order to extract meaningful insights and draw conclusions. The data that has been gathered will be subjected to analysis through two basic methodologies: multiple linear regression analysis and an independent sample t-test. Multiple linear regression analysis is a statistical technique used to examine the relationship between a dependent variable and multiple independent variables (Ghozali, 2018). It allows for the identification and quantification of the individual contributions of each independent variable to the variation in the dependent variable. The purpose of this analysis is to assess the impact of attitude and behavior variables on student engagement in the promotion of sustainability within the campus environment. The utilization of multiple linear regression enables the evaluation of the degree to which these variables contribute to the variability observed in student engagement results.

The independent sample t-test is a statistical test used to compare the means of two independent groups. The purpose of this test is to conduct a comparative analysis of the means of attitude, behavior, and engagement characteristics among male and female students. Through the implementation of this experiment, we can assess the presence of notable disparities between the two cohorts with respect to the variables being examined.

The selection of this approach was conducted with great consideration in order to assure the proper acquisition of the necessary data for addressing the research inquiries and to ensure that the analysis employed is in line with the research aims. Therefore, the primary

objective of this study is to offer significant perspectives on the subject of sustainability within the campus environment of Sanata Dharma University.

Results and Discussion

This section is about the results of analyzing the data, and then look at what those results mean in the context of the research questions and studies mentioned in the introduction.

The present study aims to assess the validity and reliability of the tests used in this research. Prior to engaging in the primary analysis, it is imperative to ascertain the integrity and reliability of the gathered data. Initially, an evaluation was conducted to determine the credibility and reliability of the data. The findings of the study in Table 1 suggest that the collected data can be considered legitimate, as the calculated significance values were found to be below the threshold of 0.05

Table 1. Validity Test Results

Items	r value	Sig.
X1.1	0,836	0,000
X1.2	0,889	0,000
X1.3	0,849	0,000
X1.4	0,879	0,000
X2.1	0,662	0,000
X2.2	0,708	0,000
X2.3	0,595	0,000
X2.4	0,633	0,000
Y1	0,815	0,000
Y2	0,868	0,000
Y3	0,790	0,000
Y4	0,867	0,000

Subsequently, an assessment of the data's trustworthiness was conducted through the utilization of Cronbach's alpha. Based on Table 2, the results of the study indicated that all collected data had a significant level of dependability, as evidenced by Cronbach Alpha coefficients surpassing the threshold of 0.6. This implies that the survey instrument employed in this study exhibited reliability in assessing the constructs being examined.

Table 2. Reliability Test Results

Variable	Number of Items	Cronbach Alpha
Attitude	4	0,883
Behaviours	4	0,620
<i>Involvement of students</i>	4	0,855

The topic of discussion pertains to classical assumption tests.

In order to ascertain the resilience of the data and the suitability of the analytical techniques employed, traditional assumption tests were performed. The use of these tests is imperative in order to ascertain whether the data conform to the assumptions required for the statistical analysis.

The normality test findings obtained using Monte Carlo simulation indicate a significance value of 0.242, surpassing the threshold of 0.05. Consequently, the data is

deemed to exhibit a normal distribution. The multicollinearity test yielded results indicating that the VIF value for X1 is within an acceptable range. Additionally, the scatter plot graph demonstrates a uniform distribution of data points. Consequently, it can be inferred that the dataset utilized in this study does not exhibit heteroscedasticity.

The findings of the multiple linear regression analysis are as follows: Once the data has been determined to be valid and reliable and has satisfied the assumptions of classical test procedures, the subsequent procedure involves conducting a multiple linear regression analysis test. In this examination, it is necessary to initially assess the model's viability or adequacy, which may be evaluated by examining the coefficient of determination and conducting the Anova test. The coefficient of determination, as indicated by the adjusted R2 value of 0.166, or 16.6%, reveals that attitudes and behavior have a 16.6% influence on student involvement. It is important to note that the remaining 83.4% is influenced by variables beyond the scope of this research. In addition, the results of the Anova test indicate that the computed F value of 24 exceeds the critical F value of 3.04, and the significance level of 0.00 is less than the predetermined threshold of 0.05. Therefore, it can be inferred that the research possesses a viable model.

A multiple linear regression analysis was performed in order to examine the distinct effects of attitude and behavior on student engagement in sustainability activities at the university. Table 3 shows that the findings of this analysis indicate that attitude did not exert a statistically significant partial impact on student involvement in campus sustainability efforts because because the significance value of 0.940 is greater than 0.05. However, it was observed that behavior demonstrated a statistically significant partial influence on student engagement in campus sustainability initiatives because the significance value of 0.000 is smaller than 0.05.

Table 3. Multiple linear regression analysis

Variable	t	Sig.
Attitudes	0,075	0,940
Behaviours	6,665	0,000

Dependent Variable: Involvement of students

The lack of a significant partial influence of attitude on student involvement can be due to multiple variables. One potential explanation is that although attitudes can offer understanding of an individual's inclination towards sustainability, they do not necessarily result in tangible behaviors or engagement in sustainability endeavors. Put simply, possessing a favorable disposition towards sustainability does not inherently result in active engagement in endeavors pertaining to sustainability. Students may possess positive views, although their actions may not always align with these sentiments due to a multitude of limits or conflicting goals that arise from their academic and personal circumstances.

However, the substantial impact of behavior on student involvement is consistent with the notion that concrete behaviors and practices play a crucial role in fostering sustainability within the campus setting. When students actively engage in sustainable behaviors, such as recycling, conserving energy, or endorsing eco-friendly projects, they exhibit a higher propensity to involve themselves in sustainability initiatives within the school environment. These behaviors not only demonstrate their dedication to sustainability but also directly contribute to the advancement and achievement of sustainability efforts.

Additionally, it is crucial to keep in mind that a wide range of factors, including institutional guidelines, peer pressure, and the availability of resources and infrastructure, can affect behavior. When a university actively promotes and enables sustainable activities, there is a higher probability of students adopting and engaging in these behaviors. The correlation between behavior and engagement highlights the significance of establishing a conducive atmosphere that fosters sustainable actions among students.

In brief, the findings derived from the multiple linear regression analysis indicate that although views can influence students' perspectives on sustainability, it is their tangible behaviors and activities that exert a more substantial influence on their degree of

involvement in sustainability endeavors within the campus context. This discovery highlights the significance of cultivating tangible sustainable practices among students and offering essential assistance and tools to encourage sustainable behavior within the university community.

The results of the independent sample t-test are presented here. The researchers utilized the independent sample t-test to examine potential disparities in views, behaviors, and involvement in sustainability activities among students depending on gender. Table 4 shows that the findings of this study revealed that there were no statistically significant disparities observed between male and female students with regards to their views, practices, and level of involvement in sustainability programs within the campus environment. The reason behind this observation might be attributed to the statistical significance level in the independent sample t-test for all three variables.

Table 4. Independent Sample t-test Results

Variable	Sig.
Attitude	0,694
Behaviours	0,762
<i>Involvement of students</i>	0,145

The lack of substantial gender-based disparities in this particular setting can be comprehended by considering many logical rationales:

1. **Promoting Equality in the Educational Environment:** Universitas Sanata Dharma, akin to other contemporary universities, is presumed to cultivate an educational environment that is inclusive and characterized by equitable practices. Within this particular context, it is evident that students of both genders are provided with an equitable opportunity to partake in sustainability education, engage in awareness campaigns, and avail themselves of various avenues for involvement (Fridayani et al., 2022). When individuals of both genders are provided with comparable sustainability initiatives and educational resources, it has the potential to alleviate disparities in attitudes and behaviors that arise due to gender.
2. **Evolution of Social Norms:** Present-day civilizations are progressively transitioning towards the adoption of gender-inclusive norms and expectations. With the increased awareness of sustainability, there is a growing prevalence of people of various genders engaging in sustainable activities and initiatives. The observed alteration in societal standards has the potential to facilitate the alignment of attitudes and behaviors pertaining to sustainability across individuals, irrespective of their gender.
3. **Widespread Environmental Concern:** The concern for the environment is a universally recognized value that extends across gender distinctions. A significant number of individuals, irrespective of their gender, exhibit a sincere inclination towards environmental sustainability and acknowledge its inherent significance. The presence of this common concern may result in the development of comparable attitudes and behaviors pertaining to sustainability within both male and female student populations.
4. **Characteristics of the Sample:** The distinct attributes of the sample, such as the demographic composition of the university and the level of homogeneity among the student population, might also play a role in the lack of gender-related disparities. In the event that a university possesses a student body characterized by diversity and inclusivity, alongside a collective dedication to sustainability, it is probable that views and behaviors pertaining to sustainability will exhibit consistency among students of both genders.

In short, the fact that the results of the independent sample t-test were not statistically significant shows that, at Universitas Sanata Dharma, gender does not seem to have a big effect on how people think, act, and get involved in sustainability programs. This

discovery highlights the notion that duty and dedication to sustainability are collective endeavors among students, irrespective of their gender. Furthermore, it underscores the significance of establishing a comprehensive and fair atmosphere that fosters consciousness and engagement in sustainability among every constituent of the academic institution [01]. This statement underscores the significance of collaborative endeavors in fostering sustainability among the entire student body, as well as the necessity for a complete and equitable academic environment within educational institutions. The main focal points encompass the involvement of universities in providing sustainability courses, the provision of sustainability education at an early stage, the implementation of activity-based interventions, and the significance of mobile learning in promoting sustainability consciousness. (Alsaati et al., 2020; Ayu et al., 2020; Kaur & Kaur, 2022)

The results of this study are consistent with existing academic literature, which has emphasized the importance of student conduct in fostering sustainability efforts inside educational institutions. Attitudes have a crucial role in shaping individuals' overall perspectives on sustainability (Kirby & Zwickle, 2021b; Vukelić & Rončević, 2021; Winkelmair et al., 2023). However, it is the concrete actions and behaviors that appear to exert a more significant influence on their active engagement in sustainability activities.

Furthermore, the absence of substantial disparities in views, behaviors, and involvement in sustainability endeavors based on gender aligns with the notion that sustainability surpasses gender borders and is a collective obligation among students, irrespective of their gender.

The findings presented in this study provide valuable insights into the correlation between students' views and behaviors in relation to campus sustainability. Administrators and educators can use these findings to direct strategies that promote sustainability within the academic setting, with a focus on encouraging sustainable behaviors among students.

In general, this study offers significant contributions to the understanding of sustainability involvement among college students and emphasizes the significance of fostering sustainability through concrete activities and behaviors. Future investigations should delve into supplementary variables that might impact student involvement in sustainability endeavors within distinct cultural and institutional settings.

Conclusion

In summary, this study has yielded significant findings about the correlation between student attitudes, behaviors, and involvement in sustainability endeavors within the specific setting of Universitas Sanata Dharma. The study's primary findings and conclusions can be summarized as follows:

1. **Attitudes vs. Behaviors:** The findings from the multiple linear regression analysis indicate that, in relation to student engagement in campus sustainability actions, attitudes did not have a statistically significant partial influence, whereas behaviors demonstrated a statistically significant partial influence. This highlights the significance of implementing concrete and enduring measures to enhance student involvement in sustainability endeavors. The active engagement of students in sustainable practices significantly contributes to the promotion of sustainability within the campus environment.
2. **Gender-Based Differences:** The findings from the independent sample t-test revealed that there were no statistically significant disparities based on gender in terms of attitudes, practices, and involvement in sustainability activities among the student population. The present discovery indicates that, in the specific setting of Universitas Sanata Dharma, gender does not seem to exert a substantial influence on the attitudes and behaviors of students towards sustainability.

The aforementioned findings underscore the imperative for higher education institutions to encourage and foster sustainable behaviors within their student population. The cultivation of favorable attitudes towards sustainability is of utmost importance; however, it is the transformation of these views into tangible activities that effectively promotes sustainability within the academic community.

Furthermore, the absence of gender-based disparities in sustainability beliefs and actions underscores the university's commitment to inclusivity and equity in its sustainability initiatives. The statement posits that the university has effectively fostered an atmosphere wherein sustainability is a collective obligation and dedication embraced by all students, irrespective of their gender.

In order to advance future studies, it is recommended that scholars delve into supplementary variables that could potentially impact student engagement in sustainability projects across a range of cultural and institutional settings. In addition, it is crucial to undertake longitudinal studies in order to monitor the progression of sustainability attitudes and behaviors over an extended period and evaluate their enduring influence on campus sustainability.

In summary, this research makes a valuable contribution to the wider academic conversation surrounding campus sustainability and underscores the importance of sustainable practices in motivating student involvement in sustainability endeavors.

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COMPARISON OF PERSONAL DATA THEFT LAWS IN THE BJORKA CASE IN INDONESIA AND POLAND

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Abstract

Information in the form of personal data is inevitable with internet-based applications. Legal protection of personal data is important to protect a person's right to privacy. A hacker named "Bjorka" who claims to come from Poland is currently becoming a conversation for committing personal data theft in Indonesia. This study aims to analyze the comparison of legal regulation and protection of personal data in Indonesia and Poland. The research method used by the author is the normative juridical method. This study uses secondary data types consisting of primary, secondary, and tertiary legal materials. Personal data theft arrangements in Indonesia are currently regulated by the Personal Data Protection Act. In the Bjorka case, because the law does not apply retroactively, legal arrangements and protections are based on the Information and Electronic Transactions Law with a maximum imprisonment of 10 years and/or a maximum fine of Rp. 5,000,000,000.00. Legal arrangements and protections in Poland are based on the Polish Criminal Code with a maximum penalty of 2 years in prison.

Keywords: Comparative Law, Personal Data, Bjorka

Introduction

The development of information and communication technology has a significant impact on modern human life. Various conveniences can be obtained with advances in technology and information. Humans can connect via the internet, make digital payments practical and fast, and read accurate maps, it could even be said that almost all problems in modern human life can be solved by the internet. It is not surprising that the number of internet users always increases from year to year. Based on a survey from the Association of Internet Service Providers in Indonesia in 2019-2020, the number of Internet users reached 73.7% of the total population of Indonesia. Internet use has increased with the onset of the Covid-19 pandemic in Indonesia. In the 2021-2022 period, internet users reached 201.03 million users or around 77.02% of the total population in Indonesia. In 2023 internet users reach 215.63 million users or approximately 78.19% of Indonesia's total population. (Finaka, 2023)

The increasing use of technology led to a "world without borders" meaning that people can access anything via the internet network. Distance and time are no longer communication barriers. The development of technology and communication creates opportunities and challenges simultaneously. The use of interconnection networking is an electronic information and communication medium that provides various activities such as e-commerce, education, e-health, e-government, e-payment, transportation, tourism, and the development of cloud computing. Cloud computing is an application that provides storage space for user data such as Google Drive, iCloud, Dropbox, YouTube, and so on. The convenience provided by the internet needs to be accompanied by an increasing quality of users. Improving Indonesian people's knowledge quality in utilizing information technology

is one of the national development goals that must be achieved to face global challenges. (Sudaryanti, 2013)

The Indonesian government is also innovating by creating applications that make things easier for its citizens. The government started this step by introducing the electronic KTP (e-KTP) program. The government has also started making online passports, online complaints, online ticket orders, online queues, digital vaccine certificates, and so on. Of course, administering and using mobile applications requires personal data from application users. Another example is the "Peduli Protect" application which requires a Personal Identity Number, address, telephone number, full name, location via GPS, and other supporting data from the user to be able to launch the application.

