Knowledge of the SDGs as a Driver of Sustainable Attitudes in Schools

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Abstract*— *Knowledge of the sustainable development goals (SDGs) is a major challenge today, as climate change is now a given. However, care must be taken to make the right choices that will lead to change and a balance of interests among the various stakeholders. Schools have a fundamental role to play, with a vision that must look to the future. This study aims to define how individual characteristics and perceptions of educational experience influence awareness and commitment to sustainability principles. To this end, an online survey was conducted in Italy involving 556 participants. The results show that greater knowledge of the SDGs is strongly correlated with greater environmental awareness, recognition of the active role of schools in sustainability, and a greater propensity to adopt sustainable behaviors. Furthermore, it emerges that the perception of being well informed about environmental issues and support for concrete sustainability actions are key factors for SDG awareness. From a practical perspective, the findings provide useful insights for school managers and policymakers on how to promote sustainability-oriented educational practices and strengthen the integration of SDG-related knowledge into school management and decision-making processes. This study offers food for thought on the link between schools and related educational models and the level of knowledge that leads to sustainable development.

Key words: Education, knowledge, quantitative analysis, schools, sustainable development.

1. Introduction

Schools can become key players in the transition towards a sustainable and inclusive society. To do so, they need accessible educational tools [24], [31], up-to-date content [13], and pedagogical approaches that develop critical and systemic thinking [3], [19]. The discussion focuses on school leaders and policymakers, whose managerial and organizational responsibilities make them key players in promoting sustainability-oriented practices and integrating sustainable development goal (SDG)-related knowledge into school strategies. Many students are anxious about the future [9] and show a gap between their environmental knowledge and behavior [14], [28]. Experiential activities and project-based learning help to bridge this gap [20], [25]. Emerging technologies, such as Big Data, can support sustainability education [15], [21], but schools need to provide appropriate and inclusive physical environments [2]. Environmental challenges require systemic and fair approaches that include all social groups [10], [17]. In the context of sustainable management, a human-centric model based on emerging technologies and knowledge management is needed [8], and the involvement of the younger generations is crucial [7].

In recent years, the role of schools in implementing the SDGs has become increasingly important. Education for sustainable development is a key element in addressing major global challenges, contributing to

the achievement of the SDGs with a growing emphasis on the shift from traditional teaching to active and participatory learning [32]. It aims to develop citizens' ability to think and act in a sustainable and future-oriented manner [12].

However, recent studies have shown that, although many schools have begun to integrate SDG-related topics into their curricula, this integration is often fragmented and superficial [30]. Nevertheless, the implementation of educational projects based on real-world problems has proven useful for disseminating sustainable knowledge and practices, thanks in part to cross-cutting resources, such as interdisciplinary collaboration, pragmatism, trust in young people's abilities, and altruism [4], [7].

In this context, it is interesting to note that, according to some studies, the use of artificial intelligence in teaching has not had a statistically significant effect on the development of students' cognitive and communication skills [11]. This suggests that, although technologies can offer innovative tools, sustainability remains a much broader challenge that requires systemic and transformative approaches that cannot be reduced to the mere use of technological solutions [18], [22]. Integrating sustainability into education from an early age can cultivate informed and responsible communities, positioning schools as key enablers of SDG 11 within the wider agenda of smart and sustainable cities [5].

This study has two research questions (RQs).

1) RQ1: How much does the level of knowledge of the SDGs impact choices and habits toward the creation of a sustainable school and inform managerial practices?
2) RQ2: What factors are significantly associated with knowledge of the SDGs that may guide educational and managerial decision-making?

The aim is to understand the extent to which personal characteristics; perceptions of school and educational experience can influence the level of awareness of sustainability. By addressing these questions, this study offers an original contribution with direct implications for management, methodology, and sustainability, in line with the growing demand for practice-oriented insights [6]. Specifically, the findings can support school managers and educational administrators in shaping decision-making processes that foster sustainability in everyday school practices. The rest of this article is organized as follows. Section 2 outlines the research methodology. Section 3 discusses the main findings. Finally, Section 4 concludes this article.

2. Methodology

2.1. Research Design Adopting a transdisciplinary approach, this study integrated perspectives from psychology and the social sciences to analyze perceptions related to sustainability [23]. The main objective of the survey was to gather information on stakeholders' perceptions of sustainability, with a focus on the educational context. While focusing primarily on the school community (students, teachers, and administrative staff), the questionnaire was also open to a wider audience. This choice was designed to obtain a more diverse and representative sample.

2.2. Questionnaire Development To ensure clarity and relevance, the questionnaire was validated by academic experts before its dissemination. The questionnaire consists of 19 questions (see the Supplementary Material), divided into six thematic sections.

2.3. Sampling and Data Collection The administration took place in Italy through Google Forms between March and April 2025, through a multichannel strategy involving different social platforms, such as Facebook and LinkedIn. This approach sought to overcome the critical issues of online surveys [16] by taking advantage of the different levels of user engagement on different social media platforms [1].

