# Sustainable Development Goals (SDGs) Awareness and the Level of Civic Engagement among Public Senior High School Students in Division of Olongapo City

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## ABSTRACT

The Sustainable Development Goals (SDGs), adopted by the United Nations in 2015, underscore education as both a goal and enabler of sustainable development, yet empirical evidence on how SDG awareness translates into civic engagement among Filipino senior high school students remains limited. This study examined the levels of SDG awareness (social, environmental, and economic goals) and civic engagement (political participation, community service, and advocacy) among 123 Grade 11 and 12 HUMSS students through a stratified sample from four public senior high schools in Olongapo City (Mabayuan SHS, Tapinac SHS, Kalalake NHS, and New Cabalan SHS) during School Year 2025–2026. Utilizing an explanatory descriptive-correlational design and a validated researcher-made questionnaire, data were analyzed through weighted means, Mann-Whitney U, Kruskal-Wallis H with Dunn's post-hoc, and Spearman's rho. Results revealed Very Aware levels across all SDG domains and High to Very High civic engagement. Significant differences emerged in social goals awareness and political participation by school (Kalalake NHS lower) and in political participation by grade level (Grade 11 higher). Strong positive correlations linked SDG awareness to civic engagement, strongest between social goals and political participation. The study concludes that heightened SDG awareness fosters civic engagement and recommends the institutionalization of the "SDG Spark: Ignite. Engage. Empower" enhancement program addresses identified gaps and strengthens youth contributions to the 2030 Agenda.

**Keywords:** Sustainable Development Goals, Civic Engagement, SDG Awareness, Mabayuan SHS, Tapinac SHS, Kalalake NHS, New Cabalan SHS

## INTRODUCTION

The Sustainable Development Goals (SDGs) were adopted by the United Nations in 2015 as part of the 2030 Agenda for Sustainable Development, setting 17 goals and 169 targets aimed at addressing global issues such as poverty, inequality, health, education, climate change, and peace. These goals function as a universal call to action to ensure that "no one is left behind." Education, particularly through SDG 4, is recognized as both a goal and a key enabler of all other goals, equipping individuals with the knowledge, values, and competencies necessary to address sustainable development challenges.

Awareness of the SDGs has been strongly associated with civic engagement. Civic engagement involves active participation in activities that promote societal well-being. However, studies show that many students exhibit only superficial awareness of the SDGs and struggle to connect this knowledge with their daily lives or civic responsibilities. This highlights a persistent gap between awareness and action in sustainability education. Empirical research examining the actual awareness of Senior High School students regarding the SDGs remains limited. While policies and curricula emphasize sustainability integration, little is known about how this awareness translates into civic engagement among Filipino youth.

This study seeks to assess the awareness of Senior High School students regarding the Sustainable Development Goals and examine its relationship with their level of civic engagement, providing insights that can strengthen the implementation of sustainability education in the Philippine context.

# RESEARCH METHODOLOGY

This study employed a quantitative research design to assess the level of awareness of sustainable development goals and civic engagement among four public senior high schools in the Schools Division of Olongapo City. A survey-based approach was utilized for date collection, as it allows the efficient gathering of data from a large group of participants and provides a clear, measurable understanding of students' level of SDGs awareness and civic engagement.

## Research Design

This study utilized Explanatory Descriptive Correlational Research Design in analyzing the relationship between Public Senior High School students' awareness of the Sustainable Development Goals (SDGs) and the Level of Civic Engagement. Explanatory research design, which seeks to explain the nature of relationships between variables (Sharma et al., 2022), is appropriate for nonparametric statistical analysis when data do not meet normality assumptions. In particular, the Mann-Whitney U test was applied to test differences between two independent groups, the Kruskal-Wallis test to examine differences across three or more groups, and Spearman's rho (Spearman rank-order correlation) to assess the strength and direction of relationships between ordinal variables (Sharma et al., 2022).

## Conceptual Framework

The concept that Sustainable Development Goal (SDG) awareness serves as a vital foundation for cultivating civic engagement and global citizenship in Senior High School (SHS) students is strongly supported by educational research (Merza et al., 2022; Yuan et al., 2021). Studies highlight that simply knowing about the SDGs, which are a universal call to action, compels students to view global challenges like poverty and climate change not just as abstract problems but as issues requiring localized action and a sense of shared responsibility (Yuan et al., 2021). This awareness is the intellectual spark that ignites civic engagement; for instance, when students engage in community projects related to SDG 6 (Clean Water and Sanitation) or SDG 13 (Climate Action), they translate global principles into tangible local civic duties and "action competence" (Merza et al., 2022). Furthermore, in a localized context, this drive is often rooted in core societal values, such as the Filipino concept of Pakikipagkapwa, which fosters genuine social interest and transforms awareness into a moral obligation to participate in community betterment (Merza et al., 2022).