If personal data recorded on e-KTP is poorly secured, there is a risk of data breach, making it vulnerable to misuse by irresponsible parties. (Latumahina, 2011) Personal data such as name, e-mail, and telephone number are often leaked because it has economic value in the business world. These data are called digital dossiers. A digital dossier is a collection of personal data owned by most, if not almost all, people using internet technology, developed by private parties, so there is a risk of violating someone's right to privacy over someone's data. (Tejomurti, 2018)

Personal data protection is necessary considering that the risk of "data breach" can be done easily and quickly through technology. Personal data breaches can occur due to negligence on the electronic system part of administrators, personal data owner's ignorance of the importance of their data, and cyber security capabilities that still need to be improved. Personal data breach occurs very often in Indonesia. (M.Iksan, 2022) which is indicated by data from Databoks that Indonesia is ranked third in the country with the most cases of personal data breaches in the world. (Annur, 2022)

In August-September 2022, the public was shocked by the personal data breach carried out by a hacker with the initials "Bjorka". The following data was successfully leaked by Bjorka: (Dewi, Hacker Bjorka is Back, Data apa saja yang pernah dibocorkan?, 2022) SIM card registration data, and KPU data which was uploaded on September 6 2022 with the title Citizenship Database From KPU 105M on the breach. On September 9, 2022, Bjorka distributed a letter to Indonesian President Joko Widodo containing a list of letter titles and numbers, including secret documents for President Joko Widodo originating from the State Intelligence Agency, Bjorka also distributed data such as Luhut Binsar Pandjaitan as Coordinating Minister for Maritime Affairs and Investment in Indonesia, Erick Thohir as Minister for State-Owned Enterprises, Johnny G Plate as Minister of Communication and Information, Samuel Abrijani Pangerapan as Director General of Kominfo Informatics Applications, and Puan Maharani as Chair of the People's Representative Council.

These data breaches prove that cyber security in Indonesia is not ready to face cyber threats. As stated before, the regulation and protection of the criminal act of theft of personal data in the Bjorka case is significant to discuss. This study aims to discuss regulations and protections against personal data theft from a comparative legal perspective in Indonesia and Poland. Based on the introduction explained by the author, this research is entitled "Comparison of Personal Data Theft Laws in the Bjorka Case in Indonesia and Poland".

Methodology

This research method uses normative juridical research methods. The approach used in the research is a statute approach by describing the laws and regulations that are relevant to the problem under study, especially the substance relating to personal data protection. Another approach used is comparative, namely a comparison of laws and regulations relating to personal data protection in Indonesia and Poland. This research uses secondary data with primary legal materials with statutory regulations, secondary legal materials with books and journals, and tertiary legal materials with dictionaries.

Results and Discussion

Personal data is a person's characteristics data relating to name, age, gender, education, occupation, address, and position in the family. (Kamus Bahasa Indonesia Online) The definition of personal data based on Article 1 point 1 Minister of Communication and Information of the Republic of Indonesia Regulation No. 20 of 2016 concerning Personal Data Protection is a person's data stored, cared for, and validity maintained and protected as confidential. Data is referred to as personal data when it relates to a person's identity information or a person's characteristics can be known from that data.

The increasing number of internet users has impacted personal data protection. Technological systems are sometimes vulnerable to cyber attacks that target personal data. Based on data from the Central Government's statistical agency to draft the Personal Data Protection Law in 2019, 115 million internet users aged >5 years in Indonesia. (Dinata, Hacker Bjorka: Pihak yang Berperan dalam Mencegah Kebocoran Data, 2023) This number is growing following the rapid number of companies in the cyber sector. All companies in the cyber sectors can be sure to collect the personal data of their users, so you can imagine how much personal data is spread across these companies. This personal data is often accessed illegally. The illegal act of accessing other people's data is a violation of the law. (Lauder Siagian, 2018) Hackers are difficult to track because cybercrime does not require the perpetrator to be in the same location as the cyberattack target location.[1]

According to the National Cyber and Crypto Agency (BSSN), in 2020, there were 88 million cyber attacks in Indonesia, 13 times more than in 2019. (Maskun, 2020) Cyber attacks like this are dangerous for personal security, and even in a wider scope, they can pose a risk to a country's security. The role of cyber security is significant. Cyber security itself is a system that has the function of protecting cyber security from attacks and disturbances in the cyber sector. With cyber security, data subjects remain in control of their cyber systems. (Ririn Aswandi, 2020)

Data owners also have the right to obtain human rights protection for their data, which includes protection of privacy rights. The right to privacy protection in international law is regulated in Article 12 of the General Declaration of Human Rights which contains: "No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honor and reputation. Everyone has the right to the protection of the law against such interference or attacks." Privacy rights protection is also regulated in Article 17 International Convention on Civil and Political Rights yang contains "1. No one shall be subjected to arbitrary or unlawful interference with his privacy, family, home, or correspondence, nor unlawful attacks on his honor and reputation. 2. Everyone has the right to the protection of the law against such interference or attacks."

The right to privacy is a constitutional right that the state must protect. Protection of the right to privacy, part of human rights, is regulated in Article 28 G paragraph (1) of the 1945 Constitution of the Republic of Indonesia (UUD 1945). Article 28 G paragraph (1) of the 1945 Constitution contains "Every person shall have the right to protection of his/herself, family, honor, dignity, and property, and shall have the right to feel secure against and receive protection from the threat of fear to do or not do something that is a human right." Personal data is inherent and sensitive in human life so it deserves to be protected. Everyone has the right to obtain protection for their data. Personal data misuse is a form of privacy rights and a crime against human rights that is against the Indonesian constitution.

The legal system in Indonesia is a Civil Law legal system, so Indonesia is bound by legal codification. Article 334 Law no. 1 of 2023 concerning the Criminal Code contains:

"Any person who uses or accesses a computer or electronic system in any way without authorization to obtain, change, damage or eliminate information on the computer or electronic system shall be punished by imprisonment for a maximum of 4 (four) years or a fine of a maximum category V."

Law No.1 of 2023 concerning the Criminal Code will only come into force in 2026, the law cannot applied to Bjorka's case.

Personal data protection is protected especially by Law No. 27 of 2022 concerning Personal Data Protection. Article 67 paragraph (1) of Law Number 27 of 2022 concerning

personal data protection states that "Every person is prohibited from obtaining personal data that does not belong to him and is carried out without rights and against the law to benefit himself that results in losses for the owner of the personal data." Article 67 paragraph (3) of Law Number 27 of 2022 concerning Personal Data protection also states that "Everyone is prohibited from using personal data that does not belong to them."

Based on the *lex specialis derogate legi generali* principle, Article 67 paragraph (1) and Article 67 paragraph (3) of the Personal Data Protection Law will override other legal regulations. Article 67 paragraph (1) and Article 67 paragraph (3) of the Personal Data Protection specifically regulate theft and use of data that does not belong to him so it would be very appropriate to apply to Bjorka's case. Unfortunately, when the Bjorka case occurred, the Personal Data Protection Law did not yet exist. Bjorka cannot be punished using Article 67 paragraph (1) and Article 67 paragraph (3) of Law No. 27 of 2002 concerning Personal Data Protection. Article 334 Law no. 1 of 2023 concerning the Criminal Code also cannot apply because the law does not apply retroactively. When Bjorka stole, distributed, and sold personal data, Law No. 27 of 2002 concerning Personal Data Protection and Law No. 1 of 2023 concerning the Criminal Code did not yet exist.

The law also recognizes the legality principle that states that a criminal act cannot be punished if no law regulates it. When the Bjorka case occurred, regulations regarding personal data protection were still weak and general. These arrangements are stated in several different and separate laws and regulations. Some of these regulations are Law Number 8 of 1997 concerning Company Documents, Law Number 36 of 1999 concerning Telecommunications, Law No. 11 of 2008 concerning Information and Electronic Transactions, Law Number 43 of 2009 concerning Archives, Law Number 36 of 2009 concerning Health, and Law Number 24 of 2013 concerning Amendments to Law Number 23 of 2006 concerning Population Administration, Law Number 19 of 2016 concerning Amendments to Law Number 11 of 2008 concerning Information and Electronic Transactions. Based on the many regulations governing personal data above, it is understood that the regulations relating to Indonesian Personal Data Protection are still general and are located separately in several statutory regulations.

Law Number 11 of 2008 concerning Electronic Information and Transactions does not regulate the use of personal data in a significant way. The articles in the ITE Law are only general provisions and cannot accommodate various issues currently being discussed at the international level. (Syarpani, 2014) However, the ITE Law has created an understanding in general regarding information and electronic transactions. The implementation of electronic systems and transactions is then further regulated by Government Regulation No. 71 of 2019 concerning the Implementation of Electronic Systems and Transactions (PSTE).

Paragraph (1) Article 26 of the ITE Law contains: "Unless provided otherwise by Laws and Regulations, use of any information through electronic media that involves personal data of a Person must be made with the consent of the Person concerned." It means there is a connection between the consent of the person who owns the personal data and the they own personal data. This connection lies in the right to disclose or distribute personal data to other parties by that person's wishes. Paragraph (2) Article 26 of the ITE Law contains: "Any Person whose rights are infringed as intended by section (1) may lodge a claim for damages incurred under this Law. " Based on the provisions above, Bjorka can be reported to the court by anyone who feels aggrieved by Bjorka's actions. The Bjorka case caused an uproar in the community and violated Article 26 paragraph (1) and 26 paragraph (2) of the ITE Law.

Bjorka as a hacker has stolen sensitive data. Sensitive data that commonly occurs when there is a data breach is: (Endah Pertiwi D. D., 2020)

1. Identification information: name, address, telephone number, email address, username, password, etc.
2. User activity: order and payment history, browsing habits, etc.
3. Credit card information: card number, expiration date, billing zip code, etc.
4. Hackers will also steal confidential company information, such as emails, internal company communications, company strategies, etc.

The following is sensitive data that Bjorka has stolen. (Dewi, Hacker Bjorka is Back, Data apa saja yang pernah dibocorkan?, 2022)

No	Owner	Data Claimed by Bjorka
1.	My Pertamina	Bjorka claims to have 30 GB of My Pertamina data which is compressed to 6 GB. This data consists of the user's name, email, NIK, NPWP, telephone number, and expenses.
2.	Indihome	Bjorka claims to have 26 million Indihome customers' browsing history. This data includes keywords, email, name, gender, and NIK.
3.	Communication and Information Ministry	Bjorka claims to have 87GB of data. This data contains NIK, cellphone number, provider
4.	General Election Commission Data	Bjorka breached 105 million public data related to the General Election. This information was uploaded by Bjorka on September 6 2022 on the breach.to forum. The upload is entitled Indonesia Citizenship Database From KPU 105M. The data consists of NIK, family card, full name, place and date of birth, gender, and age.
5.	Letters to Indonesia's President List	The data compressed to 40 GB consists of 679,180 data. The data consists of a list of letter titles and numbers including secret documents for President Jokowi, one of which is from the State Intelligence Agency (BIN).
6.	Communication and Information Ministry Doxing	Bjorka took advantage of the Minister of Communication and Information's birthday on September 11 2023 by writing "Happy Birthday" in his telegram group. At the same time, Bjorka attached several personal data including NIK, Family Card Number, names of family members, address, telephone number, and Vaccine ID.
7.	Several public officials doxing via private telegram	The public officials are Puan Maharani as Chair of the People's Representative Council, Samuel Abrijani Pangerapan as Director General of Informatics Applications, Communication and Information, Luhut Binsar Pandjaitan as Coordinating Minister for Maritime Affairs and Investment in Indonesia, Erick Thohir as Minister for State-Owned Enterprises. The personal data belonging to public officials are shared in the Telegram group including full name, KTP number, family card number, parents' names, home address, place and date of birth, religious status, educational history, and so on.

Electronic Transaction and System Operators (PSTE) have a role in safeguarding personal data to avoid data breaches like the Bjorka case. PSTE has responsibility for maintaining, guarding, and protecting all personal data of users or customers of its electronic system, except if data is incorrectly distributed, due to elements of negligence and errors made by the user or customer concerned. (Endah Pertiwi D. D., 2020) PSTE is required to fulfill the requirements in running its cyber system, namely: (Dinata, Hacker Bjorka: Pihak yang Berperan dalam Mencegah Kebocoran Data, 2023)

1. Responsible for providing prevention and protection from attacks, disruptions, or other cyber risks, as well as recovering from damage. Protection is also provided to the general public related to these cyber systems.
 2. Creating accountable and implementing cyber policy, for maintaining cyber users' identities confidentiality.
 3. Responsible for providing good service. There is education and easy access to user rights.
 4. Responsible for maintaining the authenticity of data, carrying out cyber operations by standards, norms, and regulations, and providing guaranteed certainty of system operation.
 5. Have a reliability certificate as a guarantee for cyber users and carry out system maintenance. PSTE is also ready to accept sanctions if it violate the law.
 6. Responsible for providing the information needed by users, such as PSTE identity, PSTE standards, how to operate the system, and terms and objectives of transactions.
 7. Use competent human resources to run the operating system and provide guidance regarding standards, norms, and provisions for HR activities.
 8. PSTE is obliged to inform users if there is a failure to implement security and protection of personal data. PSTE is obliged to report the problem to law enforcement officials and
 9. related institutions to avoid bigger impacts and losses.
Personal data protection is needed to avoid: (Wibowo, 2021)
 1. Threats of sexual harassment, online bullying, and online gender-based violence (KBGO).
 2. Prevent misuse of personal data by irresponsible individuals or parties and avoid potential defamation.
 3. Provide the right to control personal data.
Bjorka violated Article 32 of Law Number 11 of 2008 concerning Information and Electronic Transactions. Article 32 contains:
 1. Any Person who knowingly and without authority or unlawfully in any manner whatsoever alters, adds, reduces, transmits, tampers with, deletes, moves, hides Electronic Information and/or Electronic Documents of other Persons or the public.
 2. Any Person who knowingly and without authority or unlawfully in any manner whatsoever, moves or transfers Electronic Information and/or Electronic Documents to Electronic Systems of unauthorized Persons.
 3. Acts, as intended by paragraph (1), shall be acts that result in any confidential Electronic Information and/or Electronic Document being compromised such that the data becomes accessible to the public in its entirety in an improper manner.
Article 48 of Law No. 11 of 2008 concerning Electronic Information and Transactions regulates the sanctions that may be imposed on Bjorka. Article 48 Law no. 11 of 2008 concerning Electronic Information and Transactions contains:
 1. Any Person who satisfies the elements as intended by Article 32 paragraph (1) shall be sentenced to imprisonment not exceeding 8 (eight) years and/or a fine not exceeding Rp2,000,000,000 (two billion rupiah).
 2. Any Person who satisfies the elements as intended by Article 32 paragraph (2) shall be sentenced to imprisonment not exceeding 9 (nine) years and/or a fine not exceeding Rp3,000,000,000 (three billion rupiah).
 3. Any Person who satisfies the elements as intended by Article 32 paragraph (3) shall be sentenced to imprisonment not exceeding 10 (ten) years and/or a fine not exceeding Rp5,000,000,000 (five billion rupiah).
Based on Article 48 of Law no. 11 of 2008 concerning Information and Electronic Transactions Bjorka can be sentenced to a maximum of 10 years in prison and/or a maximum fine of IDR 5,000,000,000 (five billion rupiah).
- Bjorka, who claims to be a Polish citizen, can be tried under the laws of his country (Poland). Poland is a country that adheres to the continental European legal system. Personal

data protection regulations in Poland are governed by the European Union General Data Protection Regulation (GDPR). This regulation is an integrated regulation for all countries that join the European Union so that each country has the same regulations. The European Union General Data Protection Regulation (GDPR) was published in 2016 and only began to be implemented in 2018. GDPR in general regulates the rights and obligations of data owners and electronic system operators in maintaining data security and user information.