2.4. Survey Structure The questionnaire comprised six thematic sections (available online).

1) Section 1: Sociodemographic variables (gender, age, income, and school role).
2) Section 2: Climate change and knowledge about environmental issues.
3) Section 3: Global sustainability, the 2030 Agenda, SDGs, and perceived individual contribution.
4) Section 4: Incentives for sustainable schooling, perceived usefulness, willingness to pay, and reliable actors for managing incentives.
5) Section 5: School's role in preventing dropout and promoting sustainability awareness.
6) Section 6: Sustainable behaviors and visions for the future of education (end-of-year practices and ideal school models).

2.5. Data Analysis The sample in this study is consistent with existing literature [5]. Concerning RQ1, the responses were analyzed using mean values and segmentation techniques to identify homogeneous groups based on common behaviors and characteristics. For the purpose of the analysis, participants were divided into two groups based on their self-reported level of knowledge with respect to the SDGs of the 2030 Agenda, as measured by the question, "How well do you know the 17 Sustainable Development Goals (SDGs) contained in the

2030 Agenda?" (scale from 1 = not at all to 10 = very). The grouping threshold was prespecified, reflecting a conceptual distinction between respondents with low-to-moderate versus moderate-to-high perceived knowledge of the SDGs. In particular, the following holds.

1) Respondents who gave a score from 1 to 5 were classified as "less informed" (Group 1).
2) Respondents who indicated a score of 6–10 were considered "more informed" (Group 2).

This threshold was chosen to reflect a meaningful conceptual distinction aligned with the midpoint of the scale, facilitating interpretation of the results. To ensure statistical validity in comparing the two groups, the Mann–Whitney U test was applied.

Concerning RQ2, the analysis was conducted on a selected subgroup of respondents, identified on the basis of their preferences with respect to the ideal sustainable school model. Specifically, only respondents who, in responding to the question "What school structure would you like?" chose the option: "School that pursues sustainable behaviors regarding its environments and behaviors." This alternative was found to be the ideal school, according to the results of a multicriteria technique for order preference by similarity to ideal solution analysis, which identified the most desirable option among those proposed [5]. The approach ensured a selection based on a structured preference criterion, which was useful in isolating a consistent cluster with a high environmental sensitivity profile, which responds not only to analytical criteria but also to a pedagogical view consistent with the most recent literature. As pointed out by Foláyan et al. [10], reforming the educational framework means first of all recognizing its social and human role, and promoting a conceptual framework capable of counteracting inequalities rather than reproducing them. Ordinary linear regression (OLS), proposed in the sustainable context [26], [29], was used to estimate the effect of the independent variables (X) on the dependent variable (Y), assuming linear relationships and independence between observations. The model allows testing the association between each predictor and the level of knowledge of the SDGs, controlling for the other factors included in the model. The dependent variable is: "Self-reported knowledge of the SDGs of the 2030 Agenda." The model includes a set of independent variables that can be grouped into three macrocategories.

1) *Individual characteristics:* Age, gender, and level of environmental concern, self-assessment of one's impact on the SDGs, and perception of own information on environmental issues.
2) *Perception of school:* Judgment of the school's sustainable practices and preference on school investments (photovoltaics, energy efficiency, teacher training, recycling collection, and perception of the school's role in combating early school leaving);
3) *Teaching experience:* Perceived impact of sustainability debates, before and after the formal definition of the SDGs.

2.6. Ethical Considerations

The study adhered to established ethical standards. Participation was voluntary, with informed consent obtained from all respondents. Data were collected anonymously, stored securely, and handled in compliance with data privacy regulations.

2.7. Limitations The study focused on participants in Italy, which may limit the generalizability of the findings to other cultural, social, or educational contexts. The adoption of a social media-based recruitment strategy may have influenced participation patterns, potentially favoring respondents with greater digital engagement or interest in sustainability and educational topics. This characteristic reflects the communication channels used and is relevant for contextualizing the results. To address this limitation, future research could expand the geographic scope by including participants from multiple countries or regions, incorporate more diverse populations in terms of age, socioeconomic background, and educational settings, or adopt stratified sampling strategies to improve representativeness and enhance the broader applicability of the results. In addition, with respect to the responses collected through the questionnaire, the findings would benefit from further validation using live experiments or field studies involving real monetary incentives, which could provide a more robust understanding of participants' actual behaviors and willingness to support sustainability initiatives.

3. Results

The analysis reveals clear differences between participants with lower and higher self-reported knowledge of the SDGs. More informed respondents demonstrate greater environmental awareness, stronger perceptions of their personal contribution to sustainability goals, and more positive views of schools' engagement in promoting sustainability. Regression analysis further highlights that perceived information on environmental issues and preference for concrete sustainability initiatives (e.g., photovoltaic systems) are the strongest predictors of SDG knowledge. These results underscore the practical relevance of combining theoretical knowledge with tangible, participatory school practices to foster sustainable behaviors and awareness.