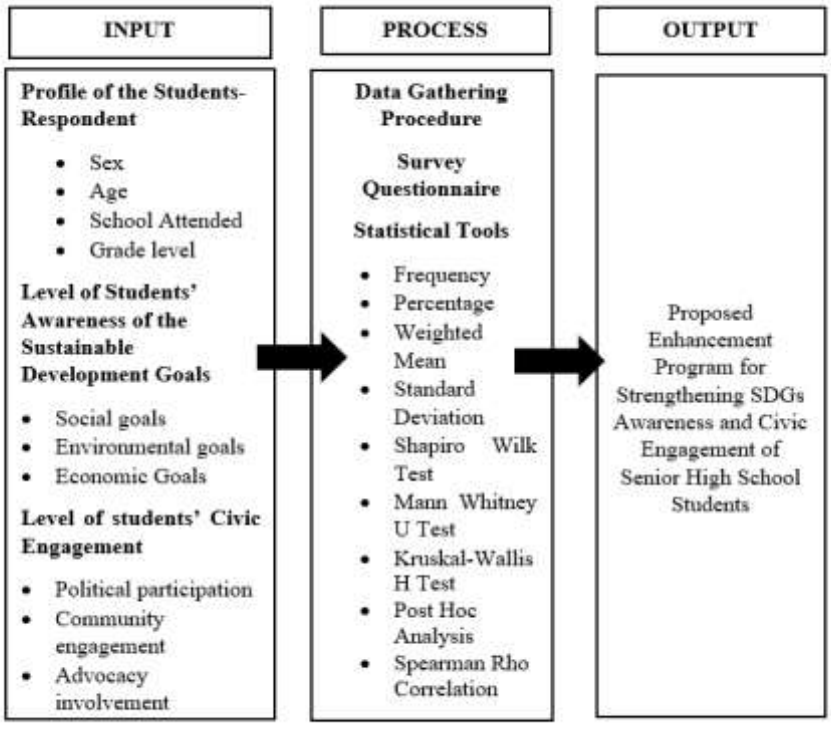


**Figure 1. Paradigm of the Study**

The Input frame dealt with the profile of the respondents in terms of their age, sex, and grade level. The level of students' awareness of sustainable development goals in terms of social, economic and environmental goals, it also showcased the level of students' civic engagement in terms of their political participation, community engagement, and advocacy involvement.

The Process framework shows how the researcher gathered information and used statistical tools such as data analysis, questionnaire, percentage, frequency distribution, weighted mean, Standard Deviation, Shapiro Wilk Test, Mann Whitney U Test, Kruskal-Wallis H Test, Post-hoc Analysis, and Spearman Rho Correlation.

The Output framework dealt with the Intervention Plan for Strengthening Awareness and Civic Engagement of Senior High School Students.

**Population and Sample**

The population of this study consisted of Humanities and Social Sciences (HUMSS) senior high school students enrolled in four public senior high schools in the Schools Division of Olongapo City during the school year 2025–2026. To ensure that the sample accurately represented all HUMSS students in Olongapo, a stratified sampling technique was applied. Specifically, stratified random sampling was used to guarantee proportional representation of different demographic groups, such as sex, age, school attended, and grade level. The total HUMSS student population in Olongapo was approximately 220.

G*Power was used to determine the sample size. G*Power is a free statistical software that allows the user to determine statistical power based on a wide variety of tests. The user can specify the type of test being run, their desired level of power, and alpha level to determine the sample size needed (Kang, 2021). The sample size of the study was determined using G*Power under the exact test family for correlation analysis. Following Cohen's (1988) guidelines, a small-to-medium effect size ($r = 0.25$) was assumed, with a significance level ($\alpha = 0.05$) and a power ($1–\beta$) of 0.80. Based on these parameters, G*Power computed a required sample size of 123 respondents. Given that the population consisted of 220 senior high school students, this number was deemed appropriate and statistically sufficient for the design of the study.

**Data Collection Instrument**

A structured survey questionnaire was developed to measure students' level of awareness of the Sustainable Development Goals (SDGs) and their civic engagement. The instrument used Four-point Likert-scale items and covered the following areas:

1. Demographic Profile: Participants provided information regarding their sex, age, school attended, and grade level.

2. SDG Awareness: Items were designed to measure students' awareness of the Sustainable Development Goals across three domains: social, environmental, and economic goals. Their level of awareness was assessed using a four-point Likert scale (4 – Very Aware, 3 – Aware, 2 – Moderately Aware, 1 – Not Aware).

3. Civic Engagement: The questionnaire also evaluated participants' civic engagement in three areas: political participation, community involvement, and advocacy. Their level of engagement was measured using a four-point Likert scale (4 – Very High Engagement, 3 – High Engagement, 2 – Low Engagement, 1 – Very Low Engagement).

The instrument underwent reliability testing using Cronbach's Alpha to determine the internal consistency of each subscale, ensuring that the items consistently measure the constructs of Sustainable Development Goal (SDG) awareness and civic engagement among student respondents in the Division of Olongapo.

Overall, the reliability results indicate that the instrument demonstrates strong internal consistency, making it a reliable tool for measuring students' awareness of the Sustainable Development Goals and their level of civic

engagement. These findings suggest that the items within each subscale are well-constructed and capable of producing consistent responses among student participants.

**Data Collection Procedure**

Data collection began with a letter addressed to the Schools Division Superintendent of Olongapo City requesting permission to collect the necessary data for the study. Following approval of the request, a letter was forwarded to the school heads of the responding schools, requesting their support in distributing the survey questionnaire. The distribution and retrieval of the survey questionnaire were supervised directly by the researcher. It was being conducted in the 4th Quarter of the School Year 2025-2026.

The respondents received an explanation of the study's goals. They had ample time to complete the instrument. Their answers were kept with utmost confidentiality. For ethical research considerations, before the study was conducted, the respondents received a detailed briefing and key information about the purpose of the study. Through informed consent, the respondents willingly decided to take part in the study. In order to gather anonymity, secrecy, and the avoidance of potential harm, all information was held and handled with utmost confidentiality by not disclosing the names and identity of the research participants in accordance with RA 10173, generally known as the Data Privacy Act.