GDPR does not explicitly prohibit forms of personal data theft. The European Union General Data Protection Regulation (GDPR) further regulates personal data rights owners that must be protected, such as the right to access, the right to correction, the right to erasure, the right to limit data processing, the right to submit consent, and the right to data portability. (Sudibyo, 2020)[2] GDPR places greater emphasis on the obligation of every electronic system operator to protect user data and provide information to users if a personal data breach occurs.

Article 84 GDPR contains “The Member States shall lay down the rules on other penalties applicable to infringements of this Regulation in particular for infringements which are not subject to administrative fines under Article 83, and shall take all measures necessary to ensure that they are implemented. Such penalties shall be effective, proportionate, and dissuasive.” It means Companies sanctions imposition that fail to protect and maintain the security of their users' data, given administrative sanctions of a maximum of £20,000,000 or 4% of a company's revenue. These laws and regulations support the strictness of companies and information system operators in protecting company personal data. The provision of legal sanctions in Poland is effective, proportionally, and persuasively. When personal data theft occurs in Poland, the emphasis on the party responsible is more on the company and information system provider.

GDPR does not penalize hackers. (Anantia Ayu D, 2019) GDPR places greater responsibility on companies and electronic system operators so that companies have a sense of responsibility for data use. It is in line with the request for compensation rights for personal data holders by the directions of the Supervisory Authority. The legal arrangements in Poland regulated in the GDPR tend to place responsibility on information system operators in providing compensation and paying administrative sanctions in the form of fines for failure to safeguard the data and information of their users.

Public Bodies also hate appointing Data Protection Officers (DPOs). The DPO's duties under Article 39 of GDPR state: Working towards exposure to all relevant data protection laws, incorporating specific processes, such as data protection impact assessments, increasing employee awareness to protect data and train them, as well cooperating with supervisory authorities. Therefore, employees who are selected as Data Protection Officers must not be terminated or punished for drowning.

Regulations regarding hacking of personal data regulated in the Polish Criminal Code or the Polish Criminal Code, namely in Article 267 paragraph (1) of the Polish Criminal Code, states that: “Anyone without obtaining information rights not intended for them, by opening a closed letter, connecting to a telecommunications network, or damaging or circumventing electronic, magnetic, information technology, or other network special protection, is threatened with imprisonment for a maximum of two years.”

The provisions of this article regulate the criminal provisions for someone who steals information and personal data without rights or against the law, is punished with a maximum prison sentence of 2 (two) years. Article 267 paragraph (4) of the Polish Criminal Code also regulates the same punishment for someone who disseminates information as intended in Article 267 paragraph (1) of the Polish Criminal Code. Unfortunately, Article 267 paragraph (5) of the Polish Criminal Code explains that the offense used for someone to spread information is the offense of complaining.

Regulation and legal protection regarding hacking of personal data in Poland can use the European Union General Data Protection Regulations and the Polish Criminal Code. Personal data theft responsibility in the European Union General Data Protection Regulations is given entirely to electronic system operators, which aim to emphasize storing user data responsibility and will be subject to administrative sanctions in the form of fines. Subjects

who commit theft of personal data as regulated in Article 267 of the Polish Criminal Code will be subject to imprisonment for a maximum of 2 (two) years with the offense of complaint. The emphasis on regulation and legal protection in Indonesia and Poland is different. The regulation emphasis and legal protection in Indonesia is more on legal subjects who steal data. The regulation emphasis and legal protection in Poland is more on companies administering electronic systems.

When Bjorka is tried under Poland law, he will be subject to Paragraphs (1) and paragraph (4) of Article 267 of the Polish Criminal Code which prohibits someone from obtaining information that is not intended for them or without authorization, by opening a closed letter, linking it to telecommunications networks, or by damaging or circumventing electronic, magnetic, information technology or other special protection of electronic networks. In this article, you will be threatened with imprisonment for a maximum of 2 (two) years without the imposition of a fine. The imposition of Paragraph (1) and Paragraph (4) Article 267 of the Polish Criminal Code on Bjorka can only be carried out if there is a complaint regarding the violation of his actions of the law. A comparison of laws in Indonesia and Poland contributes to knowledge regarding the differences in regulation and legal protection of personal data carried out by Bjorka.

Conclusion

Legal protection of personal data is significant to protect a person's right to privacy. Legal protection regarding personal data already exists but enforcement is not optimal yet. Personal data theft arrangements in Indonesia are currently regulated by the Personal Data Protection Act. In the Bjorka case, because the law does not apply retroactively, legal arrangements and protections are based on the Information and Electronic Transactions Law with a maximum imprisonment of 10 years and/or a maximum fine of Rp. 5,000,000,000.00. Legal arrangements and protections in Poland are based on the Polish Criminal Code with a maximum penalty of 2 years in prison.

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THE IMPLEMENTATION OF LAUDATO SI AMONG STUDENTS AT THE SYANTIKARA DORMITORY YOGYAKARTA

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Abstract

Pope Francis in 2015 issued the encyclical Laudato Si to care for the earth as our common home. This research explored how the implementation of Laudato Si's teachings and their impact on the lives of students at the Syantikara dormitory in Yogyakarta. The teachings of Laudato Si focus on environmental issues and emphasize the importance of maintaining and creating a balance between humans, nature and God. However, humans often exploit natural resources without considering the impact on the earth. To overcome this problem, concrete and sustainable actions are needed. Therefore, the Syantikara dormitory made various efforts to address this environmental problem. In particular, environmental themes are the focus of learning for the dormitory residents, so that they play a role in protecting and preserving the environment. The main problem in this research was to determine how the impact of implementing Laudato Si's teachings was carried out by the dormitory residents in their daily lives. To answer this problem, the researchers used a qualitative research method by interviewing the dormitory residents. Based on the interview results, it was found that the dormitory residents had implemented some of Laudato Si's teachings in their daily lives. This can be seen from the growing awareness, intention, and commitment of the dormitory residents to preserve the environment around them. The hope is that the residents of Syantikara dormitory will become agents of change in protecting the environment for the next generation.

Keywords: Laudato Si; implementation; students; Syantikara dormitory

Introduction

Human life on Earth is profoundly dependent on the surrounding environment, which serves as our place of residence and the source of life. Consequently, it is imperative that humanity nurtures and cherishes the environment. Human beings are created in the image of God, and, as such, carry a responsibility to care for and love the environment. This is reflected in Genesis 2:15, where it is affirmed that humans were placed in the Garden of Eden to tend and care for it. Thus, in the past, people showed great love and care for the environment, working together to protect it and secure the well-being of future generations. As Ulifia (2022: 49) notes, this historical perspective underscores the importance of preserving the Earth to provide comfort, peace, and sustenance for those who inhabit it.

However, contemporary human awareness regarding the preservation of a clean and healthy environment has been waning. Many view the environment merely as a resource to exploit without considering the consequences for our planet. The detrimental effects of such behavior are evident in climate change and the deterioration of environmental quality. Various human activities, including the utilization of fossil fuels, intensive agriculture, industrialization, and infrastructure development, are primary contributors to environmental degradation. Additionally, excessive consumption, waste generation, and

irresponsibility further exacerbate environmental issues (Rukiyanto dan Sumarah, 2014: 118-129).

Pope Francis, in his encyclical *Laudato Si*, emphasizes the vital importance of raising awareness to protect biodiversity, reduce greenhouse gas emissions, and promote environmentally friendly technologies. He denounces excessive consumptive behavior. As human beings, we all share the responsibility for preserving our Earth, our common home (LS. 103).

However, in today's world, there is a notable lack of awareness regarding the importance of safeguarding God's creation and expressing gratitude for it. Many individuals are more preoccupied with practical matters and the pleasures of life, leading them to overlook the surrounding environment. The rapid advancement of technology in the modern era has presented a significant challenge, as a considerable number of people opt to spend their time with technology rather than contributing to the improvement or preservation of the environment. Consequently, our beautiful and magnificent Earth faces a multitude of environmental issues, including climate change, pollution, and the loss of natural habitats. Nevertheless, humans appear to be less concerned about this situation and tend to prioritize technological advancements and personal interests.

It is crucial for humanity to recognize that the Earth requires our assistance to thrive and develop sustainably. As humans, we bear the responsibility of protecting the environment and ensuring the continuity of nature. We must adopt a long-term perspective to safeguard the Earth for the well-being of future generations (Eko Armada Riyanto, 2018: 46)

According to Handayani (2017:7), our Earth is metaphorically crying out for help from humans, its stewards. Regrettably, many people seem to turn a deaf ear to its pleas, with their attention often consumed by the ever-advancing age of technology. The stark reality is that people are frequently more captivated by technological advancements than they are by the well-being of our environment. Human affection for the gifts of creation bestowed by God has, at times, taken a backseat to personal gratification.

This issue is not limited to one region, as it manifests in Indonesia as well. Various regions in Indonesia face environmental challenges such as landslides, droughts, water scarcity, and escalating pollution levels, which adversely affect human comfort and well-being. When disasters such as landslides strike, humans can only bear witnesses, lacking the capacity to take preventative actions such as planting trees in their surroundings. In some cases, individuals even resort to destructive practices, such as burning green areas, including vital soil root systems, for the construction of houses or the establishment of oil palm plantations. If such behaviors persist, they will inevitably cast a long shadow on future generations. Contemporary society often prioritizes self-interest over concerns for the implications these actions may have on generations yet to come.

Consequently, it is imperative that humans shoulder the responsibility of safeguarding our Earth to ensure that it can continue to provide for the well-being of future generations (Aaron, 2021:130)

In today's world, the human population is increasing, as is evident in Indonesia, a developing country where the population continues to grow. The rising population, coupled with industrialization, poses a significant challenge to the environment, and this is a concern that affects us all. In light of the challenges we face, it is worth noting that Indonesia's Environmental Quality Index (MoEF) increased by 0.97 points in 2022 compared to the previous year. This information was disclosed by the Director General of Environmental Pollution and Damage Control during the 2022 year-end reflection of the Ministry of Environment and Forestry (KLHK), which took place both offline and online in Jakarta on December 29, 2022. The current situation necessitates collective efforts from all sectors of society, including students who are regarded as future change-makers. Therefore, it is incumbent upon all of us to make an effort to protect the environment, with the role of students being particularly crucial in fostering environmental awareness for the sake of sustainability in the future (Anugrah, 2022; Sihotang, 2020:65).

The government has initiated measures to protect the environment from those who intend to harm it. They have established regulations with sanctions for individuals who damage the environment. The Indonesian government has also encouraged community collaboration and mutual assistance to prevent disasters such as landslides and floods in various regions. However, the efforts made thus far are still insufficient to adequately protect and preserve the environment, as evidenced by recurring disasters such as floods, landslides, and other environmental damage in various parts of the country. This situation remains a significant challenge for both the government and communities throughout Indonesia (Febrianto, 2020:50).

This issue is not limited to governmental concerns; it also extends to the Church, which has observed a lack of sensitivity to the current global context, particularly regarding environmental issues. In response to global concerns, especially those related to the environment, Pope Francis issued the document *Laudato Si* in 2015, emphasizing the importance of protecting the Earth and its environment. Pope Francis affirmed that the environment is a shared asset that must be safeguarded by humanity. Through this document, Pope Francis calls upon Catholics to have a stronger commitment to protecting the natural world. Pope Francis invites all of us to make efforts to protect nature, ensuring that future generations can enjoy the beauty of our planet. Today, our Earth is no longer as pristine as before, largely due to pollution from various industries. This concern extends not only to the secular world but also to the Church itself (Meidinata, 2021:65).

However, in reality, the impact of the *Laudato Si* document has not been fully absorbed by Catholics; only a minority fully grasp Pope Francis's call. This situation reflects the influence of the fast-paced millennial era, where people often favor instant gratification over more demanding tasks such as environmental stewardship. Therefore, it can be said that the Church's teachings, especially those presented in Pope Francis's *Laudato Si*, have not been comprehensively understood by Catholics. The document's intention to encourage all Catholics to care for the environment is realized only by a fraction of them. This issue underscores the importance of the Church's continued efforts to engage and involve the community in environmental protection (Ranboki, 2018:46).

To address these concerns, students, as agents of change, play a pivotal role in environmental protection and the application of the teachings of *Laudato Si*. Students can lead in raising awareness about the importance of environmental protection and incorporating eco-friendly practices into daily life. Female students residing in the Syantikara dormitory have embraced the principles of *Laudato Si*, including practices such as sorting trash into organic and inorganic categories, using reusable shopping bags, tending to plants inside and outside the dormitory, and conserving electricity (Mojau, 2021:126).

Syantikara Dormitory, managed by the Congregation of Charles Borromeus (CB) in Yogyakarta, provides accommodations for students pursuing their education in the city. These students, residing in a controlled environment, have a unique opportunity to contribute to the future of Indonesia, as they will become leaders in various fields. The dormitory holds a vision and mission to promote environmental consciousness, making it an ideal setting for the practical application of the teachings of *Laudato Si* in the lives of its students (Adon, 2022:53)

Based on the background stated above, the author formulated the problem as follows: How to implement *Laudato Si*'s teachings in the lives of students in Syantikara Dormitory, Yogyakarta?

The objective of this research was to determine effective methods for implementing *Laudato Si*'s teachings in the lives of female students at Syantikara Dormitory, Yogyakarta.

Methodology

In this research, qualitative research was chosen as the research methodology. Qualitative research is employed to gather descriptive and intricate information, such as the viewpoints, attitudes, and behaviors of research subjects. (Sugiyono, 2019: 119-137).

In this context, qualitative research enabled researchers to gain profound insights and experiences from students regarding *Laudato Si's* teachings and how these teachings are put into practice in their daily lives at Syantikara Dormitory. Furthermore, qualitative research also assisted researchers in acquiring insights into the factors that influence student behavior in relation to their living environment within the dormitories. Therefore, qualitative research offered a more comprehensive and detailed perspective on the topic under investigation.

The data collection instruments to be employed in this study included: *participant observations*, which entailed observing students' behavior related to the dormitory environment, such as maintaining cleanliness, waste disposal, and responsible resource utilization; *structured interviews*: researchers conducted interviews with students residing in the Syantikara Dormitory to gather information about their understanding and implementation of *Laudato Si's* teachings in their daily lives at the dormitory. Interviews employed structured and open-ended question guides to ensure that comprehensive and detailed information was obtained; *documentation*: documents to be utilized in this research included archives, interview recordings, and photos related to the implementation of *Laudato Si's* teachings at Syantikara Dormitory. These encompassed environmental policies, programs, and other documents pertinent to the dormitory's environmental aspects, as well as profiles of Syantikara Dormitory, and its vision and mission.

The respondents in this study were students from Syantikara Dormitory, along with the dormitory team and the dormitory head, using purposive sampling, with certain criteria, that were students residing in Syantikara Dormitory in Yogyakarta who were considered knowledgeable about the meaning of *Laudato Si* and actively engaged in practising its principles. Twelve students were selected as respondents. For data validation, the researchers established criteria that included members of the dormitory team and the coordinator of the Syantikara Dormitory.