3.1. Group Analysis The sample analyzed in RQ1 consisted of 556 participants residing in Italy and was divided into two groups based on the level of self-reported knowledge with respect to the SDGs.

1) *Less informed (Group 1):* It includes 288 respondents, with an average age of 33 years. The gender composition is balanced: 51% men and 49% women. In terms of annual income, 51% report income between 0 € and 20,000 €, 35% between 20,000 € and 40,000 €, 11% between 40,000 € and 60 000 €, while only 3% exceed 60,000 €. In terms of membership category, 10% are parents, 14% are faculty, 7% are technical-administrative staff, 48% are students, and the remaining 20% are other categories.

2) *More informed (Group 2):* It includes 268 respondents, with a slightly lower average age of 31. In total, 54% are men and 46% are women. Income diversification is also observed in this group: 38% are in the 0 €–20,000 € range, 34% in the 20,000 €–40,000 € range, 17% between 40,000 € and 60,000 €, and 11% over 60,000 €. From a category perspective, 6% of participants are parents, 22% faculty, 5% technical-administrative staff, 38% students, and 29% fall into other categories.

3.1.1. Knowledge of the SDGs and Environmental Awareness: In line with what emerged from the differences in levels of knowledge of the SDGs, the two groups also show different perceptions in terms of environmental awareness (see Figure 1). Group 1 reports an average level of concern for environmental and sustainability issues of 7.3, while Group 2 expresses a higher level of concern of 8.2. The Mann–Whitney U-test showed that this difference is statistically significant (p-value $= 3.66 \times 10^{-9}$), confirming that the level of concern varies significantly between the two groups.

Similarly, the degree of perceived information regarding environmental issues is also higher in Group 2 (7.7) than in group 1 (6.1), confirming a consistency between environmental knowledge and awareness. The Mann–Whitney U-test with a p-value of 0 showed that the difference between a randomly selected value from the population of Group 1 and that of Group 2 is large enough to be statistically significant.

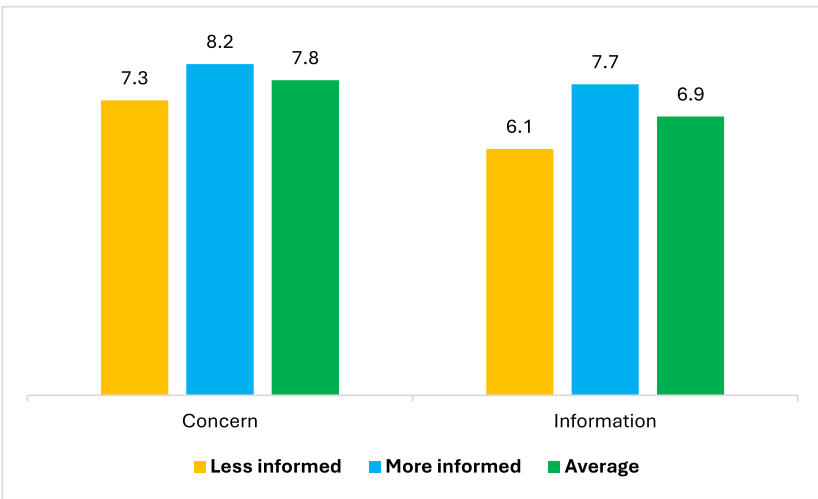

Figure 1. Concern and information on environmental issues.

3.1.2. SDGs: Perceived Information and Awareness of Personal Action: Regarding Agenda 2030 and the SDGs, Group 1 has an average level of information on the Agenda's principles and goals of 2.7, while Group 2 has a significantly higher level of 7.8. The Mann–Whitney U-test confirms the statistical significance of this difference (p-value $= 0$), rejecting the null hypothesis and indicating that the two clusters come from different distributions. This result is consistent with the criterion for dividing the clusters based precisely on the level of self-reported knowledge: it confirms that the subjective perception of knowledge is also reflected in the aggregate data.

Similarly, with respect to the perception of the contribution of daily actions to the achievement of the 17 SDGs, cluster 1 gives a mean value of 6, while cluster 2 gives a mean value of 7. Again, the Mann–Whitney U-test shows a significant difference between the groups (p-value $= 3.68 \times 10^{-9}$), confirming that the evaluations of the two clusters differ statistically significantly. This finding suggests that greater awareness of the SDGs is also associated with stronger perceptions of individual impact: those who know more about the 2030 Agenda tend to recognize a more direct link between their daily actions and the global goals.

3.1.3. School and Sustainability: Perceptions and Priorities: Regarding the role of schools in sustainability, Group 1 gives an average value of 5.2 to the perception of school engagement in this area, while Group 2 gives a slightly higher rating of 5.7 (see Figure 2). Both groups agree, however, on the importance of further incentivizing the school's actions on sustainability: Group 1 assigns a mean value of 7.8 to the need for the school to receive incentives to pursue these goals, while Group 2 manifests an even

more favorable orientation, with a mean score of 8.5.