**Data Analysis**

After the completed questionnaires were collected, the data were tallied, encoded, and organized according to the objectives of the study. Both descriptive and inferential statistics were utilized in the analysis. Descriptive statistics, including percentage, frequency, and weighted mean, were used to describe the respondents' demographic profile, such as age, sex, school attended, and grade level, and to determine their levels of awareness of the Sustainable Development Goals (SDGs) and civic engagement. Specifically, percentage was used to present the profile of the respondents, frequency was employed to show the distribution of responses across all survey items, and weighted mean was computed to determine the overall levels of SDG awareness and civic engagement.

On the other hand, inferential statistics included the Mann-Whitney U Test, Kruskal-Wallis H Test, post hoc analysis using Dunn's Test with Bonferroni adjustment, and Spearman Rho correlation. The Mann-Whitney U Test was used to compare differences between two independent groups when the data were not normally distributed, while the Kruskal-Wallis H Test was applied to compare more than two independent groups under similar conditions. When significant differences were found, Dunn's Test with Bonferroni adjustment was conducted to identify specific group differences while controlling for Type I error. Lastly, Spearman's rho correlation was used to determine the strength and direction of the relationship between students' SDG awareness (social, environmental, and economic) and their civic engagement (political participation, community involvement, and advocacy).

## RESULT AND DISCUSSION

The findings show that slightly more than half of the respondents were male (54.5%), while females made up 45.5%, indicating a fairly balanced but male-leaning group. In terms of age, most students were between 17–20 years old (54.5%), while 45.5% were 16 and below, suggesting that many respondents are in the later stage of senior high school. Regarding school attended, the highest number of respondents came from New Cabalan Senior High School (31.7%), followed by Kalalake National High School (27.6%), Mabayuan Senior High School (22.8%), and Tapinac Senior High School (17.9%), showing that all schools were represented but not equally. Lastly, most respondents were Grade 11 students (58.5%), while 41.5% were Grade 12, meaning the data reflects more responses from younger senior high school students.

The results indicate that students have a high level of awareness of the Sustainable Development Goals (SDGs) across social, environmental, and economic dimensions, as all composite means fall within the "Very Aware" range. Among the three, environmental goals obtained the highest mean (M = 3.50), suggesting that students

are most knowledgeable about environmental concerns. This may be influenced by the strong presence of environmental topics in school curricula and media, particularly issues such as ecosystem protection, which also ranked as the highest indicator. However, the relatively lower mean on recognizing the role of youth in climate action implies that while students understand environmental issues, they may not fully see themselves as active participants in addressing them. In terms of social goals (M = 3.38), students demonstrated strong awareness, particularly regarding inclusive and equitable quality education. This reflects the emphasis on education as a key development goal within the academic setting. However, lower ratings on familiarity with programs promoting equal opportunities and gender equality suggest a gap between conceptual understanding and awareness of actual initiatives in their community. For economic goals (M = 3.33), although still interpreted as "Very Aware," it recorded the lowest among the three domains. Students showed a clear understanding of the need to balance economic growth with environmental and social welfare. However, their lower awareness of government programs supporting innovation and entrepreneurship indicates limited exposure to practical or policy-related aspects of economic development. Overall, the findings suggest that while students possess strong general awareness of the SDGs, there is a need to strengthen their knowledge of real-world applications, programs, and their own role in contributing to these goals.

The findings reveal that students generally show a high to very high level of civic engagement across political participation, community service, and advocacy. In terms of political participation, the composite mean of 2.90 indicates a High Engagement level. Students strongly recognize that civic participation is important in maintaining a healthy democracy, which obtained the highest mean. However, their actual involvement in political activities such as attending rallies, debates, or forums is relatively lower, suggesting that their engagement is more on awareness rather than active participation. For community service, students demonstrated a Very High Engagement level with a composite mean of 3.36. The highest involvement was seen in activities such as clean-up drives, tree planting, and other environmental initiatives. This shows that students are more active in hands-on and school- or community-based activities. However, participation in structured school outreach programs was slightly lower, indicating room for strengthening organized involvement. In terms of advocacy, students also showed a Very High Engagement level with a mean of 3.34. They are most active in supporting campaigns related to social, environmental, and educational issues. However, engagement in discussions about national and global issues is comparatively lower, suggesting limited participation in deeper critical discussions.

Table I Summary of the Level of Sustainable Development Goals (SDGs) Awareness of Public Senior High School Students in Division of Olongapo City

| | **Dimensions** | **Weighted Mean** | **Rank** | **Descriptive Interpretation** |
|---|---|---|---|---|
| 1. | Social goals | 3.38 | 2 | Very Aware |
| 2. | Environmental goals | 3.50 | 1 | Very Aware |
| 3. | Economic goals | 3.33 | 3 | Very Aware |
| **Composite** | | **3.40** | | **Very Aware** |

***Note.*** Legend: 3.25 – 4.00 = Very Aware, 2.50 – 3.24 = Aware, 1.75 – 2.49 = Moderately Aware, 1.00 – 1.74 = Not Aware.

Studies on senior high school students frequently report stronger awareness in environmental domains, which are often more visibly integrated into science and environmental education subjects and reinforced through media and school-based activities. In contrast, economic goals tend to rank lower because they involve more abstract concepts such as sustainable economic growth, decent work, and responsible consumption and production, which may receive comparatively less emphasis in the basic education curriculum.