The research was conducted at the Syantikara Dormitory in Yogyakarta during May and June 2023. It focused on the implementation of *Laudato Si* teachings in the lives of students at Syantikara Dormitory.

The technical data analysis in this research included: *data collection* through the recording of observations, conducting interviews, and referencing documentation; *data reduction*: data collected were meticulously recorded and then streamlined. The process involved selecting key elements to focus on important aspects, providing a clearer understanding, and facilitating further data collection; *data presentation* took the form of concise descriptions and summaries; and *verification of analysis results*, which entailed a reevaluation of the analysed data to ensure consistency with the collected information.

In this study, the technique used to validate data was source triangulation to cross-verify the data obtained with data from trusted sources, including the dormitory head and the dormitory team (Sugiyono, 2019: 98).

Results and Discussion

Based on direct observations of the Syantikara Dormitory environment, the researchers found the vicinity to be clean, tidy, and beautiful. The area was adorned with lush green trees and a variety of plants that enhanced its beauty. This cleanliness and neatness extended not only to the surrounding environment but also to the dormitory itself.

Inside the dormitory, the prayer room was orderly and decorated with live plants in pots. The dining area featured well-arranged tables and chairs, while the study room remained neat, with students returning their study materials to their respective drawers after use. The bathrooms were consistently clean and well-maintained. The dormitory followed a weekly schedule for activities such as cleaning, laundry, and kitchen maintenance. This meticulous organization and cleanliness were evident throughout the dormitory.

During an interview with the deputy coordinator of the Syantikara Dormitory, it was mentioned that the dormitory maintained its cleanliness by regularly managing waste. Garbage bins, categorized for organic, inorganic, and solid waste, were strategically placed in various areas, including near the main gate, study areas, kitchen, and dishwasher. The dormitory took these measures to instill a sense of care, discipline, and responsibility among its residents regarding proper waste disposal. Additionally, the dormitory premises were regularly cleaned to ensure a clean and comfortable environment.

Syantikara Student Dormitory also maximized the use of its open spaces. There was a well-maintained small garden within the dormitory premises, providing a refreshing atmosphere. Residents often utilized this open space for relaxation, physical activities, or gatherings.

An interview with the coordinator of the Syantikara Dormitory revealed that the dormitory actively promoted environmental consciousness through routine activities. These efforts aimed to reduce plastic usage. Every dormitory resident was made aware of the importance of minimizing plastic waste and encouraged to use cloth shopping bags or other environmentally friendly materials. This commitment was reflected in the dormitory's limited use of plastic bags and the growing awareness of more eco-friendly alternatives.

Additionally, a member of the dormitory team emphasized the dormitory's commitment to maintaining a green environment. Numerous trees were planted around the dormitory to enhance its beauty and provide fresh air. Dormitory residents actively participated in tending to the parks and small gardens within the dormitory premises, caring for ornamental plants and ensuring the area's cleanliness.

Syantikara Dormitory is known for its active engagement in various social activities. These activities included visits to orphanages, charity fundraisers, and community service programs. These initiatives reflected the dormitory's dedication to making a positive impact on the local community.

Overall, through these observations, it became evident that Syantikara Dormitory placed a strong emphasis on cleanliness, efficient use of open spaces, reduction of plastic usage, maintenance of a green environment, and active involvement in socially beneficial activities. These actions underscored the dormitory's genuine care and commitment to preserving and enhancing the environment.

Interviews

Based on the interviews with 12 respondents, the researchers inquired about the responsibilities assigned to dormitory residents in preserving the environment within the dormitories, on campus, and at home. Data from the respondents revealed a commendable level of environmental involvement. These participants indicated that they segregate waste according to its type to facilitate its conversion into more useful resources. For instance, organic waste was repurposed as fertilizer, while inorganic waste such as plastic was transformed into materials for crafting kites and other decorations. They also made efforts to minimize energy consumption by using energy-efficient lighting and turning off unused electrical appliances. Additionally, they recognized the importance of judicious water usage.

When asked about their contributions to environmental sustainability, the respondents reported various initiatives. These included proper waste disposal, reduction in single-use plastic consumption, and the adoption of recyclable or eco-friendly materials. They emphasized their commitment to energy-saving practices, such as switching off unused electrical appliances and conscientious water usage for bathing and cooking, utilizing it efficiently and sparingly. They also took care to turn off taps when not in use and voluntarily assisted in planting and maintaining trees, vegetables, and ornamental plants around the dormitory. Some of the respondents additionally mentioned adopting reusable eating utensils to minimize waste.

According to the respondents, assigned tasks and residents' efforts within the dormitory had a positive impact. These responsibilities not only heightened environmental awareness but also fostered creativity in preserving and promoting environmental

sustainability. Individual awareness further encouraged values such as care, discipline, responsibility, and a simpler lifestyle.

Data Validation Results

The researchers validated the data through source triangulation, including the Syantikara Dormitory coordinator, the deputy coordinator, and one of the team members of dormitory (validators).

The validators emphasized the importance of responsibility, awareness, and caring for the environment and others. The teachings of *Laudato Si* were reflected in the dormitory's vision and mission, which instilled values of environmental consciousness. Dormitory residents were educated on the consequences of their actions on nature and were encouraged to take concrete steps to reduce environmental harm. These steps included saving energy, minimizing plastic usage, and adopting eco-friendly practices in daily life.

The validators highlighted that the teachings of *Laudato Si* were actively applied through tasks assigned to dormitory residents. Community service activities involved cleaning, reducing plastic waste, tree planting, and maintaining green areas. These practical actions allowed residents to deeply understand and appreciate nature while strengthening their faith and spiritual connection.

They mentioned that dormitory residents received weekly faith coaching from the team, reinforcing the teachings of *Laudato Si* in their daily lives. This coaching helped residents cultivate gratitude, care, and appreciation for God's creation.

In summary, the dormitory provided strong support for implementing *Laudato Si*'s teachings, fostering awareness, and encouraging concrete actions to protect and preserve the environment.

For students' involvement in environmental preservation, the validators mentioned various activities and tasks that demonstrate their commitment. These activities included energy conservation, reduction of single-use plastics, and waste segregation. Dormitory residents were also known for their caring nature, helping sick friends, and assisting those in need. They actively engaged in social services at orphanages, providing food, education, and creative activities to nurture empathy and appreciation for God's creation.

This continuous effort had a positive impact on dormitory residents, making them more environmentally conscious, disciplined, and responsible. Residents adopted habits such as using reusable eating utensils and disposing of waste correctly, reflecting their sensitivity to environmental issues and simpler living.

Discussion

Based on the research findings, it was confirmed that the teachings of *Laudato Si* were not only conveyed but also put into practice through tasks assigned by the dormitory team. For example, students were encouraged to sort their garbage by type for more efficient processing—organic waste can be used as fertilizer, while inorganic waste, like plastic, can be repurposed for making items such as kites or decorations. Additionally, students were mindful of energy consumption, utilizing energy-efficient lighting and turning off unused appliances. Wise water usage was also emphasized. The teachings of *Laudato Si* revolved around responsible waste disposal to ensure a healthy and sustainable environment. These teachings helped students develop a greater understanding of and care for their surroundings.

The involvement of dormitory residents in environmental preservation was supported by several factors, including self-awareness, familial influence, and the dormitory community. Respondents consistently highlighted the importance of self-awareness and commitment to acting in accordance with *Laudato Si*'s teachings as key motivators for their involvement. They expressed an increasing sense of environmental concern, echoing the sentiment that our planet is suffering from the damage inflicted upon it (LS 2).

The ongoing habituation efforts within the dormitory effectively inspired residents to become more caring, responsible, disciplined, and sharing individuals. However, some students initially struggled to adapt to these habits. The dormitory coordinator and their team consistently offered guidance and encouragement, allowing students to gradually embrace these practices and make them part of their daily lives.

The researchers recognized that students' efforts to engage in environmental preservation represented a form of faith in ecological conversion—a transformation driven by regret for past actions toward nature, leading to gradual changes and new ways of living (Hendani, 2018: 97). Changing one's lifestyle requires commitment, hope, intention, and sincere effort. Respondents mentioned initial difficulties in implementing dormitory routines aimed at reducing plastic usage and adopting waste segregation practices. Nonetheless, they managed to adapt over time. These efforts serve as a clear testament to their commitment to appreciating and caring for creation while setting an example for others.

The researchers believe that these efforts and processes reflect a manifestation of faith through repentance, and they view the implementation of *Laudato Si's* teachings at Syantikara Dormitory as successful in fostering awareness and concrete actions for environmental protection. Students actively participated in waste management, energy conservation, and the understanding of nature's importance. Although challenges and adjustment periods existed, the dormitory's guidance and habituation helped students evolve into individuals who prioritized environmental care and responsibility.

The validators highlighted supportive factors, including the dormitory's commitment to environmental conservation. Dormitory residents received support from various sources, including their families, the dormitory environment, and parental backing. The family environment played a significant role in shaping environmental awareness and care. The dormitory itself served as a platform for applying environmental conservation principles through activities and assigned tasks. These efforts included energy-saving measures, eco-friendly packaging, plastic reduction, and proper waste disposal. Parental support was also instrumental, especially through social service initiatives. Dormitory residents' receptiveness to coaching and their openness to life experiences contributed to their personal growth, fostering gratitude and a deep concern for protecting and preserving creation.

Conclusion

Based on the study's findings, the researchers have concluded that the implementation of *Laudato Si's* teachings can be effectively realized through the tasks assigned by the dormitory to its residents. These tasks serve as a means to nurture faith, self-awareness, and a sense of responsibility among dormitory residents towards caring for and preserving the natural environment that surrounds them. The efforts, intentions, and commitments cultivated within them are visibly manifested in various ways, such as segregating waste by type, reducing plastic usage, adopting more mindful shopping practices, demonstrating sensitivity to the needs of others, and readily offering assistance. The self-awareness of dormitory residents, as they engage with their environment, represents an expression of faith and a tangible manifestation of their devotion to God.

The growth and development of self-awareness among dormitory residents, encouraging them to care for, respect, and protect both others and the environment, can be attributed to several influential factors. These include the nurturing family environment, the dormitory's role as a platform for implementing environmental conservation practices, parental support, and the willingness of dormitory residents to receive guidance. Collectively, these elements contribute to personal growth that is centered around environmental care and a steadfast commitment to preserving the integrity of creation. By implementing the teachings of *Laudato Si*, the students express their faith in God, who has bestowed upon humanity the gift of a beautiful and sustainable natural world that requires stewardship for the sake of human survival.

The vision and mission of the dormitory play a crucial role in instilling Christian values in dormitory residents, guiding them towards becoming intelligent and faithful individuals. While the dormitory endeavors to apply environmental habits among its residents, it is

acknowledged that some may still occasionally violate established regulations. Nevertheless, the dormitory coordinator and the support team remain committed to consistently accompanying and directing those residents who are in the process of developing greater awareness and involvement in environmental preservation. This reflects Pope Francis's call in *Laudato Si* (LS 117) to reimagine humanity's relationship with the universe and recognize that humans are an integral part of a larger ecosystem. This perspective is expected to inspire everyone to prioritize the sustainability of the Earth and adopt more environmentally sustainable lifestyles.

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MEASURING COMPANY PARTICIPATION IN THE IMPLEMENTATION OF CORPORATE SOCIAL RESPONSIBILITY IN THE 3T AREA

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Abstract

Various company activities in the 3T area have a real impact on the quality of life of the community and the environment. 3T areas where people are categorized as having economic, social and infrastructure backwardness, often have high poverty rates, limited access to health and education and disparities in economic development. It is not uncommon for the wealth owned by the 3T regions to be used by companies to generate large profits for shareholders. This study aims to see how the participation of companies in the Province of NTT as a 3T region in implementing Corporate Social Responsibility (CSR) on the basis of the Triple Bottom Line (profit, people, planet) provided by corporations in the 3T area in supporting economic improvement and environmental welfare in the area. The research method used is a literature study. Researchers search, collect, study, and analyze financial report data, news and other literature. The results showed that the company's involvement in carrying out CSR in the Province of NTT was not maximized. Telkomsel, for example, was stated to have a monthly turnover of almost IDR 1 trillion but the government did not know where its CSR funds were channeled. In addition, (CSR) of IDR 860 million from several companies intended for the community through the Kupang City Government was declared lost, its use and designation cannot be accounted for. Based on data from 44 companies in NTT Province registered with the Ministry of Industry, the only visible traces of literature actively carrying out CSR is Bank NTT which also won the 4 Star Top CSR Award in 2022. This shows that the community has not received justice economically or environmentally when companies take wealth to increase their profits from the 3T areas.

Keywords: CSR, 3T Regions, Participation

Introduction

Corporate Social Responsibility (CSR) is a social responsibility carried out by companies to the surrounding environment in the form of various activities that have a direct, broad and sustainable impact. CSR is a company's commitment to act ethically, operate legally and contribute to improving the quality of life of employees and their families, local communities and the wider community (Sankat and Clement: 2002 in Rudito and Famiola: 2007).

The World Business Council for Sustainable Development defines CSR as a company's commitment to contributing to sustainable economic development, working with company employees, employee families, local communities and the community as a whole in order to improve the quality of life. The company's involvement in carrying out CSR activities is a demand for responsibility for the impact of losses experienced by society, especially environmental damage (Harris and Purnomo, 2016).

In general, CSR can be defined as a form of activity to improve the quality of life in society by increasing the ability of humans as individuals to adapt to existing social conditions, enjoy, utilize and maintain the existing environment. Good CSR can influence a company's financial performance. CSR is a strategy for companies to increase their competitiveness (Pratami and Juliarto, 2020).

For the above CSR objectives, companies that obtain economic benefits from the environment in which the company is located are required to provide benefits to the surrounding environment. Companies located in 3T (Frontier, Outermost, Disadvantaged) areas certainly have more responsibility, because they take economic benefits from areas that are categorized as economically poor. The policy regarding 3 T Regions is regulated in Presidential Decree of the Republic of Indonesia Number 131 of 2015 concerning underdeveloped regions for 2015-2019. Article 1, namely: Underdeveloped regions are districts whose areas and communities are less developed than other regions on a national scale.

In article 2 it is also emphasized that. 1. An area is designated as a disadvantaged area based on the following criteria: a. Community economy; Human Resources; c. Facilities and infrastructure; d. Regional financial capacity; e. Accessibility; and f. Regional characteristics. Furthermore, according to Situmorang and Ayustia (2019) 3T (Frontier, Outermost, Disadvantaged) regions are regions that have territorial conditions that directly border other countries, and this area is characterized by a lack of complete facilities and infrastructure, both public and health infrastructure. The 3T area is synonymous with borders, low economic growth, but there are several factors that make the area called a 3T area, namely: 1. Does not have public infrastructure such as good asphalt or concrete roads, electricity and clean water. 2. Not having complete health services, both community health centers and general hospitals. 3. Has territorial boundaries that directly border other countries, 4. Have sales and purchase transactions for goods in 2 currencies that border each other.

Thus, this research will focus on measuring the contribution of companies in the 3T area, the extent to which companies that benefit from the 3T area contribute back to improving the quality of life of the people in the 3T area, and see how the participation of companies in NTT Province as a 3T region is in implementing CSR based on the Triple Bottom Line (profit, people and planet) provided by corporations in the 3T region in supporting economic improvement and environmental welfare in the region?