Mann–Whitney U-tests performed for both questions confirm that these differences are statistically significant. In the first case, the p-value of 0.00337 indicates that the distribution of responses in the two clusters is significantly different, rejecting the null hypothesis of equality. Similarly, for the second question, the p-value of 0.0000027 further reinforces this conclusion, showing a significant difference in evaluations of the usefulness of incentives between the two clusters. The higher level of knowledge about the SDGs is associated with a more positive perception of school engagement and a stronger belief in the importance of investing in schools to promote sustainability.

Regarding the priorities for action should the school receive incentives to promote sustainability, the study proposes the following results (see Figure 3): Group 1 shows a moderate level of agreement, with the highest scores assigned to photovoltaic systems (7.1) and energy efficiency (7). In contrast, refresher courses on sustainability and waste collection valorization receive lower average scores, both of 6.5. Group 2, on the other hand, manifests a stronger orientation toward all of the areas considered, with higher average values: 8.5 for energy efficiency, 8.4 for photovoltaic systems, 8.2 for recycling collection, and 8 for courses.

Statistical tests confirm that the differences between the two clusters are significant for all intervention areas, as shown by the following p-values: PV system (9.13×10^{-11}), energy efficiency (2.22×10^{-16}), courses (7.35×10^{-14}), and waste sorting (1.11×10^{-15}).

Regarding the willingness to incur additional cost to attend a sustainable school, surprisingly, Group 1 shows a higher average (13.43%) than Group 2, which stands at 11.94%. This might indicate that those with less information tend to perceive direct payment as a more straightforward way to contribute to sustainability, while those who are more informed might have different expectations about who should bear these costs, resulting in them being less willing to pay a high amount. For schools and policymakers, this insight highlights the importance of clear communication regarding how sustainability initiatives are financed and the shared roles of individuals and institutions. Transparent funding models and participatory decision-making could therefore enhance both engagement and perceived fairness in supporting sustainable education.

Next, the objective was to collect ratings on different categories of stakeholders through a multiple-choice mechanism based on a higher or lower level of trust. Positive wording was deliberately adopted in order to highlight how public resources can be used appropriately.

The results for the first question, i.e., the question on greater trust, show some consistency between the two groups analyzed (see Figure 4). Both, in fact, express a preference for allocating incentives to the school leader, with 30% and 28% of responses, respectively. This was followed by local government institutions. Regarding the question on lower trust (see Figure 5), there is again a consistency between the two groups: both, in fact, indicate a lower level of trust in the student committee, with percentages of 28% for the least informed and 31% for the most informed. The absolute lowest trust, however, is reserved for the elected school board.

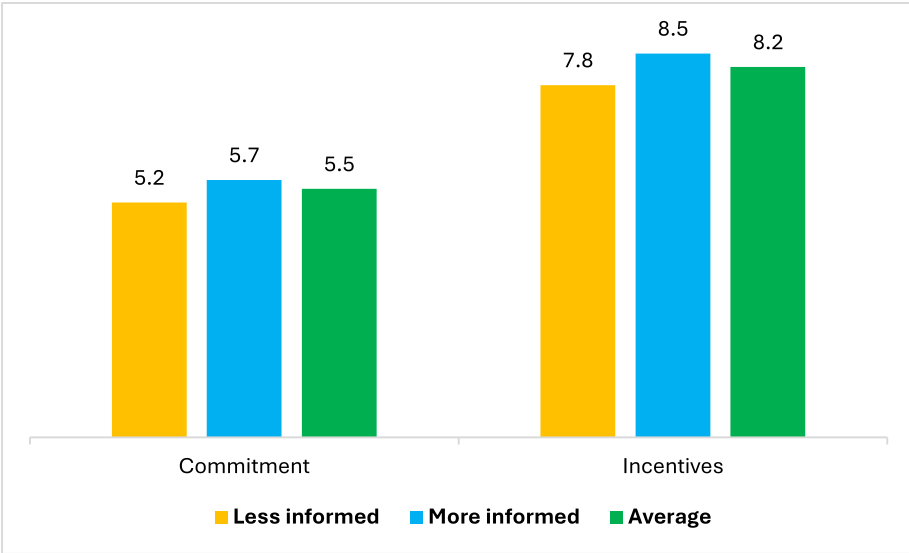

Figure 2. Role of schools in sustainability.

3.1.4. Sustainability, Dialogue, and School Inclusion: Regarding the school's perceptions of school dispersal management, the least informed group reports an average score of 5.2, lower than the 6.1 recorded by the most informed group, with an overall average of 5.7. The difference of 0.9 points between the two groups is consistent with the characteristics that distinguish them: in fact, those with greater knowledge on the subject of sustainability tend to show greater sensitivity and empathy toward this issue, which is particularly relevant today, than those who are less informed. The Mann–Whitney U-test confirms a statistically significant difference between the two groups, with a p-value of 0.000003179.