The present findings are supported by Padilla (2025), who examined SDG awareness among senior high school students in a Philippine STEM school and noted generally positive awareness levels, with variations in how specific goals (including environmental and welfare-related ones) are prioritized or understood by students. Similar patterns appear in international studies, such as Yuan et al. (2021), where senior high school students showed higher attention to certain social and environmental goals while displaying relatively lower emphasis on purely economic dimensions.

Overall, the results confirm a generally high level of SDGs awareness among public senior high school students in Olongapo City. While the slight lead of environmental goals and the marginal lag in economic goals do not alter the overall "Very Aware" interpretation, they highlight potential areas for curriculum enhancement. Strengthening the integration of economic dimensions of sustainability in senior high school instruction could help achieve a more balanced awareness across the three pillars of sustainable development. These baseline findings can guide educational interventions and policy efforts aimed at deepening students' understanding and promoting active engagement with the SDGs.

Table II Summary of the Level of Senior High School Students' Civic Engagement

| | **Dimension** | **Weighted Mean** | **Rank** | **Descriptive Interpretation** |
|---|---|---|---|---|
| 1. | Political participation | 2.90 | 3 | High Engagement |
| 2. | Community service | 3.36 | 1 | Very High Engagement |
| 3. | Advocacy | 3.34 | 2 | Very High Engagement |
| **Composite** | | **3.20** | | **High Engagement** |

***Note.*** Legend: 3.25 – 4.00 = Very High Engagement, 2.50 – 3.24 = High Engagement, 1.75 – 2.49 = Low Engagement, 1.00 – 1.74 = Very Low Engagement.

This pattern aligns with existing literature on youth civic engagement in the Philippines. Studies consistently report that senior high school students participate more actively in community service and advocacy-related initiatives such as volunteerism, barangay activities, clean-up drives, and school-based service-learning projects than in traditional political participation. Such differences are often attributed to the emphasis on community involvement and service-learning in the Philippine K-12 curriculum, as well as the accessibility of local barangay-level programs (Paras, 2025). Formal political participation tends to be lower among this age group because many students are below voting age and may perceive political processes as more distant or complex (Ibardeloza, 2021; Wui et al., 2025).

The present findings are consistent with recent Philippine studies. For instance, Paras (2025) found that senior high school students, particularly those in the HUMSS strand and older age groups (17–18 years), showed higher engagement in civic-oriented and community activities, with academic achievers demonstrating stronger involvement in leadership and service initiatives. Similarly, a mixed-methods study by the authors in the Asian Journal of Education and Social Studies reported that civic engagement among SHS students was generally stronger than political engagement, with awareness translating more readily into community-based actions (Talavera-Mendoza et al., 2025). These patterns support the observation that action-oriented civic behaviors are more prominent among Filipino senior high school students than formal political involvement.

Overall, the results confirm a generally high level of civic engagement among public senior high school students in Olongapo City, primarily driven by community service and advocacy. The relatively lower score in political participation, though still within the "High Engagement" range, points to an area for potential improvement. Enhancing civic education programs to better connect community action with political literacy could foster more balanced civic engagement. These baseline findings can inform educators, school administrators, and policymakers in developing targeted interventions that promote comprehensive active citizenship in alignment with national youth development goals

Table III Table of Significant Difference in the Level of SDGs Awareness in terms of Sex

| Variable | Sex | Md | U | z | Asymp. Sig | Conclusion |
|---|---|---|---|---|---|---|
| Social Goals | M | 3.60 | 1594.500 | -1.447 | .148 | Not Significant |
| | F | 3.40 | | | | |
| Environmental Goals | M | 3.60 | 1691.000 | -.959 | .337 | Not Significant |
| | F | 3.60 | | | | |
| Economic Goals | M | 3.40 | 1869.000 | -.036 | .971 | Not Significant |
| | F | 3.40 | | | | |

***Note.*** M = Male (n = 67); F = Female (n = 56); Md = Median.

Table III presents the results of the Mann–Whitney U test, which examined differences in the level of senior high school students' awareness of the Sustainable Development Goals (SDGs) across sex-at-birth groups. The analysis revealed no significant differences for social goals (U = 1,594.500, z = −1.447, p = .148, r ≈ .13), environmental goals (U = 1,691.000, z = −0.959, p = .337, r ≈ .09), and economic goals (U = 1,869.000, z = −0.036, p = .971, r ≈ .00). All effect sizes (r) were small to negligible, indicating that sex at birth has minimal practical influence on students' awareness of SDGs. The non-significant results suggest that male and female students possess similar levels of awareness regarding the social, environmental, and economic dimensions of the SDGs. This may be attributed to shared exposure to sustainability topics through school curricula, educational programs, and community initiatives, which provide uniform learning opportunities across sexes. These results indicate that awareness of sustainable development principles is more strongly shaped by educational exposure and access to information than by sex-at-birth differences. inclusive educational strategies and gender-neutral approaches to teaching the SDGs are likely to lead to equivalent awareness among male and female students.