Methodology

The research method used is literature study. Rusmawan (2019:104) states that literature study is a method of collecting data by searching for and reading existing written sources such as books or literature that explain the theoretical basis. It is the same as collecting data and information by exploring knowledge or knowledge from sources such as books, written works, and several other sources that are related to the research object (Rusmawan, 2019: 104). This research method directs researchers to collect data from various kinds of relevant literature such as reference books, magazines, notes and previous research that are appropriate to the research object (Manehat and Sanda, 2022). In this research, researchers search for, collect, study and analyze financial report data, news and other literature.

Results and Discussion

General Overview of Companies in East Nusa Tenggara (NTT) Province as a 3T Region

Article 1 point 2 of Law Number 8 of 1997 states that a company is a form of business that carries out activities on a permanent and continuous basis with the aim of obtaining profits and/or profits, whether organized by individuals or business entities in the form of

legal entities or non-legal entities. which was established and domiciled in the territory of the Republic of Indonesia.

There are 44 companies running their businesses in East Nusa Tenggara Province as one of the poorest provinces in Indonesia (Tri, 2017). From a total of 44 companies, it was found that not all companies carried out CSR even though it was regulated in Government Regulation or PP Number 47 of 2012 concerning Social Responsibility and Limited Liability Companies. In Articles 2 and 3 of the PP, it is stated that every company as a legal subject has social and environmental responsibilities. Even in Article 4 of the PP, CSR is implemented by the Board of Directors based on the company's annual work plan after obtaining approval from the Board of Commissioners or GMS in accordance with the articles of association. Company, unless otherwise specified in statutory regulations. This means that the amount of CSR funds is not specific, according to company policy. However, CSR costs must still be incurred, calculated and budgeted by the company in accordance with propriety and fairness. Based on information collected by researchers from various literature, there are 15 companies that provide CSR in NTT Province as summarized in table 1 below:

Table 1 Companies in NTT that provide Corporate Social Responsibility

No.	Nama Perusahaan	Types of CSR	Jumlah	Target/Sasaran
1.	PT Timor Mitra Niaga	a) School construction b) Construction of houses of worship, c) community empowerment		South Wewewa District, Southwest Sumba
2.	PT Tamaris Garam Nusantara	Church construction		South Central Timor Regency
3.	PT Nuha Kepa Kai	English education in elementary school		Alor Kecil Village, Alor Regency
4.	PT Komodo Dragon	construction of the mosque		Mesah Island, Komodo District, West Manggarai
5.	PT Indonesia Adventure	a) Construction of clean water facilities b) Malnutrition c) Eradication of malaria d) education in collaboration with the Sumba Foundation		Kabupaten Sumba Barat
6.	PT Paragon Innovation & Technology	Pembangunan MTS Insan Cita Moru		Alor Regency
7.	Bank NTT Cabang Bajawa	Procurement of 7 Culinary Cart Units	Rp.50.000.000	Ngada Regency
8.	PT BPD/Bank NTT	Construction of the Al Fatah mosque	Rp.100.000.000	Solor Village, Kab. East Flores
9.	PT BPD/Bank NTT	Purchase of 1 Garbage Truck Unit	Rp.510.000.000	Kab. Flores Timur
10.	PT BPD	Assistance to: a) Pure Work Foundation	Rp.100.000.000	Manggarai Regency

No.	Nama Perusahaan	Types of CSR	Jumlah	Target/Sasaran
		b) Renceng mose home in Ruteng		
11.	Bank NTT cabang Waingapu	Assistance for pig breeding stock	Rp.300.000.000	East Sumba Regency
12.	Bank NTT	Assistance to BUMDES 7 March Hadakewa	Rp.75.000.000	Lembata Regency
13.	PT PLN (Persero) Unit Induk Pembangunan Nusa Tenggara	Community empowerment program	Rp.100.000.000	West Kupang District, Kupang Regency
14.	PT.Pertamina Patra Niaga Fuel Terminal Manager Maumere	providing assistance with drinking water facilities to the residents of Tanaduen Village		Kangae District, Sikka Regency
15.	PT PLN	Assistance to renovate school buildings and drum band equipment	Rp.330.000.000	SMAK SURIA Atambua, Belu

From several CSRs above PT. The Regional Development Bank of NTT Province (Bank NTT) has even won the Top CSR (Corporate Secretary Responsibility) 4 Star Award from Top Business Magazine because it was considered a company that has succeeded in carrying out CSR programs very well. The basis for this determination is also because Bank NTT is considered to not only focus on development and community involvement (community involvement and development) but also implement CSR that is aligned and relevant to the seven core subjects of ISO 26000. (Baraona, 2022)

Is the CSR provided by companies in 3T areas appropriate?

Telkomsel on its official website <https://www.telkomsel.com/about-us/csr> states that there are several types of CSR pillars implemented by Telkomsel in general, namely in the fields of education, digital citizenship, community empowerment, caring for climate change and philanthropy. These various types of CSR were launched by Telkomsel to create an impact in terms of increasing understanding, improving the local economy, developing regional potential to answer various social problems in order to improve the quality of life in various regions in Indonesia.

However, when traced through several literatures it was found that Telkomsel's CSR in NTT Province, the provincial government in news released by various local media stated that the government stated that it did not know where the CSR funds provided by Telkomsel flowed.

Similar facts are stated by the Chairman of the Kupang City DPRD, Yeskiel Loudoe during the Banggar session, Monday, 26 September 2022 which was released by Nttterkoni.id (2022), it was also found that there were CSR funds amounting to IDR 860,000 from several companies which were intended for the community through the City Government (City Government) Kupang, East Nusa Tenggara (NTT) is lost, its use and designation cannot be accounted for. The funds are Indomaret's CSR for maintaining garden lights worth IDR 380 and CSR funds from Bank Indonesia for the construction of weaving houses in Alak District worth IDR 480 million. In the same release, the Regional Secretary (Sekda) of Kupang City,

Fahrensy Funay, said that the aid funds had never been recorded in assets and their use was unknown.

The facts above show that the CSR funds donated are not on target. CSR giving partners do not carry out supervision after giving funds to evaluate whether the distribution and use of the funds is appropriate. Another thing that was also found to be the cause of the inappropriate use of CSR in NTT was because the Kupang City Inspectorate did not yet have regulations regarding the management and use of CSR funds (<https://www.victorynews.id/>, 2022).

The practices described above confirm that companies in NTT do not yet fully have a sustainable commitment to developing economic development in the 3T area. There is no maximum benefit for the community from companies that profit from their territory. This is not in accordance with what is stated in The World Business Council for Sustainable Development defining CSR as a company's commitment to contributing to sustainable economic development, working with company employees, employee families, local communities and the community as a whole in order to improve the quality of life.

The above practices are contrary to the good CSR practices of PT PLN in the Tanjung Jati Region. B CSR has quite an influence on the welfare of the community around PT. PLN TJB. Such as CSR in the economic sector through flashlight programs and tourist villages which have a direct impact on the income of the surrounding community. As well as a free treatment program that has received enthusiasm from the community. Collaboration with various related stakeholders is also the key to the success of this CSR (Syarifuddin, 2020)

Measuring Company Participation in Implementing Corporate Social Responsibility in the 3T Region

The presentation of the data above shows several important things:

1. Companies gain large profits by conducting business in poor areas but do not provide a positive impact on the economic, social and environmental development of the NTT community which is categorized as a 3T area. There is no improvement in welfare for economically backward communities with the Company's operations in the area.
2. Companies that have provided CSR do not properly monitor the distribution and use of CSR funds so that some are lost and it is not known where they have gone. This results in losses for both the Company and the Community in NTT Province. This certainly hinders the success of CSR in NTT considering that in Chairia, et al (2022) it is stated that the success of Green Accounting does not only depend on the company's accuracy in classifying all costs incurred by the company, but also the ability and accuracy of the company's accounting data to reduce the environmental impact that arises. from company activities. For this reason, the company's control function over the CSR provided must also run effectively.
3. The NTT Provincial Government as the recipient and distributor of CSR funds has not yet worked optimally. There are CSR funds provided through the government that have disappeared without a trace, apart from that the NTT Provincial government's weak control function over CSR funds can be seen from the absence of regulations regarding the management of CSR funds and there are even no accounting records as evidence and a source of information on the use of funds.

Through the 3 main points as measuring tools above, it can be stated that companies that generate profits and obtain wealth from NTT Province as the 3rd poorest province in Indonesia have not provided maximum justice impact for the community. The company uses the wealth of the 3T area to generate huge profits for shareholders while forgetting about social responsibility for the community and the surrounding environment. The facts above are also in line with the research results of Dewi and Wardani (2022) which state that manufacturing companies' awareness of the environment is still low.

The above practices do not yet show the stages in CSR that must be carried out by the Company, Community and government as implied in the Pitutur Luhur Kejawen to achieve the ultimate goal of CSR according to the views of Anindita and Hamidah (2020), namely the first stage: balancing nature and the interests of the Company, The second stage brings the

company closer to the community and the third stage; cooperation between companies, communities and government in implementing environmental accounting. The third stage is the main key to achieving successful implementation of environmental accounting.

If a company is committed to carrying out CSR, it must pay attention to economic, social and environmental conditions based on three basic principles which include profit, people and planet (3P). Profit; Companies must still be oriented towards seeking economic profits to ensure the survival of the company so that the company can continue to operate and develop. People; Companies must have concern for the welfare of employees and humans who are valuable assets in the organization and country. A form of social or people-oriented CSR program is the provision of scholarships for students around the company, the establishment of educational and health facilities. Planet, concern for the environment and sustainability of biodiversity can be done through implementing environmental greening programs, providing clean water facilities, improving settlements, developing tourism (Anatan, 2010)

Conclusion

There are 44 companies that gain profits through their operational activities in East Nusa Tenggara Province, but not all companies carry out their social responsibility to improve community welfare both in economic, social and environmental terms. Not all of the CSR funds given were used for the intended needs. The control system over the CSR funds provided is still weak. There is no good control from the company or government so that CSR funds are not used or even lost without knowing where. East Nusa Tenggara Province as part of the 3T Region has not felt the maximum impact of CSR to bring NTT out of the 3T zone.

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FOSTERING SENSITIVITY, JUSTICE, SOLIDARITY, AND OPEN VISION: UTILIZING THE JEFFREY DAHMER TELEVISION SERIES IN ETHICAL LEARNING

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Abstract

Public administration educators play a pivotal role in shaping ethical future administrators with qualities like sensitivity, justice, solidarity, and open-mindedness. This essay explores how the TV series "Monster: The Jeffrey Dahmer Story" can serve as a powerful tool for teaching public ethics. Reflective learning, a core approach in public administration education, deepens students' understanding of complex issues and ethical dilemmas. The series fosters critical thinking and moral reasoning by analyzing Jeffrey Dahmer's character, exposing students to ethical considerations such as sensitivity towards crime victims. It prompts students to evaluate the role of public administrators in justice and equal treatment. Furthermore, the show encourages reflection on solidarity, emphasizing community support by administrators. Through exploring Dahmer's actions and their consequences, students consider ethical implications and societal impact. It also highlights systemic failures, offering insights into public administration complexities and the need for preventive measures. This paper demonstrates how "Monster: The Jeffrey Dahmer Story" facilitates reflective learning, cultivating qualities vital for ethical administrators. Through critical analysis, the series explores sensitivity, justice, solidarity, and open-mindedness, equipping future administrators for ethical navigation of their roles.

Keywords: ethics, Jeffrey Dahmer, justice, open vision, public administration, reflective learning, sensitivity, solidarity

Abstrak

Pendidik pada bidang ilmu administrasi publik memainkan peran penting dalam membentuk administrator masa depan yang beretika dan menjadi insan yang memiliki kepekaan, keadilan, solidaritas, dan keterbukaan pikiran. Makalah ini mengeksplorasi bagaimana serial TV "Monster: The Jeffrey Dahmer Story" dapat berfungsi sebagai alat yang ampuh untuk mengajarkan etika publik. Pembelajaran reflektif, salah satu pendekatan dalam pendidikan administrasi publik dapat memperdalam pemahaman peserta tentang isu-isu kompleks dan dilema etika. Serial tv ini menumbuhkan pemikiran kritis dan penalaran moral dengan menganalisis karakter Jeffrey Dahmer, mengenalkan peserta pada pertimbangan etis seperti kepekaan terhadap korban kejahatan. Hal ini mendorong peserta untuk mengevaluasi peran administrator publik dalam mewujudkan keadilan dan perlakuan yang setara. Selain itu, serial tivi ini mendorong peserta melakukan refleksi terhadap solidaritas dan menekankan pentingnya dukungan masyarakat kepada para administrator publik. Melalui eksplorasi tindakan Dahmer dan konsekuensinya, peserta berlatih mempertimbangkan dampak etis dan dampak sosial. Makalah ini juga menyoroti bagaimana mahasiswa memahami tentang kegagalan sistem, memberikan wawasan mengenai kompleksitas administrasi publik dan perlunya tindakan pencegahan. Melalui analisis kritis, serial ini membantu peserta mengeksplorasi kepekaan, keadilan, solidaritas, dan

keterbukaan pikiran, dan membekali para administrator masa depan untuk menjalankan peran mereka secara etis.

Kata kunci: administrasi publik, etika, Jeffrey Dahmer, keadilan, pembelajaran reflektif, pemikiran terbuka, sensitivitas, solidaritas

Introduction

Educators play a critical role in developing a future generation of ethical public managers in the field of public administration education. For these public administrators to successfully negotiate the complexities of their responsibilities, they must have traits like empathy, justice, solidarity, and an open vision. This essay explores a distinctive and unusual strategy for encouraging students of the public administration department i.e. the future public administrators to study public ethics critically. It focuses on how the Jeffrey Dahmer television series, despite being divisive, can be an effective vehicle for reaching this objective. A key component of public administration education is reflective learning, which helps students comprehend complex challenges and the moral quandaries unique to their area.

Reflective learning is a key element of contemporary pedagogy, especially when it comes to public administration education (Harper, 2018; Barnett, M., 2005; Behn, R. D., 2010). Its importance comes from its ability to support students' development of essential skills and to foster a greater knowledge of complex situations. Reflective learning is an effective instrument for developing these crucial skills in the field of public administration, where moral judgment and the capacity to work through complex situations are crucial. Further, Reflective learning helps prospective public administrators make ethically sound decisions in the dynamic and frequently unpredictable world of public service by bridging the gap between theory and practice in this way.

In this paper, I discuss the student's learning experience on public ethics using serial television. Further, I offer a critical assessment of how the elements of sensitivity, justice, solidarity, and open vision might build the student's understanding of the reflective learning that might eventually enhance their ethics.

This study has several points of novelty. First, it employs a unique education tool in which the Jeffrey Dahmer television series was used as an instructional instrument for teaching public ethics. This approach hasn't been widely explored in public administration education. Second, it enables students to explore comprehensive ethical considerations in public affairs as it discusses a variety of ethical issues, such as sensitivity, fairness, solidarity, and an open mind. Third, as the nature of public administration is a praxis field of study, using the television Series provides insights to the students into the practical challenges and ethical dilemmas that public administrators may encounter in their future careers. This eventually is a meaningful skills development for future public administrators. Fourth, up to now, there have been no scholarly articles devoted to using the Jeffrey Dahmer television series as a resource for teaching public administration or ethics.