Knowledge of sustainability issues can be enhanced through the development of open dialogues. The next question therefore aims to assess how much this influences the development of sustainable issues, both before and after providing a definition.

Before the definition, the least informed group shows an average score of 7.4, while the most informed group achieves an average value of 8.1, with an overall average of 7.8. After the definition, an increase in the scores of both groups is observed, as expected, reaching 7.9 and 8.4, respectively, with an overall average of 8.2. The statistical results for this analysis are shown by the following p-value: predefinition (3.896×10^{-4}) and postdefinition (3.976×10^{-4}).

The results confirm what also emerged in the previous question: more informed people show greater sensitivity to these issues, and this sensitivity increases further once the definition of open dialogues is introduced. School leaders and policymakers can leverage this insight by implementing open discussions or workshops on sustainability, as providing clear definitions and guided conversations appears to increase both sensitivity and perceived personal impact, particularly among less informed students.

3.1.5. Sustainable Behaviors and Visions of the School of the Future: Next, the study aims to investigate people's perceptions of what they thought was the most appropriate behavior to adopt toward school books once the year is over. The results show differences between the two groups under analysis (see Figure 6).

For the less informed, the most frequent choice is reselling the books at half the purchase price (27%), followed by donating to students in need (25%) and keeping the books for possible future use or for other family members (22%). For the most informed, a different orientation is observed: the main choice is to keep the books for future use (30%). This preference may stem from the perception of the question among respondents, who may have interpreted it as an invitation to long-term preservation, in line with an idea of sustainability. This is followed by resale at half price (27%) and donation to students in need (21%).

In the final analysis, the study tries to explore how people imagine the school of the future (see Figure 7). The results show for the least informed a preference for a school model geared toward sustainable behaviors, both in terms of space management and daily habits (33%). This is followed by a vision of a school that promotes inclusive and accessible behaviors (24%) and a vision of a school committed to environmental sustainability through the use of renewable energy and waste valorization (27%). As a last option, as might be expected, appears the idea of a school identical to the current one, selected by 16% of the respondents. For the most informed group, preferences follow a similar order as for the other participants, but with significantly different values. The majority (54%) imagine a school focused on sustainable behaviors, referring particularly to school environments and daily practices. This is followed, in order, by an inclusive and accessible school (18%), one that pays attention to the use of renewable energy and waste management (15%), and, finally, a school similar to the current one (13%).

Striking, especially for this group, is the relatively low figure attributed to the school attentive to the use of green energy and waste

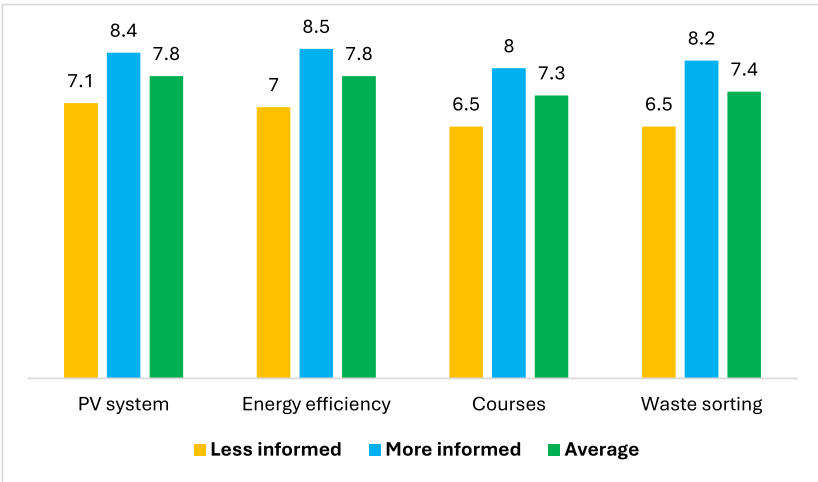

Figure 3. Intervention priority.

management. This result can be explained by considering the multiplicity of meanings that the concept of sustainability can take on. Indeed, in this context, participants seem to have interpreted sustainability primarily from a school perspective, favoring a view centered on school behaviors and spaces rather than on more technical or environmental aspects. These results suggest that more informed students tend to value concrete sustainable behaviors, such as envisioning a school focused on daily sustainable practices. Educational interventions should therefore combine behavioral and structural aspects, emphasizing both space management and everyday habits to enhance students' awareness and engagement with sustainability.