Table IV Table of Significant Difference in the level of SDGs Awareness in terms of Age

| Variable | Age | Md | U | z | Asymp. Sig | Conclusion |
|---|---|---|---|---|---|---|
| Social Goals | 16 and below | 3.40 | 1783.000 | -.478 | .633 | Not Significant |
| | 17 - 20 | 3.60 | | | | |
| Environmental Goals | 16 and below | 3.60 | 1706.500 | -.879 | .379 | Not Significant |
| | 17 - 20 | 3.60 | | | | |
| Economic Goals | 16 and below | 3.20 | 1529.500 | -1.784 | .074 | Not Significant |
| | 17 - 20 | 3.40 | | | | |

***Note.*** 16 and below (n = 56); 17 - 20 (n = 67); Md = Median.

Table IV shows the results of the Mann–Whitney U test, which examined differences in the level of senior high school students' awareness of the Sustainable Development Goals (SDGs) across age groups. The analysis revealed no significant differences for social goals (U = 1,783.000, z = −0.478, p = .633, r ≈ .04), environmental goals (U = 1,706.500, z = −0.879, p = .379, r ≈ .08), and economic goals (U = 1,529.500, z =

−1.784, p = .074, r ≈ .16). All effect sizes (r) were small, indicating that age has a negligible practical influence on students' awareness of SDGs.

The non-significant results suggest that students aged 16 and below and those aged 17–20 demonstrate comparable levels of awareness regarding the social, environmental, and economic dimensions of the SDGs. This may be attributed to similar exposure to sustainability-related topics through school curricula, community programs, and educational initiatives, which provide uniform learning opportunities regardless of age. These results imply that age alone does not strongly affect students' understanding of sustainable development concepts, and that educational content and institutional emphasis are more decisive factors in shaping SDG awareness. Furthermore, the results align with the notion that structured teaching and inclusive learning strategies ensure consistent awareness across age groups.

Table V Table of Significant Difference in the Level SDGs Awareness of Senior High School Students According to School Attended

| **Variable** | **Category** | **n** | **Md** | **H** | **Asymp. Sig** | **Conclusion** |
|---|---|---|---|---|---|---|
| Social Goals | MSHS | 28 | 3.60 | 12.299 | .006 | **Significant** |
| | TSHS | 22 | 3.50 | | | |
| | KNHS | 34 | 3.20 | | | |
| | NSHS | 39 | 3.60 | | | |
| Environmental Goals | MSHS | 28 | 3.60 | 1.133 | .769 | Not Significant |
| | TSHS | 22 | 3.60 | | | |
| | KNHS | 34 | 3.60 | | | |
| | NSHS | 39 | 3.60 | | | |
| Economic Goals | MSHS | 28 | 3.40 | 4.607 | .203 | Not Significant |
| | TSHS | 22 | 3.40 | | | |
| | KNHS | 34 | 3.40 | | | |
| | NSHS | 39 | 3.20 | | | |

***Note.*** df = 3; Md = Median; School (MSHS = Mabayuan Senior High School, TSHS = Tapinac Senior High School, KNHS = Kalalake National High School, NSHS = New Cabalan Senior High School).

Table V shows the results of the Kruskal–Wallis H test, which examined differences in the level of senior high school students' awareness of the Sustainable Development Goals (SDGs) across schools. The analysis revealed a significant difference for social goals [H(3) = 12.299, p = .006, $\varepsilon^2 \approx .08$], with small effect size. Post hoc pairwise comparisons using Dunn's test with Bonferroni adjustment revealed a statistically significant difference between Kalalake National High School (KNHS) and Mabayuan Senior High School (MSHS) (adjusted p = .006). The median scores varied across schools, with the highest medians observed among students from Mabayuan Senior High School (Md = 3.60) and New Cabalan Senior High School (Md = 3.60), followed by Tapinac Senior High School (Md = 3.50). In contrast, the lowest median was recorded among students from Kalalake National High School (Md = 3.20). The significant difference between KNHS and MSHS indicates that students from MSHS demonstrate greater awareness of SDG social goals than those from KNHS. This suggests that differences in school environments, instructional emphasis, and program implementation may influence students' awareness of SDG social dimensions such as inclusive education,

gender equality and social inclusion. Schools that actively integrate sustainability topics into their curriculum or extracurricular programs may provide students with greater exposure to social development issues.

In contrast, no significant differences were found for environmental goals [$H(3) = 1.133$, $p = .769$, $\varepsilon^2 \approx .01$] and economic goals [$H(3) = 4.607$, $p = .203$, $\varepsilon^2 \approx .01$]. The computed epsilon squared ($\varepsilon^2$) values indicate that the effect size for environmental and economic goals is negligible. The non-significant results for environmental and economic goals indicate that students across the four schools demonstrate relatively similar levels of awareness in these areas. The identical median values for environmental goals (Md = 3.60 across all schools) suggest a consistent understanding of environmental sustainability concepts, including ecosystem protection, biodiversity conservation, and pollution reduction. Likewise, the similar medians for economic goals indicate that students share relatively uniform awareness of concepts related to innovation, sustainable economic growth, and financial literacy. This consistency may be attributed to standardized learning materials and curriculum frameworks that promote sustainability education across schools.

Table VI Table of Significant Difference in the Level SDGs Awareness of Senior High School Students According to Grade Level

| Variable | Grade Level | Md | U | z | Asymp. Sig | Conclusion |
|---|---|---|---|---|---|---|
| Social Goals | Grade 11 | 3.50 | 1612.000 | -1.164 | .244 | Not Significant |
| | Grade 12 | 3.40 | | | | |
| Environmental Goals | Grade 11 | 3.60 | 1681.500 | -.810 | .418 | Not Significant |
| | Grade 12 | 3.60 | | | | |
| Economic Goals | Grade 11 | 3.40 | 1818.500 | -.091 | .927 | Not Significant |
| | Grade 12 | 3.40 | | | | |

***Note.*** Grade 11 (n = 72); Grade 12 (n = 51); Md = Median.

Table VI presents the results of the Mann–Whitney U test, which examined differences in the level of senior high school students' awareness of the Sustainable Development Goals (SDGs) across grade levels. The analysis revealed no significant differences for social goals ($U = 1{,}612.000$, $z = -1.164$, $p = .244$, $r \approx .10$), environmental goals ($U = 1{,}681.500$, $z = -0.810$, $p = .418$, $r \approx .07$), and economic goals ($U = 1{,}818.500$, $z = -0.091$, $p = .927$, $r \approx .01$). All effect sizes (r) were small to negligible, indicating that grade level has minimal practical influence on students' awareness of SDGs.