Method

In this section, a clear and detailed description of how this study was conducted and how the data were collected and analyzed to support my conclusions about the use of the Jeffrey Dahmer television series to promote reflective learning in public administration education will be presented.

Participants were chosen from two batches of undergraduate students (classes of 2022 and 2023) who were enrolled in the public ethics course in the Public Administration Department at Parahyangan Catholic University. The course, Public Ethics, was designed as one of the mandatory courses in the undergraduate department of the Public Administration Department. As a mandatory course, I have incorporated contemporary tools and approaches

for teaching public ethics. The course has been structured so that upon understanding the basic concepts of public ethics, students are expected to test their understanding through identifications of elements of the public ethics dilemma in the Jeffrey Dahmer television series.

Concerning data collection, as the assessment tool to generate data for the analysis, this study used the responses written by the students' reflective essays. Every student enrolled in the public ethics course was required to write a reflective essay that showcased their understanding of the concepts discussed in this course, such as deontology, teleology, consequentialism, utilitarianism, hedonism, impartiality, neutrality, integrity and integrity approach or compliance approach in promoting ethical behavior in the public sector. To enrich the analysis, I looked at how the students' responses are

Data Analysis was conducted using thematic analysis. This will involve a process of understanding the student's responses that showcase their reflection on how all of the concepts can be applied to analyze the chosen television series in ethical implications. Below are the questions that guide the students' reflective essay:

1. The students' perceptions/understanding/discoveries of the concepts of public administration ethics from each character in the television series "Monster: The Jeffrey Dahmer Story." This may include concepts such as deontology, teleology, consequentialism, utilitarianism, hedonism, impartiality, neutrality, integrity and integrity approach or compliance approach.
2. The students' perceptions of whether or not Street-level Bureaucrats (SLB) sensitivity is important for vulnerable communities. This will relate to minority and marginalized parts of society (Black, Latino, Asian, Immigrant)
3. The perspectives of the students regarding the significance of SLB in fostering justice and guaranteeing that everyone is treated fairly under the law
4. Perceptions of the students as to whether the TV series embodies ideas of solidarity. According to this definition, solidarity is "loyal friends or mutual trust."
5. Students are aware that every SLB choice that affects society has ethical ramifications.
6. Students can express their ideas and examine the social dynamics and systemic flaws that allowed Dahmer to commit crimes that went unpunished for a long time.
7. The students can comprehend the complexity of public administration and the need for SLB to take proactive measures to prevent future tragedies like the Dahmer murder.
8. Which strategy—deontology or teleology, compliance approach or integrity approach—did the SLBs employ considering all the issues caused by Dahmer's crimes?

Findings and Discussion

The questions guide that the students use in writing their reflective essay is also useful as the basis of thematic analysis. Hence through the television series, students can reflect on eight aspects. In the following, these eight aspects will be elaborated.

Identification of ethical principles in public administration

The students who are currently enrolled in the public ethics course, and who are expected to become future public administrators, have demonstrated their ability to identify the fundamental principles that govern ethical conduct in public administration. The identification of ethical principles is achieved by engaging in a process of reflection over the television series entitled "Monster: The Jeffrey Dahmer Story"

Studying public ethics through TV series enables students to Understand the Importance of Impartiality and Neutrality. Being impartial when exercising public authority has long been regarded as a crucial component of excellent government (Rothstein, 2009; Rothstein & Teorell, 2008; Suzuki & Demircioglu, 2019; Suzuki & Demircioglu, 2021). Students engaging with the television series "Monster: The Jeffrey Dahmer Story" gain valuable insights into the principles of public administration ethics. They are exposed to the consequences of partiality and bias, as reflected in the series' portrayal of unethical conduct.

The interviews conducted with experts in the field resonate with the idea that impartiality is a cornerstone of ethical public administration. As one interviewee aptly put it, "Impartiality: preferential not to those who are disadvantaged, biased, taking a side, discriminate against." This quote underscores the need for public administrators to uphold principles of fairness and neutrality in their decision-making processes. By analyzing the actions and decisions of characters like Jeffrey Dahmer, students are prompted to recognize the ethical implications of favoritism and partiality, emphasizing the importance of treating all members of the community with equality and fairness.

Furthermore, students understand how to balance ethical principles that are sometimes contradictory. By using the TV series, students are encouraged to critically examine the compliance approach in public administration ethics. Menzel (2010) argues that "A compliance approach depends heavily on rules and practices that, if followed, are designed to keep members of the organization out of trouble. Behavior deemed acceptable or unacceptable is defined for the employee usually in the form of rules or admonishments. Rules are typically placed in personnel manuals, codes of conduct, and new employee orientation sessions." One interviewee expressed concerns about being overly cautious and overly rule-bound, noting that it could lead to delayed services and problem-solving. This perspective highlights the delicate balance between adherence to standard operating procedures (SOPs) and ethical professionalism. This is in line with Grabham's (2009b) argument that Emphasizing formal equality may be detrimental to substantive equality, which takes into account and responds to the social causes and outcomes of various forms of discrimination. Through their engagement with the television series, students begin to grasp the complexities of decision-making in public administration. They learn that a rigid adherence to procedures, while important, must be complemented by moral sensitivity and a commitment to providing efficient and timely services. This nuanced understanding prepares future public administrators to navigate ethical dilemmas by considering both procedural compliance and the human aspects of their work.

One significant theme that emerges from the students' reflective essay is the notion of ethical leadership and responsibility. Students can analyze how various characters in the series, both in law enforcement and other positions of authority, either upheld or failed to uphold ethical standards. This exploration allows students to recognize the importance of ethical leadership within public administration. It prompts them to identify the characteristics and behaviors that define ethical leaders in the field, such as accountability, transparency, and a commitment to the welfare of the community.

In learning public ethics, students are expected to foster moral sensitivity in decision-making. One of the striking aspects of the television series "Monster: The Jeffrey Dahmer Story" is its capacity to encourage students to reflect upon the importance of moral sensitivity in public administration. An interviewee aptly stated, "moral sensitivity (F)." This brief but impactful phrase captures the essence of ethical decision-making. By analyzing the character of Jeffrey Dahmer and his heinous actions, students are prompted to confront the ethical dilemmas that can arise in public administration. They come to appreciate the significance of empathy and ethical discernment when dealing with vulnerable populations, such as victims of crime. Through this lens, students learn that public administrators must possess the moral sensitivity to understand the needs and rights of all individuals within their jurisdiction.

Sensitivity

Sensitivity in public administration entails being empathetic and attuned to the needs, concerns, and emotions of the diverse individuals and communities served. According to Choi & Perry (2010) before the cognition stage, to reason morally, public administrators should perceive ethical dimensions in the process of their work through sensitivity. Public administrators with sensitivity can understand the unique circumstances of vulnerable populations, such as victims of crime, and respond with compassion and fairness. They recognize the importance of treating everyone with respect and dignity, regardless of their background or circumstances.

As sensitivity is a vital lens for public ethics, studying public ethics through unconventional means, such as the Jeffrey Dahmer TV series, offers a unique perspective on the importance of sensitivity in public administration. As one quote aptly states, “a vulnerable and disadvantaged group of society becomes the victim because the police officer has no sensitivity.” This observation underscores the real-world consequences of insensitivity within the public sector. It highlights that public administrators, including law enforcement officers, must possess sensitivity to protect the rights and well-being of all citizens. Sensitivity is not an abstract concept but is directly related to human rights protection, serving as a lens through which to assess the ethical conduct of those in authority.

SLB with good sensitivity helps ensure the safety and security within the society. Human rights protection encompasses all aspects of safety and security within society. Public ethics education through the Jeffrey Dahmer TV series allows students to grasp how a lack of sensitivity can compromise these fundamental aspects. Sensitivity is paramount in identifying problems and their root causes, a quality essential for street-level bureaucrats (SLBs) to find effective solutions. It is through sensitivity that SLBs can ensure the safety of marginalized society groups, proactively averting conflicts before they occur. This proactive approach is pivotal in creating a secure environment where the rights of all individuals are respected and upheld.

Impartiality as the important principle of public ethics, stresses formal equality in the procedural process, which is about treating people equally despite inequalities in race, gender, and other sociodemographic characteristics (Grabham, 2009a). It is also aligned with sensitivity. The combination of these two principles helps SLB to address the diverse needs of society, irrespective of individuals' identities, characters, or backgrounds. The Jeffrey Dahmer TV series serves as a compelling case study to underscore this point. Sensitivity enables SLBs to provide services that align with the unique requirements of their communities. It fosters an inclusive approach to governance where the rights and dignity of every citizen are valued. By examining the consequences of insensitivity, students learn that failure to cater to the needs of society can lead to further problems and severe consequences, emphasizing the ethical imperative of sensitivity.

Another aspect that the students understand about sensitivity in its importance to public ethics from studying the TV series is that sensitivity has a certain impact on the character of bureaucracy. Sensitivity extends beyond individual behavior; it aligns with the character of bureaucracy itself. This connection is significant, as sensitivity is crucial in preventing severe problems in the long run, as stated in one of the quotes. An objective, fair, and ethical bureaucracy embodies sensitivity in its decision-making processes. Sensitivity contributes to a bureaucracy that upholds the principles of justice and equality, fostering public trust and legitimacy. In contrast, insensitivity can erode the character of bureaucracy, leading to inefficiencies and ethical lapses.

Students also understand that being sensitive is important to help the bureaucracy to have proactive conflict prevention. The Jeffrey Dahmer TV series vividly illustrates how sensitivity is fundamental in preventing social conflicts in society. Public administrators, particularly SLBs, bear the duty of preventing conflicts before they occur, as another quote emphasizes. Sensitivity equips them with the ability to foresee potential sources of conflict, maintain open lines of communication, and promote understanding among diverse community members. By delving into the series, students come to recognize that sensitivity plays a pivotal role in maintaining social harmony and order, making it an essential component of public ethics education.

Justice

Justice is a fundamental principle in public administration ethics. Justice, particularly social justice is essential to ‘enrich public administration theory and practice and make it more relevant for addressing complex social problems’ (Stivers et al. 2023). It involves treating all individuals and groups equitably and fairly, ensuring that decisions and actions are based on principles of fairness and impartiality. Impartiality and neutrality are

considered the standard values that public servants should follow in their recent study on 14 countries' codes of conduct for civil servants Jørgensen and Sørensen (2012). Fair and just public administrators uphold the rule of law and work to eliminate discrimination and bias in their interactions with the public. They are committed to upholding the rights and responsibilities of citizens and ensuring equal treatment under the law. The theory of government impartiality suggests that impartiality means "government institutions treat similar cases in similar ways, and only pay attention to the particular circumstances of citizens insofar as such considerations are specified in advance in law" (Stensöta, 2012, p. 88; Rothstein, 2011).

The future of public administrators, as suggested by (Terry, 2003) should be a conservator. One of the noble duties to uphold as a conservator is to be the guardian of human rights. By delving into the Jeffrey Dahmer TV series, students gain a profound appreciation for the centrality of justice in the realm of public ethics, particularly concerning the protection of human rights. The series serves as a stark reminder that injustices, such as ignoring reports from marginalized members of society, can have far-reaching consequences. As emphasized in one quote, "Injustice will have consequences: the law will no longer be universal. The public will not trust the law and its enforcement." Through the lens of the series, students understand that justice is not merely a legal construct but a moral imperative that safeguards the rights and dignity of all individuals. They recognize that public administrators, including street-level bureaucrats (SLBs), play a crucial role in upholding justice to protect human rights and ensure public trust in the legal system.

The most emerging topic of discussion found in the students' reflective essay is equality under the law and the role of SLB. Students discern that SLBs are entrusted with the responsibility of ensuring that all individuals are treated equitably under the law, irrespective of their backgrounds or characteristics. As conveyed in one quote, "SLB works in the field. They must recognize and understand the situation. They must protect and serve society to enforce the law and ensure that all are treated equally under the law." This quote underscores that SLBs serve as role models and instruments for justice. By critically examining how differential treatment results in unfairness and erodes public trust within the series, students grasp that promoting equality under the law is not solely a legal obligation but an ethical imperative for public administrators. Students understand that procedural justice/fairness matters for citizen trust in or support for the government (Grimes, 2017; Linde, 2012; Magalhaes & Aguiar-Conraria, 2019; Marien & Werner, 2019)

The ethical principle of neutrality is aligned with the concept of justice. To ensure justice, SLB must be objective and neutral. The Jeffrey Dahmer TV series sheds light on the critical importance of SLBs maintaining objectivity and neutrality in their roles. It demonstrates that law enforcement officials cannot take sides or put aside integrity when conducting investigations, as doing so compromises the pursuit of justice. As aptly stated in one quote, "related to being objective/neutral. The law cannot take sides in certain groups. Being objective/neutral will ensure law enforcement." This quote reinforces that SLBs must adhere to the principles of justice by preserving objectivity and neutrality. Students understand that SLBs possess the authority to prosecute when crimes occur, and their decisions carry significant ethical implications. By studying the series, students gain insights into the ethical mandate of objectivity and neutrality in public administration to guarantee that justice is administered impartially and fairly, reinforcing public trust in the legal system.

Solidarity

Solidarity in public administration is about actively engaging with and supporting the communities and constituencies served. Public administrators who embrace solidarity recognize the interconnectedness of society and work collaboratively to address common challenges. Research by Xu'e et al. (2023) shows that among other aspects, solidarity incentives have a statistically significant positive correlation with public coproduction behaviors. This means that solidarity allows the community to work together. They prioritize

community well-being, advocate for the needs of marginalized groups, and foster a sense of unity and shared purpose among citizens.

Solidarity is a crucial component of Public Ethics. The Jeffrey Dahmer TV series offers students a window into the critical role of solidarity within the framework of public ethics. Throughout the series, viewers witness the consequences of trusting certain groups while displaying apathy towards others, particularly disadvantaged groups. Students observe scenarios where public administrators, in their role as deliberators, should refrain from taking sides and instead prioritize treating everyone fairly to ensure the equitable provision of public services. The series further highlights instances where public services are granted primarily to individuals of a similar racial background, exposing a clear connection to partiality. This depiction underscores that solidarity is not a mere abstract concept but a tangible and vital ethical principle that should guide public administrators in their decision-making. It serves as a reminder that public administrators must remain impartial and uphold the principles of justice and fairness to provide equal opportunities and services to all members of society.

However, students see that solidarity can also have a negative dimension. Negative solidarity comes into play when it is applied in a way that leads to exclusivity rather than inclusivity. It occurs when a certain group aligns itself to the detriment of others. In the series, there are instances where negative solidarity is depicted, where individuals within a specific community close rank, often at the expense of marginalized or disadvantaged groups. This form of solidarity can inadvertently contribute to discrimination, perpetuating inequalities in access to public services and justice. The series offers students a nuanced perspective on the consequences of negative solidarity. It serves as a cautionary tale, illustrating that while solidarity can be a powerful force for change and justice, it can also be wielded as a tool for exclusion and bias. By examining these instances of negative solidarity within the series, students gain a deeper understanding of the ethical complexities that public administrators face when navigating the dynamics of various interest groups and communities. They learn that achieving true solidarity in public ethics requires a delicate balance, where unity and cohesion should not come at the cost of fairness, equality, or the well-being of marginalized populations. Ultimately, the series reinforces the importance of ethical decision-making and the need for public administrators to uphold justice, impartiality, and inclusivity in their roles.