3.2. Regression Analysis

Concerning RQ2, regression was conducted on a sample consisting of 80 observations. OLS analysis conducted on the dependent variable "Self-reported knowledge of the SDGs of the 2030 Agenda" shows that only a few of the variables considered have a statistically significant impact (see Table 1). Prominent among these is perceived information on environmental issues (coeff. $= 0.57; p < 0.01$), which is confirmed to be a central predictor of knowledge of the SDGs. Similarly, preference for interventions, such as the installation of PV systems, shows a very strong positive association (coeff. $= 0.61; p < 0.001$), suggesting that those who value concrete sustainability initiatives tend to have greater awareness of global goals. This suggests that schools could enhance students' SDG awareness by combining teaching with visible sustainability actions so that students experience sustainability in practice rather than only in theory. This result is consistent with Torsdottir et al.'s [25] observation that students' sustainable actions and attitudes are strongly influenced by the school context and personally experienced practices. Direct experience of school environments committed to the ecological transition, such as the installation of photovoltaic panels, may thus contribute not only to developing sustainable behaviors but also to consolidating theoretical awareness of the global goals of the 2030 Agenda. Also of interest is the effect of age, which is negatively associated with knowledge of the SDGs (coeff. $= -0.049; p < 0.05$): younger people report higher levels of knowledge, perhaps as a result of more up-to-date or recent teaching. The other variables, including environmental concerns, perceived personal impact or effectiveness of school debates, are not significant in the model, although they sometimes show directions consistent with what is expected.

The estimated linear regression model shows good explanatory

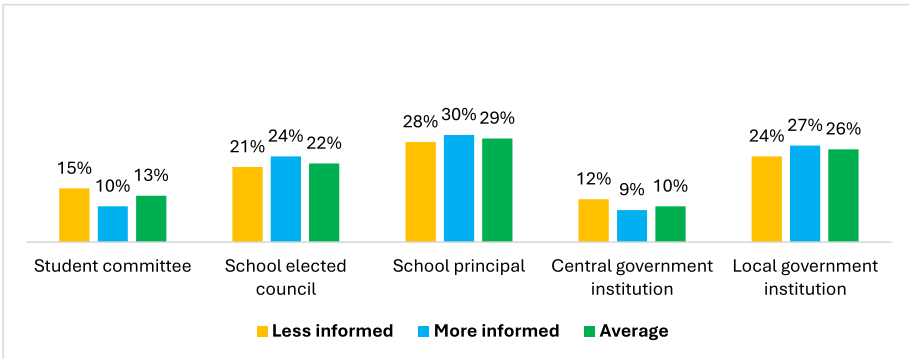

Figure 4. More trust in stakeholders for the allocation of incentives.

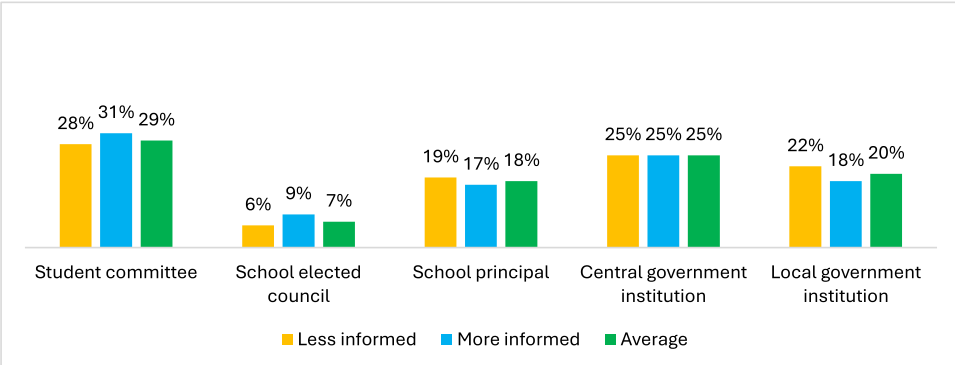

Figure 5. Less trust in stakeholders for the allocation of incentives.

power: the coefficient of determination R^2 is 0.705, indicating that about 70.5% of the variance in self-reported knowledge of the SDGs is explained by the independent variables included in the analysis. The multiple R value of 0.84 also suggests a strong overall correlation between the model and the observed data.

This level of fit is particularly significant considering that the sample analyzed consisted of only 80 respondents and that the dependent variable is subjective in nature (scale of 1 to 10). The result reinforces the validity of the proposed model and confirms that the dimensions considered—particularly perceived information and preference for concrete sustainable practices—are key predictors of environmental awareness among students.

These results underscore the importance of strengthening schools not only in disseminating clear and up-to-date information on environmental issues, but also in promoting tangible and visible sustainability practices that can stimulate students' interest and awareness. In this sense, investing in environmentally friendly infrastructure and participatory educational activities could be an effective strategy for consolidating a culture of sustainability among the younger generation.