The non-significant results suggest that Grade 11 and Grade 12 students exhibit similar levels of awareness regarding the social, environmental, and economic dimensions of the SDGs. This may be attributed to students' consistent exposure to SDG-related topics across grade levels through school curricula, extracurricular programs, and community-based initiatives. The results indicate that grade level does not significantly affect students' understanding of sustainable development concepts, suggesting that educational delivery and program exposure are more influential than grade level in shaping awareness. Moreover, standardized teaching approaches and inclusive learning strategies likely contribute to comparable awareness across grade levels.

Table VII: Table of Significant Difference in the Level of Senior High School Students' Civic Engagement According to Sex

| Variable | Sex | Md | U | z | Asymp. Sig | Conclusion |
|---|---|---|---|---|---|---|
| Political | M | 3.00 | 1608.500 | -1.372 | .170 | Not Significant |

| | | | | | | |
|---|---|---|---|---|---|---|
| Participation | F | 3.00 | | | | |
| Community Service | M | 3.40 | 1673.500 | -1.043 | .297 | Not Significant |
| | F | 3.40 | | | | |
| Advocacy | M | 3.40 | 1713.000 | -.838 | .402 | Not Significant |
| | F | 3.40 | | | | |

***Note.*** M = Male (n = 67); F = Female (n = 56); Md = Median.

Table VII presents the results of the Mann–Whitney U test, which examined differences in the level of senior high school students' civic engagement according to sex at birth. The analysis revealed no significant differences for political participation (U = 1,608.500, z = −1.372, p = .170, r ≈ .12), community service (U = 1,673.500, z = −1.043, p = .297, r ≈ .09), and advocacy (U = 1,713.000, z = −0.838, p = .402, r ≈ .08). All effect sizes (r) were small, indicating that sex at birth has a negligible practical influence on students' civic engagement.

The non-significant results suggest that male and female students demonstrate similar levels of civic engagement across political participation, community service, and advocacy. This may be attributed to shared opportunities for involvement in school-based programs, extracurricular activities, and community initiatives, which provide equal exposure to civic engagement experiences regardless of sex. These results imply that sex differences do not strongly determine students' participation in civic activities; rather, engagement is more likely influenced by program availability, institutional support, and individual motivation. Furthermore, the results are consistent with the principle of gender-neutral participation in educational and community programs, which encourages equal involvement of male and female students.

Table VIII Table of Significant Difference in the Level of Senior High School Students' Civic Engagement According to Age

| **Variable** | **Age** | **Md** | **U** | **z** | **Asymp. Sig** | **Conclusion** |
|---|---|---|---|---|---|---|
| Political Participation | 16 and below | 3.10 | 1710.000 | -.852 | .394 | Not Significant |
| | 17 - 20 | 2.80 | | | | |
| Community Service | 16 and below | 3.40 | 1660.000 | -1.112 | .266 | Not Significant |
| | 17 - 20 | 3.40 | | | | |
| Advocacy | 16 and below | 3.40 | 1555.000 | -1.650 | .099 | Not Significant |
| | 17 - 20 | 3.40 | | | | |

***Note.*** 16 and below (n = 56); 17 - 20 (n = 67); Md = Median.

Table VIII shows the results of the Mann–Whitney U test, which examined differences in the level of senior high school students' civic engagement according to age. The analysis revealed no significant differences for political participation (U = 1,710.000, z = −0.852, p = .394, r ≈ .08), community service (U = 1,660.000, z = −1.112, p = .266, r ≈ .10), and advocacy (U = 1,555.000, z = −1.650, p = .099, r ≈ .15). All effect sizes (r) were small, indicating that age has a negligible practical influence on students' civic engagement.

The non-significant results suggest that students aged 16 and below and those aged 17–20 demonstrate comparable levels of civic engagement across political participation, community service, and advocacy. This

may be attributed to similar exposure to school-based and community programs that encourage youth involvement in civic activities and provide equal opportunities for engagement regardless of age. The results indicate that age alone does not strongly affect students' participation in civic initiatives, and that engagement is more likely influenced by program availability, institutional support, and individual motivation. Furthermore, the findings are consistent with the notion that inclusive, age-neutral approaches in civic programs ensure comparable participation across age groups.

Table IX Table of Significant Difference in the Level of Senior High School Students' Civic Engagement According to School Attended

| **Variable** | **Category** | **n** | **Md** | **H** | **Asymp. Sig** | **Conclusion** |
|---|---|---|---|---|---|---|
| Political Participation | MSHS | 28 | 3.40 | 23.436 | <.001 | **Significant** |
| | TSHS | 22 | 3.00 | | | |
| | KNHS | 34 | 2.60 | | | |
| | NSHS | 39 | 3.40 | | | |
| Community Service | MSHS | 28 | 3.40 | 2.843 | .416 | Not Significant |
| | TSHS | 22 | 3.40 | | | |
| | KNHS | 34 | 3.40 | | | |
| | NSHS | 39 | 3.40 | | | |
| Advocacy | MSHS | 28 | 3.40 | 2.467 | .481 | Not Significant |
| | TSHS | 22 | 3.40 | | | |
| | KNHS | 34 | 3.20 | | | |
| | NSHS | 39 | 3.40 | | | |

***Note.*** df = 3; Md = Median; School (MSHS = Mabayuan Senior High School, TSHS = Tapinac Senior High School, KNHS = Kalalake National High School, NSHS = New Cabalan Senior High School).