Ethical Consequences

The Jeffrey Dahmer TV series serves as a poignant reminder of the ethical consequences that can result from the actions of public administrators, particularly street-level bureaucrats (SLBs). Students witness how negative sentiments from society toward the bureaucracy and police officers can arise when ethical principles are compromised. As the series portrays, when SLBs' morality is negatively perceived, it not only erodes public trust but also leads to a low level of citizen compliance with government decisions and public policies. This multifaceted consequence underscores the interconnectedness of ethics, public perception, and government effectiveness. It becomes evident to students that without considering ethical values, justice, and the interests of society, every decision made by public administrators can have far-reaching consequences that impact not only public trust but also the overall quality of public services.

The TV series offers an opportunity for students to delve into the delicate realm of public perception and reputation management in public administration. They can examine how unethical behavior, when exposed, can tarnish the reputation of individuals, organizations, and even entire agencies. This sub-idea encourages students to consider the lasting consequences of ethical lapses on the public's perception of government institutions. By understanding the link between ethical conduct and public trust, students gain insights into the strategies and communication skills required to maintain and restore public confidence.

In addition to understanding the principles of public administration ethics, students also confront the real-world consequences of unethical conduct. As portrayed in the series and echoed in the interviews, every action or decision made by a public servant carries ethical repercussions. This insight is encapsulated in the statement, "Undoubtedly, ethical consequences follow each action or decision made by a street-level bureaucrat." Students come to realize that their actions have a direct impact on societal perceptions of public services and the level of trust the public places in these institutions. By witnessing how unethical behavior can erode public trust, students become more attuned to the importance of upholding ethical standards in their future roles. Through this exploration, they develop a heightened awareness of the ethical principles that underpin effective public administration and the profound influence their decisions can have on the communities they serve.

Another important skill that the students gain is their ability to understand the consequences of unethical conduct and public trust. Through the TV series, students also confront the real-world consequences of unethical conduct. As portrayed in the series and echoed in the interviews, every action or decision made by a public servant carries ethical repercussions. This insight is encapsulated in the statement, "Undoubtedly, ethical consequences follow each action or decision made by a street-level bureaucrat." Students come to realize that their actions have a direct impact on societal perceptions of public services and the level of trust the public places in these institutions. By witnessing how unethical behavior can erode public trust, students become more attuned to the importance of upholding ethical standards in their future roles. Through this exploration, they develop a heightened awareness of the ethical principles that underpin effective public administration and the profound influence their decisions can have on the communities they serve. Through the Jeffrey Dahmer TV series, students gain insights into the long-term impact of unethical decisions made by public administrators. They see how the inability of SLBs to consider the ethical dimensions of their actions, particularly in the absence of impartiality, can lead to profound and lasting consequences. The series depicts unsolved societal problems, including an increase in crimes and murders, individuals experiencing trauma, and heightened animosity among different racial groups. Moreover, it illustrates how unethical actions can inspire or motivate individuals to follow criminal activities, perpetuating a cycle of harm and distrust within society. This portrayal underscores that ethical decision-making in public administration is not just about immediate outcomes but also about the enduring effects on communities, individuals, and societal harmony. Students come to understand that ethical considerations are integral to the effective and responsible practice of public administration.

Systemic Failure & Social Dynamic

Through the lens of the Jeffrey Dahmer TV series, students gain a profound understanding of how partiality and discrimination can lead to systemic failure, particularly in murder cases. The series vividly illustrates how subjective and partial public services for minority groups, combined with inattentive and sluggish responses from street-level bureaucrats (SLBs), can perpetuate bias and injustice within the system. Discrimination, which often results in biased judgments by SLBs, contributes to systemic failure and social unrest. Unfair treatment by SLBs, such as disregarding reports and discriminating against black or minority populations, exacerbates systemic issues and negatively impacts social dynamics. Stereotyping and stigma further worsen the situation, as white individuals are often considered without suspicion while black individuals face immediate judgment and retribution. The series portrays how these unethical actions by SLBs sustain systemic failures, perpetuate prejudice, and, in the case of Jeffrey Dahmer, lead to tragic consequences. Research by Garg et al. (2021) on "Addressing stigma and discrimination in the Covid-19 pandemic: a public health ethics issue" shows how discrimination and health-related stigma can exacerbate pre-existing divisions in communities such as race, gender, religion, and class.

The Jeffrey Dahmer TV series also sheds light on the systemic failures resulting from communication breakdowns and neglect within law enforcement agencies. Students witness how the police often overlook missing person cases in America, viewing them as minor societal issues due to their frequency. This lack of effective communication between agencies, coordination in gathering information, and public awareness of crime issues becomes evident as a significant problem. The series underscores how these issues can contribute to systemic failures, including delayed responses to crime reports and murder detection. Human error, coupled with insensitivity and slow responses to reports, exacerbates communication problems and hampers the effectiveness of law enforcement. Consequently, students come to understand the intricate interplay between systemic failures, discrimination, and communication issues, and how these factors impact the dynamics of society and the pursuit of justice within the context of public administration.

Open Vision

An open vision in public administration signifies a broad and forward-looking perspective. Public administrators with an open vision are willing to challenge the status quo and explore innovative solutions to complex problems. They consider the long-term consequences of their decisions and actions, aiming to create positive and sustainable outcomes for their communities. This quality encourages adaptability, a willingness to learn from past mistakes, and a commitment to proactive measures that prevent future issues.

Through the Jeffrey Dahmer TV series, students gain a deeper understanding of how open vision in public administration is intertwined with ethical dilemmas and societal trust. The series illustrates that ethical dilemmas are inherent in public administration, involving norms, hierarchies, compliance, honesty, and issue resolution. Students recognize that SLBs must navigate these complexities while being proactive in addressing community concerns. However, a disconnect often exists between SLBs and society, leading to prejudice and distrust. The series highlights that proactive decision-making and ethical adherence are crucial for bridging this divide and rebuilding public trust. It underscores the importance of SLBs taking the initiative to follow up on public complaints, seek information, and address incidents responsibly and transparently. By examining the challenges faced by SLBs in balancing ethical considerations and proactive problem-solving, students gain a nuanced understanding of open vision as an essential component of public ethics in the context of complex, real-world situations like those depicted in the series.

The Right Public Ethics Approach

Through the Jeffrey Dahmer TV series, students learn the significance of impartiality in ethical decision-making for street-level bureaucrats (SLBs). They gain an understanding that impartiality is a strategy that will elevate SLBs' ethical standards. Impartiality in public administration means (a) impartial treatment of citizens and (b) civil servants can behave and make decisions without the influence of any political party (Aucoin, 2012). It involves making decisions that reflect values of fairness and equality rather than taking sides based on personal biases, identity, color, or heritage. The series underscores that upholding impartiality is crucial in public administration to ensure that decisions are just and unbiased. By examining the complexities of the Dahmer case, students come to understand that impartiality is not just a theoretical concept but a practical approach that helps address issues that can lead to criminal actions and promote justice and equality.

Students also understand the importance of balancing both the compliance and integrity approaches in ethical decision-making for SLBs. Students recognize that while compliance is essential for following established rules and laws, integrity provides the moral compass for making decisions that align with what is morally right or wrong. The series emphasizes that SLBs must consider both ethical strategies to ensure a well-rounded and sensitive approach. By drawing upon their sense of compassion and adhering to rules and regulations, SLBs can conduct thorough investigations, as seen in the handling of Glenda's

report in the series. Students come to understand that using both approaches can motivate SLBs to act ethically and contribute to a fair and just society while upholding the law.

Incorporating these ethical approaches and principles into their learning, students gain a comprehensive understanding of the right approach to public ethics as they prepare for future roles in public administration.

Further, it emphasizes the importance of balancing both the compliance and integrity approaches in ethical decision-making for SLBs. Students recognize that while compliance is essential for following established rules and laws, integrity provides the moral compass for making decisions that align with what is morally right or wrong. The series emphasizes that SLBs must consider both ethical strategies to ensure a well-rounded and sensitive approach. By drawing upon their sense of compassion and adhering to rules and regulations, SLBs can conduct thorough investigations, as seen in the handling of Glenda's report in the series. Students come to understand that using both approaches can motivate SLBs to act ethically and contribute to a fair and just society while upholding the law.

Incorporating these ethical approaches and principles into their learning, students gain a comprehensive understanding of the right approach to public ethics as they prepare for future roles in public administration.

Conclusion

In conclusion, the unconventional but powerful tool of using the television series "Monster: The Jeffrey Dahmer Story" as an educational resource in public administration equips students with the skills and mindset necessary for ethical public administration. Through critical analysis and introspection prompted by the series, students emerge with a profound understanding of sensitivity, justice, solidarity, and an open vision as fundamental principles of public administration ethics. This approach ensures that future public administrators are not only well-versed in the theoretical aspects of ethics but are also capable of applying these principles in real-world scenarios. Ultimately, it empowers them to navigate the intricate challenges of their roles while upholding the highest ethical standards, thus contributing to a more ethical and effective public administration landscape.

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FOSTERING LOCALITY CONSCIOUSNESS THROUGH PEDAGOGY

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Abstract

Locality consciousness is very important to inculcated from an early age. One of the very important elements of locality is the richness of traditional architecture. The wealth of local architectural wisdom that is owned by Indonesia should be used as a source of inspiration in the embodiment of architecture that is present today. One of the competencies of graduates of the Bachelor of Architecture at Saint Thomas Catholic University (UKST) is emphasizing mastery of the basic skills of architecture graduates who have a global perspective and open vision of local values. The embodiment of this concept is reflected in the pedagogy carried out in the Architecture Study Program UKST, especially in the latest MBKM curriculum. This competence is very relevant to the vision of the architecture study program at the UKST, namely "becoming an architecture study program that produces bachelors of architecture who are reliable in architectural design and research, ethics and humanity." Humanism can be created only if students understand their environment and themselves, especially the richness of the locality around them. By this vision, the introduction of the potential of locality is applied through all aspects of pedagogy, such as in the process of learning, research, and community service. Students are advised to refer to the richness of the locality in almost every assignment, thus awareness of local potential will be embedded in every student. This paper highlights the significant impact of locality consciousness on the pedagogy of architecture education at UKST to nurture a new generation of architects who have open vision and locality consciousness.

Keywords: Locality consciousness, Pedagogy

Introduction

With the condition of the earth increasingly experiencing environmental degradation and massive invasion of modernization, we should instill environmental awareness in our children from an early age. Locality consciousness can be inculcated from an early age through education.

The most effective way to solve environmental problems (Pooley & O'Connor, 2000; Stevenson, 2007 in Arslan, 2012) is the education of societies. Education about the environment has become an individual and social necessity which was caused by the environmental problems that have been at the top of the world agenda all the time. As the problems about the environment grow and as the sensitivity about the environment increases, the importance of environmental education also becomes more important (Alim, 2006; Dunlap & Liere, 1978 in Arslan, 2012). The education about environment aims not only an increase the educational knowledge of the individuals but also to turn the positive attitudes about the environment into behavior. While education about the environment gets more importance in the changed world, as a natural consequence of it,

environmental education gets more attention in the educational curriculum of the countries (Jensen & Schnack, 1997 in Arslan, 2012).

The unique architecture of our nation deserves to be placed as an architectural character of our nation, so the challenge to all of us is, to dare to make a design by following architectural principles in Indonesia (Koesmartadi, 2018) to provide a new spirit of modernization that is more sensitive to local issues (Antariksa, 2017).

The existence of residential buildings scattered throughout the archipelago for centuries is present and leaves a long trace both culturally and socially and is integrated with life. The community that owns it has an extraordinary wealth of local wisdom values (Subroto, 2019).

Technological advances, especially in the field of communication facilitate intercultural relations and modernization. Intercultural relations in society and between nations will create an acculturation process, either in the form of "Acculturation Integration or Acculturation Domination. Acculturation Integration can make people absorb foreign elements to strengthen local culture and develop teak themselves, whereas in acculturation domination aspects of the dominant foreign culture will be detrimental to local cultural identity (Wiranto, 1999).

By focusing on pedagogy as the area where teachers exercise the most control, place-conscious pedagogy offers a feasible and immediate means of tapping the transformative potential of current education systems (Darron, 2019).

This paper highlights the significant impact of locality consciousness on the pedagogy of architecture education at Saint Thomas Catholic University (UKST) to nurture a new generation of architects who have open vision and locality consciousness.

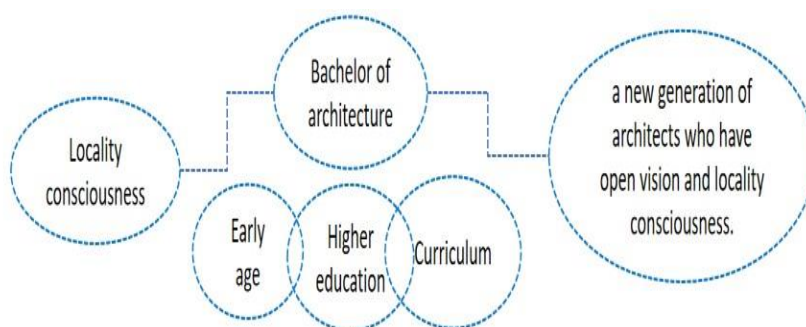


Figure 1. Research background

Methodology

This brief review aims to find out what has been done by the UKST architecture study program to foster awareness of locality through a learning process that has been carried out more or less during and after the pandemic (2019-2023).

The research method used is descriptive qualitative. Primary data is the perception of students and teaching staff/lecturers through the depth interview method; 6 respondent from lecturer, 10 student respondents which are in their final semester. Secondary data is the perception of student through google forms questionnaire (47 respondents). Other parts of this article are taken from case studies or empirical experiences of the author and several lecturers at the Architectural Study Program at UKST. All questions are categorized starting from the learning process, curriculum and output of each course as well as research and community service activities that have been carried out more or less during the pandemic (2019-2023).

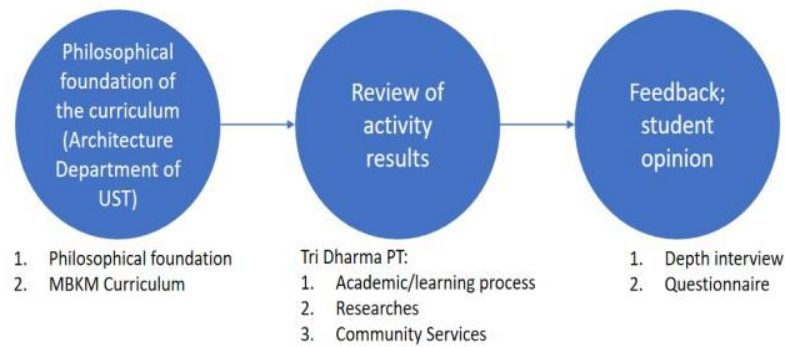


Figure 2. Review process

Results and Discussion

Philosophical foundation of curriculum UKST is progressive pragmatism. Progressive views a student-centered curriculum. Students must motivated and interested in learning tasks, and classes should build experiences interesting life and activities (Hunkins&Ornstein, 2018). Pragmatism underpins the curriculum dynamic and flexible, based on the principles of usability, interest, experience and integration. This is aligned with the field of architectural science that focuses on designing spaces for human activity, and emphasizing processes design studio learning. The pragmatist view advocates a focused learning process on critical and exploration thinking, learning by doing, interactive, and interdisciplinary subject matter.