The methodology adopted, which selected a sample with already high environmental awareness, allows us to isolate the factors that really differentiate knowledge of the SDGs in a favorable context, offering useful insights for targeted and customized interventions. It is important to emphasize that the strength of the model does not imply

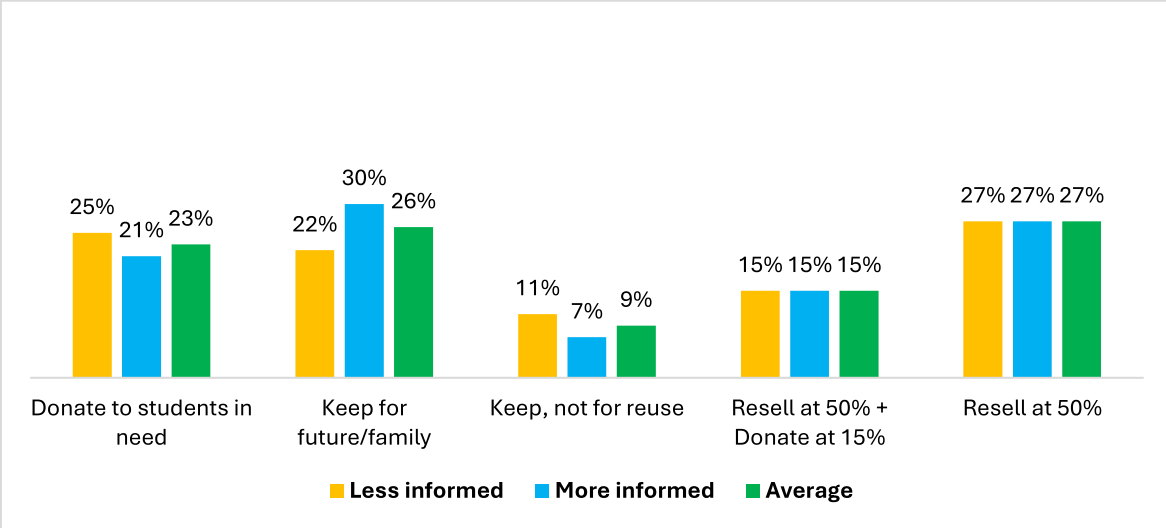

Figure 6. Behavior in school books.

Table 1. Self-Reported Knowledge of the SDGs of the 2030 Agenda.

	Coefficients	Significance value
Intercept	-2.15706765	0.349469152
Perception utility of school incentives for sustainability	-0.114580209	0.431826691
Age	-0.049222326	0.0456100043741925*
Gender	0.363873866	0.489762064
Environmental concern	0.05743508	0.775817879
Information on environmental issues	0.573918821	0.00143762911877021**
Self-assessment of personal impact on the SDGs	0.151214677	0.36093859
Perception of the school's sustainable practices	-0.040907162	0.761118873
Preference for school investment in photovoltaic systems	0.605843626	0.000522275393757341***
Preference for school-based energy efficiency interventions	-0.112349511	0.611994283
Preference for teacher training on sustainability issues	0.247928174	0.227983279
Preference for school initiatives related to recycling collection	-0.056379519	0.73306068
School's role in reducing school dropouts	0.163506884	0.090975035
Before definition—Impact of open debates on sustainability	0.047636935	0.791585471
After definition—Impact of open debates on sustainability	-0.125657142	0.519013714

$* = p < 0.05$; $** = p < 0.01$; $*** = p < 0.001$. $R^2 = 0.70482416$

causality: the associations found indicate significant relationships, but do not allow a definitive conclusion that independent variables cause an increase in SDGs knowledge. Further studies, perhaps longitudinal or experimental, could better explore these links.

Finally, the lack of significance of some expected variables—such as environmental concern or perceived impact of school debates—may suggest that mere exposure to sustainability issues is not sufficient. It is the integration of knowledge, direct involvement, and perceived concreteness in actions that seems to make the difference. To promote sound and widespread knowledge of the SDGs, it is essential to supplement teaching with concrete, participatory, and meaningful practices. In this direction, project-based learning, especially when implemented through interdisciplinary collaborations with different stakeholders, proves to be a strategic approach to educating for sustainability [20]. Sustainable education encourages the active involvement of stakeholders, strengthening awareness, collaboration, and participation in energy transition processes [4]. This requires a focus on the active involvement of students [27] and the adoption of a pragmatic approach applicable to school reality [7], so that schools become a laboratory for sustainable citizenship and not just a place for the transmission of theoretical knowledge. The theme of sustainable schools is crucial to achieving the SDGs, particularly SDG [5], with the idea that knowledge of sustainable development can lead to greater commitment and involvement in sustainability projects.

4. Conclusion

The analysis conducted highlighted how the level of knowledge of the SDGs significantly influences the perceptions, behaviors, and priorities expressed by citizens, particularly in the school context. Comparison of the two groups within RQ1—less informed and more informed—shows a clear relationship: as awareness about the SDGs increases, so does sensitivity to environmental issues, perception of the active role of schools, and inclination to adopt behaviors consistent with sustainability principles.

Statistical data confirm that these differences are significant and cannot be attributed to chance.