Table IX depicts the results of the Kruskal–Wallis H test, which examined differences in the level of senior high school students' civic engagement across schools. The analysis revealed a significant difference for political participation [$H(3) = 23.436$, $p < .001$, $\varepsilon^2 \approx .17$], with a moderate effect size. Post hoc pairwise comparisons using Dunn's test with Bonferroni adjustment revealed statistically significant differences between Kalalake National High School (KNHS) and New Cabalan Senior High School (NSHS) (adjusted $p = .002$) and between Kalalake National High School (KNHS) and Mabayuan Senior High School (MSHS) (adjusted $p < .001$). The median scores varied across schools, with the highest medians reported among students from Mabayuan Senior High School (Md = 3.40) and New Cabalan Senior High School (Md = 3.40), followed by Tapinac Senior High School (Md = 3.00). In contrast, the lowest median was observed among students from Kalalake National High School (Md = 2.60). The significant differences between KNHS and both MSHS and NSHS suggest that students from MSHS and NSHS exhibit higher levels of political participation than those from KNHS. This result implies that institutional factors, such as the availability of student leadership opportunities, civic-oriented programs, and school initiatives that encourage participation in community and political activities, may influence students' level of civic engagement. Bastida et al. (2024) highlights that in the Philippines, schools that act as "hubs" for youth leadership training show significantly higher student involvement in political processes

However, no significant differences were found for community service [$H(3) = 2.843$, $p = .416$, $\varepsilon^2 \approx .00$] and advocacy [$H(3) = 2.467$, $p = .481$, $\varepsilon^2 \approx .00$], with a negligible effect size. This indicates that students across the four schools demonstrate relatively similar levels of engagement in volunteerism and advocacy-related activities. The identical median values for community service (Md = 3.40 across all schools) suggest a consistent level of participation in activities such as community outreach programs, environmental initiatives, and volunteer work. Also, the relatively similar medians for advocacy indicate that students from different schools share comparable levels of involvement in promoting awareness of social, environmental, and educational issues.

Table X Table of Significant Difference in the Level of Senior High School Students' Civic Engagement According to Grade Level

| **Variable** | **Grade Level** | **Md** | **U** | **z** | **Asymp. Sig** | **Conclusion** |
|---|---|---|---|---|---|---|
| Political Participation | Grade 11 | 3.20 | 1382.000 | -2.354 | .019 | Significant |
| | Grade 12 | 2.60 | | | | |
| Community Service | Grade 11 | 3.40 | 1778.000 | -.302 | .763 | Not Significant |
| | Grade 12 | 3.40 | | | | |
| Advocacy | Grade 11 | 3.40 | 1536.000 | -1.559 | .119 | Not Significant |
| | Grade 12 | 3.40 | | | | |

***Note.*** Grade 11 (n = 72); Grade 12 (n = 51); Md = Median.

Table X presents the results of the Mann–Whitney U test, which examined differences in the level of senior high school students' civic engagement across grade levels. The analysis revealed a significant difference in political participation ($U = 1{,}382.000$, $z = -2.354$, $p = .019$, $r \approx .21$), with a small to moderate effect size. The significant finding in political participation shows that Grade 11 students (Md = 3.20) are more engaged in political activities than Grade 12 students (Md = 2.60). This may be attributed to the more recent integration of civic education programs or to student government involvement in Grade 11, which often encourages younger students to participate actively in school-based political activities. Additionally, Grade 12 students may experience increased academic workload and preparation for final exams or graduation, which could limit their opportunities and time for political engagement.

In contrast, no significant differences were found for community service ($U = 1{,}778.000$, $z = -0.302$, $p = .763$, $r \approx .03$) and advocacy ($U = 1{,}536.000$, $z = -1.559$, $p = .119$, $r \approx .13$) with negligible effect size. The non-significant findings for community service and advocacy suggest that both Grade 11 and Grade 12 students demonstrate comparable levels of engagement. This indicates that engagement in volunteer work, outreach programs, and advocacy initiatives is consistent across grade levels, likely due to similar access to school and community-based programs that encourage participation.

Table XI Table of Significant Relationship Between Sustainable Development Goals Awareness and Civic Engagement of Senior High School Students

| Variables | | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 1 | Social Goals | - | | | | | |
| 2 | Environmental Goals | .388** | - | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3 | Economic Goals | .585** | .583** | - | | | |
| 4 | Political Participation | .587** | .210* | .384** | - | | |
| 5 | Community Service | .463** | .307** | .466** | .377** | - | |
| 6 | Advocacy | .365** | .174 | .348** | .488** | .476** | - |

***Note.*** *p < .05; **p < .01 (significant); Sustainable Development Goals (SDG) Awareness (Social Goals, Environmental Goals, Economic Goals); Civic Engagement (Political Participation, Community Service, Advocacy)

Table X illustrates the relationship between Sustainable Development Goals (SDGs) awareness and civic engagement among senior high school students, using Spearman's rho correlation. The analysis revealed several statistically significant relationships between the domains of SDG awareness (social, environmental, and economic goals) and the dimensions of civic engagement (political participation, community service, and advocacy) at the 5% significance level.