The vision of the architecture study program at UKST, namely "becoming an architecture study program that produces bachelors of architecture who are reliable in architectural design and research, ethics and humanity." Humanism can be created only if students understand their environment and themselves, especially the richness of the locality around them (Curriculum MBKM UKST, 2023).

Relevant curriculum trends reflect the 21st century world of work adaptable, creative and digitally fluent. This view is in harmony with MBKM curriculum which provides space for student interaction and collaboration for learning, working, research, and experience interact with people outside the campus. The curriculum is required to continuously adapt to various changes, both in the world of education as well as in the development of science and technology and sociocultural society. This MBKM Curriculum can be seen as collaborative learning method. Collaborative learning compared with competitive and individualistic efforts, has numerous benefits and typically results in higher achievement and greater productivity, more caring, supportive, and committed relationships; and greater psychological health, social competence, and self esteem (Laal; Ghodsi, 2012).



Figure 3. Output of main subject

One of the graduate learning outcome (CPL) UKST - specific ability is “appreciate the richness of locality and heritage. By including locality value as one of the learning outcomes, it is hoped that all courses will include it in the learning outcomes of their courses.

Apart from teaching, locality issues are also clearly written in the research master plan and community service master plan at Architecture Study Program UKST. Community Master Plan (2021-2026) : focus to stakeholder (community; indigenous people (villages assisted in Samosir Island), church). Community service activities will prioritize collaboration with stakeholders from around campus.



Figure 4. some example of community participation

One (from 3) of the research focus written in Research Master Plan (2021-2026) is focusing in vernacular architecture (locality; heritage). Lecturers will focus on researching studies in this field.



Figure 5. Some example of research field

This is review of activity results; latest semester:

Table 1. Review of activity result in the last semester

Main Subjects	SKS	Process	Curriculum	Learning Output
		1	2	3
Design Architecture Studio 3	4	studio processes and offline assistance	Students are given the task of designing a school with a tropical architectural theme approach	Building design with a tropical architectural theme approach
Design Architecture Studio 5	4	studio processes and offline assistance	Students are given the task of designing commercial buildings with a themed approach according to each student's choice	Almost all students brought building designs with a tropical and neo vernacular architectural theme approach
Research in Architecture	5	Offline lecture process	Students conduct research in the field of architecture	Research on historical buildings, Batak, Karo and Nias architectural buildings
Field Research	3	Students go to study locations / outside the area	Students visited and documented traditional Batak and Acehese buildings	Report on Batak and Aceh architecture
Thesis	8	studio processes and offline assistance	Students are given the task of designing buildings of high complexity with a themed approach according to each student's choice	Most of the students brought building designs with a tropical and neo vernacular architectural theme approach

From the results of the review of the last semester, it can be seen that almost all courses bring locality issues into their learning process. In higher education, lecturers play a role as the front guard in introducing local issues to their students. lecturers must act as humanistic teachers, namely teachers who are "positive" and "supportive", who can manage students without coercion and teaching without failure (Hunkins and Ornstein, 2018).

As feedback, depth interviews were conducted with students. Students were asked in a depth interview about how they responded to locality issues and how interested they were in deepening these issues in the course assignments given?

Student respondents are 10 students which are in their final semester. 9 student say yes and give positive opinion. One student argued to be more interested in modern themes but still interested in local architecture.

Respondent A:

‘ By using the locality theme, it will participate in bringing and strengthening the identity and pride of the local community/region, so that the user's sense of ownership, appreciation and pride for their cultural heritage (which is the local community) will be stronger. From the iconic side of the building, using this theme will make the architecture of the building become a landmark’

Respondent B :

‘The identity of Indonesian architecture is little by little starting to be lost or displaced by developments in world architecture, such as European and American architecture’

Respondent D :

'The strongest reason why students need to focus on local elements, both vernacular and Neo-vernacular, is none other than as a form of preserving culture and an effort to introduce a culture to the wider community and abroad. Foreigners come on vacation to Indonesia to enjoy nature and witness local elements'

Conclusion

Based on the experience of the last three years, especially at the end of the last semester, it can be seen that the issue of locality is an issue that is often raised as learning materials, assignment materials, the theme of the final project as well as the issue of locality that has often arisen in research and community service activities.

However, more activities need to be carried out in order to foster and increase awareness of the importance of local values and nurture a new generation of architects who have locality consciousness.

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LAUDATO SI' AND ARCHITECTURE EDUCATION AT UNIVERSITAS KATOLIK SANTO THOMAS: FOSTERING SUSTAINABLE DESIGN AND ENVIRONMENTAL CONSCIOUSNESS

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Abstract

Laudato Si', Pope Francis's encyclical on the environment, has profound implications for architecture education at architecture department, Universitas Katolik Santo Thomas, Medan. The encyclical's call for an "integral ecology" that respects both human and natural systems necessitate a rethinking of architectural pedagogy. The architecture department, in response, has integrated principles of sustainable and ecological design into its curriculum. Students are thought to consider the environmental impact of their designs, from the choice of materials to energy efficiency. They are also encouraged to create spaces that foster a sense of community and respect for the natural world. This approach aligns with the encyclical's emphasis on the interconnectedness of all creation and the moral imperative to care for our common home. The university's commitment to this vision of architecture education not only prepares student to meet the challenges of climate crisis, but also instils in them a deep sense of ethical responsibility towards the environment and future generations.

This paper highlights the significant impact of Laudato Si' on architecture education at Universitas Katolik Santo Thomas to nurtures a new generation of architects who are well-equipped to create a built environment that promotes harmony between humanity and nature while addressing the pressing environmental concerns of our time.

Keywords: laudato si'; architecture education; environment; ecology; design

Introduction

The global discourse on environmental sustainability and ecological responsibility has taken center stage in recent years. Amidst growing concerns about climate change, resource depletion, and the environmental impact of human activities, Pope Francis issued a clarion call to action through his encyclical "Laudato Si': On Care for Our Common Home." Released in 2015, this monumental document addresses not only the urgent need for ecological conversion but also the moral and ethical dimensions of environmental stewardship. It challenges humanity to reevaluate its relationship with the natural world and recognize the interconnectedness of ecological, economic, and social well-being (Wilkins, 2019).

Within the realm of higher education, this encyclical has resonated profoundly, influencing academic disciplines that have significant bearing on the environment (Franchi, 2016). One such discipline is architecture, which plays a pivotal role in shaping the built environment and consequently, its impact on the planet (Hermansdorfer, 2018). In this context, architecture department of Universitas Katolik Santo Thomas in Medan, Indonesia, try to implementing social awareness, environmental consciousness, and sustainability within architectural education.

Through an examination of the integration of sustainable design principles in student assignments and the cultivation of environmental consciousness in the curriculum, this paper

endeavors to paint a comprehensive picture of the profound influence of *Laudato Si'* on the architectural education landscape at architecture department of Universitas Katolik Santo Thomas.

Universitas Katolik (Unika) Santo Thomas was founded in Medan, North Sumatra in 1984 with architecture as one of the first department in engineering faculty with the mission to produce and propagate knowledge from teaching, research, and extension activities in architecture design and science scope (Pedoman Akademik Prodi Arsitektur Unika Santo Thomas, 2022). In addition, architecture department of Unika Santo Thomas is one of the pioneering departments in the inclusion of option for the poor, sustainable, and green design principles into its curriculum. Taking full advantage of natural environment of its campus for educating and implementing various programs for the benefit of society at large.



Figure 1: Architecture department of Unika Santo Thomas.

In sum, this paper embarks on an exploration of the multifaced relationship between *Laudato Si'* and architecture education at Unika Santo Thomas. It seeks to unravel the transformative influence of the encyclical on the pedagogy and outcomes of architectural education at this institution. Moreover, it aims to shed light on the approach taken architecture department of Unika Santo Thomas in response to Pope Francis' clarion call for environment stewardship (Alva, 2016). This underscores the institution's commitment to shaping not just mere architects, but environmentally conscious and ethically responsible architects capable of designing a sustainable future for our common home.

Methodology

The methodology carried out in this study is a mixed-methods approach to comprehensively examine the impact of *Laudato Si'* on architecture education in architecture department of Unika Santo Thomas (Creswell, 2018, p.337).

In this study there are two actions used to obtain data, including:

1. Surveys: surveys were administered to architecture students to assess their perception of the incorporation of *Laudato Si'* principles in the curriculum and their awareness of sustainable and cultural design concepts in architecture.
2. Interviews: interviews were conducted with students and lecturers to gain insights the changes in pedagogy and curriculum as influenced by *Laudato Si'*.
3. Qualitative data from the surveys and interviews were analyzed using thematic and descriptive method to identify emerging patterns and themes.

Results and Discussion

Based on the analysis carried out after conducting surveys and interviews, this study has identified four significant themes related to the integration of Laudato Si' teaching into architecture curriculum at architecture department of Unika Santo Thomas.

The themes are as follows: 1. Ecological design - meeting in the garden, 2. Circular economic design - option for the poor, 3. Social well-being - history and culture of place, and 4. Integrated approach design.

Theme 1: Ecological Design - Meeting in the Garden

"... At the same time, creativity should be shown in integrating rundown neighborhoods into welcoming city...". (Pope Francis, 2015: 143)

Teaching ecological conscious design to first and second-year architecture students presents unique challenges for instructors in the architecture department of Unika Santo Thomas. Students from different background and neighborhoods need to be introduced to their local environment on a personal level, after which instructors gradually incorporate the core teaching of Laudato Si' and architectural design method. Emphasizing the importance of the connection and relationship between the surrounding environment as the teaching of the encyclical that architecture should "connect, relate, and favor the recognition of others" (White, 2023).

Instructors face the task of familiarizing students with their immediate surrounding and local ecosystem. Students were given the task of designing and building street furniture around campus and surrounding neighborhoods using recycled and inexpensive renewable building material. This task will help students develop a deep, personal interconnectedness with the environment in which they will be designing. This connection is vital as it forms the foundation for understanding the impact of architectural decisions on the local environment (Miller, 2017).

In the second year, junior students will be tasked with dismantling street furniture that was previously created by their senior peers a year earlier. This is done to impart the lesson that "what we design today might become waste and a burden for future generations". Through this instruction and hands-on activity allows students to physically engage with the consequences of design decisions made by their predecessors. It is anticipated that students will develop a mindset focused on environmentally friendly and sustainable design.



Figure 2: Students building street furniture with recycled and inexpensive renewable building material.



Figure 3: Students presenting their street furniture design.

Theme 2: Circular Economic Design - Option for the Poor

“... Today, however, we have to realize that true ecological approach always becomes a social approach: it must be integrating questions of justice in debates on the environment, so as to hear both the cry of the earth and the cry of the poor.” (Pope Francis, 2015: 49).

The encyclical proclaims that environmentalism (including architecture development) must be guided by the pro-poor objective (Moellendorf, 2020). It declares that, “a true ecological approach always becomes a social approach; it must be integrate questions of justice in debates on the environment”.

This pro-poor objective is approached in the design class for the second-year students. The students were given the task of designing and building a mobile kiosk intended for informal street vendors using recycled and inexpensive renewable materials.

Through instruction on designs that are oriented towards the weak and the poor, it is hoped that students will be able to recognize, experience, and create various design that can address society’s needs for a sustainable circular economy.

The teachings of *Laudato Si’* underscore the interconnectedness of ecological, social, and economic issues (Davila, 2017). By focusing on designs that benefit the less fortunate, this educational approach aligns with the encyclical’s call for a holistic and ethical approach to environmental and social challenges.



Figure 4: Students building mobile kiosk with recycled and inexpensive renewable building material.



Figure 5: The mobile kiosk design for the week and the poor street vendors.

Theme 3: Social Well-being - History and Culture of Place

"... It is not a matter of tearing down and building new cities, supposedly more respectful of the environment yet not always more attractive to live in. Rather, there is a need to incorporate the history, culture, and architecture of each place, thus preserving its original identity." (Pope Francis, 2015: 143).

The encyclical emphasizes the needs of incorporated history and culture of place (*genius loci*) in architecture design, not just making new but alienated buildings (Priyotomo, 2018).

This preserving original identity in architecture objective is approached in the history of architecture and architecture documentation technique class for the third- year students. The students were given the task of documenting and making models of heritage and vernacular architecture.

The study of architectural documentation and history allows student to gain a deep understanding of the architectural heritage of their region. By learning about the historical significance of local buildings and design styles, students can develop an appreciation for their cultural and architectural identity. In the future, students are encouraged to create

designs that are harmony with the local environment and culture. Students who value their cultural heritage are more likely to design buildings that contribute positively to the cultural and architectural fabric of their communities (Clarke *et all*, 2019). This approach aligns with the principles of Laudato Si’ about sustainable and context-sensitive architecture.



Figure 6: Students learning about local vernacular architecture through site visit and on-site documentation.

Theme 4: Integrated Approach design

“... We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental. Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time protecting nature.” (Pope Francis, 2015: 139).

Fourth-year architecture students at Unika Santo Thomas are tasked with designing building using the Laudato Si’ approach that relates to environmental and social crises by incorporated the knowledge they gained over the previous three years. The design projects focused on addressing environmental and social crises that aligns with the encyclical’s message of caring the planet and its most vulnerable inhabitants. It challenges students to think critically about how architecture can play a role in mitigating these crises.

Projects related to environmental and social crises often require interdisciplinary thinking. Students may need and encourages to collaborate with experts from fields such as environmental science, sociology, and urban planning to develop holistic solutions that consider both the built environment and its impact on society.

This approach not only enriches students understanding of architecture’s role in society but also prepares them to be socially conscious and environmentally responsible architects in the future.



Figure 7: Student's project that require interdisciplinary thinking that relates to environmental and social crises

Result

In term of curriculum integration, more that 50% of students and lecturer reported that socio-environmental sustainability related topics influenced by Laudato Si' were now included in their coursework such as in design studio course and theoretical course.

In term of pedagogical transformation, more than 65% of students mentioned that their lecturer encouraged them to think more holistic about design, considering environmental, social, and economic aspects. Lecturer members also stated that they now emphasize interdisciplinary approaches in their teaching.

In term of student perceptions and practices, more that 65% of students reported an increased awareness of sustainable design concepts due to the influence of Laudato Si' and about 52% of student expressed a desire to pursue careers in sustainable architecture with exploration in architectural heritage preservation and renewable building material design.

Conclusion

The findings of this study demonstrate the significant impact of Laudato Si' on architecture education at architecture department of Unika Santo Thomas. The integration of socio-environmentally sustainable design principles into the curriculum and adoption of a holistic pedagogical approach have led to increased student interest in sustainability and social awareness. These outcomes align with the encyclical's call for ecological conversion and responsible stewardship of the environment.

While the study indicates positive changes in curriculum and pedagogy, there is room for further enhancement. Department development programs and additional resources for sustainable design education could further strengthen the curriculum. Moreover, long-term follow up studies are needed to assess the actual impact of these changes on graduates' practices in the architecture design field.

In conclusion, Laudato Si' has played a pivotal role in fostering sustainable design and socio-environmental consciousness in architecture education at architecture department of Unika Santo Thomas. This study underscores the importance of aligning education with

ecological principles, ensuring that future architects are equipped to address the pressing challenges of our time for our better common home.

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