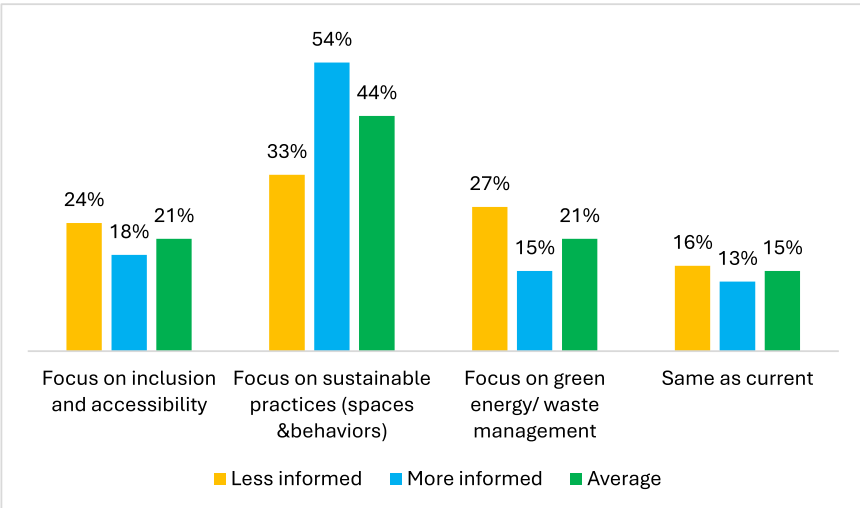

Figure 7. Perspective on the school of the future.

Those with greater familiarity with the 2030 Agenda tend to have a more structured and informed view of the school's contribution to sustainability, placing greater value on interventions, such as the adoption of renewable energy sources, energy efficiency, staff training, and more responsible waste management.

Notably, there is a divergence in the willingness to pay extra for a sustainable school: surprisingly, the less informed group is more willing to contribute financially. This may reflect a more immediate and personal conception of their role, while the more informed may believe that such investments should be secured through public interventions and structural policies.

The differences that emerged in the open-ended responses, particularly on schoolbook management and the vision of the school of the future, indicate that sustainability is interpreted in different ways. The most knowledgeable participants tend to favor an idea of sustainability rooted in everyday behaviors and educational spaces, rather than tied exclusively to technological or environmental aspects.

The results of the RQ2 confirm that self-reported knowledge of the SDGs among respondents is significantly influenced by some specific dimensions. In particular, the perception of being well informed about environmental issues and the preference for concrete sustainability interventions, such as installing photovoltaic systems in the school, emerge as the main predictors of increased awareness of the SDGs. This suggests that effective communication and direct involvement in sustainable actions can strengthen students' awareness of the global goals. The negative effect of age, although modest, highlights that younger students may be more exposed or receptive to

updated sustainability content, likely due to recent curricular innovations or a greater presence of these issues in contemporary teaching. In contrast, variables, such as self-reported environmental concern, self-assessment of personal impact, or perceptions of the school's role in combating dispersion, do not appear to be determinants in the model, indicating that mere sensitivity or perceived commitment may not automatically translate into greater specific knowledge of the SDGs.

4.1. Managerial Implications

Based on the findings, school managers and policymakers can take actions to foster sustainability within the educational environment. Schools should demonstrate their commitment to the SDGs through visible initiatives and integrate sustainability into the school culture. Policymakers can support these efforts by providing incentives and recognition for schools engaged in sustainability education and community initiatives. Training programs addressing the social, economic, and environmental dimensions are recommended for teachers and students, including participation in local projects and opportunities for recognized educational credits.

To support implementation, managers may consider the following concrete and measurable actions.

1) *Track resource efficiency:* monitor energy consumption, water use, and waste reduction to quantify improvements.
2) *Measure student engagement:* record participation rates in sustainability-related programs and activities.
3) *Assess interdisciplinary integration:* count the number of subjects or courses incorporating sustainability topics.
4) *Report outcomes systematically:* produce annual reports summarizing key metrics, providing evidence for decision-making and continuous improvement.

4.2. Policy Implications The findings suggest that policies should prioritize information and education as key levers for promoting sustainability. Policymakers should support schools through targeted funding and structural programs that integrate SDG-related content into school curricula and teacher training. Strengthening experiential and participatory learning, such as involving students in local sustainability projects, can increase awareness and long-term commitment.

Furthermore, public policies should ensure that sustainability initiatives in schools do not depend on individual willingness to pay but are guaranteed by systemic investment and institutional commitment. It is also essential that public money is spent on initiatives that give relative advantage to stakeholder groups by providing appropriate control tools and rewarding good practices.

In conclusion, the results confirm the centrality of information and education in spreading a culture of sustainability. A more informed citizenry is also more active, critical and action-oriented. In this scenario, schools emerge as a key player, not only in the transmission of content, but also as a place of cultural, social, and environmental transformation.

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