First, social goals awareness showed a significant, moderate positive correlation with political participation [rs(121) = .587, p < .05], indicating that students who are more aware of social development goals tend to participate more in political and civic-related activities. According to Ng and Thomas (2023), the youth play an important role as agents of change by promoting Sustainable Development Goals and participating in community dialogues and initiatives. Also, a moderate positive correlation with community service [rs(121) = .463, p < .05], suggesting that greater awareness of social issues such as equality, inclusion, and education is associated with increased involvement in volunteer and service-oriented activities. However, a weak positive correlation with advocacy [rs(121) = .365, p < .05] indicates that students with higher awareness of social goals are somewhat more likely to engage in advocacy initiatives. Likewise, Young people play an essential role in advocating for sustainable development and promoting awareness of global social issues, (United Nations, 2020). The coefficient of determination ($R^2$) suggests that social goals awareness explains approximately 34.4% of the variance in political participation, 21.4% in community service, and 13.3% in advocacy, indicating meaningful relationships between awareness and engagement (Schober et al., 2018; Cohen 1988, 1992).

Second, environmental goals awareness demonstrated a significant but weaker relationship with political participation [$r_s(121) = .210$, $p < .05$] and community service [$r_s(121) = .307$, $p < .05$], These implies that students who are more aware of environmental sustainability issues tend to participate slightly more in political discussions or community-based activities related to environmental protection. Studies indicate that awareness of environmental and societal issues encourages civic engagement among students. These findings suggest that increased awareness of environmental goals may motivate students to engage in community service and participate in civic or political initiatives that promote societal well-being. However, the relationship between environmental goals awareness and advocacy was very weak and not statistically significant [rs(121) = .174, p > .05], suggesting that awareness of environmental goals does not necessarily translate into active advocacy among students. These results suggest that while students who are aware of environmental sustainability concepts may participate moderately in political discussions and community-based environmental initiatives, such awareness does not necessarily translate into stronger advocacy involvement.

The coefficient of determination indicates that environmental awareness explains approximately 4.4% of the variance in political participation and 9.4% in community service, reflecting relatively modest influences (Schober et al., 2018; Cohen, 1988, 1992). This suggests that although environmental knowledge is present, additional encouragement or structured opportunities may be needed to translate awareness into stronger advocacy behaviors. Environmental education helps students develop responsible environmental attitudes; however, active advocacy often requires deeper engagement through environmental campaigns and youth-led initiatives.

Third, economic goals awareness showed a significant weak positive correlation with political participation [$r_s(121) = .384$, $p < .05$], a moderate positive correlation with community service [$r_s(121) = .466$, $p < .05$], and a weak positive correlation with advocacy [$r_s(121) = .348$, $p < .05$]. These results indicate that students who understand SDG economic goals, such as sustainable economic growth, financial literacy, and innovation, are more likely to participate in civic activities that support economic and social development. The coefficient of determination indicates that economic awareness explains approximately 14.7% of the variance in political participation, 21.7% in community service, and 12.1% in advocacy, demonstrating moderate relationships between economic awareness and civic engagement (Schober et al., 2018; Cohen 1988, 1992). Understanding economic sustainability can encourage students to support community initiatives and advocacy efforts that promote development and innovation. Improving economic literacy among young people fosters responsible citizenship and encourages participation in initiatives that support sustainable economic development. Studies shows that economic awareness and understanding of economic development issues can enhance students' civic and political participation by equipping them with the analytical skills and knowledge needed to engage effectively in public discourse and community activities.

## CONCLUSION

Based on the findings, the study concludes that most of the respondents were male, aged 17–20, and were Grade 12 HUMSS students, with the largest group coming from New Cabalan Senior High School. In terms of SDG awareness, students demonstrated a very high level overall, with stronger awareness in social and environmental goals, while economic goals had the lowest mean among the three. Similarly, students showed a very high level of civic engagement, particularly in community service and advocacy, while political participation had the lowest level.

The results also revealed that there were no significant differences in students' SDG awareness when grouped according to sex, age, school attended, and grade level. In the same way, no significant differences were found in civic engagement specifically in community service and advocacy when grouped according to sex at birth and age. However, a significant difference was observed in political participation when students were grouped according to school attended and grade level. Furthermore, a statistically significant relationship was found between SDG awareness and civic engagement, although the relationship with advocacy was weaker compared to other dimensions

## RECOMMENDATION

Based on the conclusions of the study, several recommendations are proposed. Students are encouraged to actively participate in SDG Youth Clubs, Civic Cafés, and Youth Summits to transform their high level of awareness into consistent civic action. Student leaders and organizations may strengthen political participation by organizing more school-based discussions, forums, and petition drives, particularly targeting Grade 12 students and those from Kalalake National High School. Teachers are advised to integrate localized SDG lessons into relevant subjects and serve as advisers to SDG-related clubs to sustain student engagement. The DepEd Olongapo City Division Office may institutionalize SDG and civic education in school plans and provide support for training and youth-centered programs. The Olongapo City Government may collaborate with schools by offering resources, programs, and exposure to innovation and entrepreneurship initiatives. Curriculum developers are encouraged to enhance the integration of SDGs, especially in areas where awareness is lower. School administrators may implement the "SDG Spark: Ignite. Engage. Empower." program, with a focus on improving political participation and social awareness among specific groups. Lastly, future researchers are encouraged to conduct follow-up and comparative studies to evaluate the effectiveness of these interventions and further improve SDG awareness and civic engagement among students.

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