

Integrating Environmental, Social and Governance (ESG) into Higher Education: Voices of Accounting Undergraduates

*Mohamad Hafiz Rosli¹, Nurul Azlin Azmi²

¹Faculty of Management and Economics, Universiti Pendidikan Sultan Idris, Tanjong Malim, Perak, Malaysia

²Faculty of Accountancy, Universiti Teknologi MARA Cawangan Johor, Kampus Segamat, Johor, Malaysia

Email: *hafizrosli@fpe.upsi.edu.my

Corresponding Author: Mohamad Hafiz Rosli

Abstract: Environmental, Social and Governance (ESG) is a framework for businesses to assess their business practices and performance on various ethical and sustainability issues. Over two decades of global prominence, the ESG concept is now rooted across sectors, including education. In the context of higher education, embedding ESG into the curriculum is essential to equip students with a deeper understanding of ESG principles and related issues. This study explores undergraduate students' perceptions of ESG principles within the context of higher education. This study employed a quantitative research design, and 174 responses among undergraduates accounting students were collected using a survey questionnaire. The findings reveal that while ESG elements are addressed within the academic syllabus, they are not delivered systematically, highlighting the need for deeper integration and clearer curriculum alignment. Overall, student responses across all three dimensions, Environmental Awareness, Social Awareness, and Governance and Ethics, were generally positive. Among these, Governance and Ethics recorded the highest mean score, suggesting that students strongly perceive ethical behavior and see it as a crucial component in implementing ESG principles within higher education. Furthermore, awareness of climate change and its effects needs to be highlighted among students. Embedding ESG into the curriculum will help to produce environmentally conscious and socially responsible students. In addition, regulators and practitioners can play their role in jointly educating students on ESG. Future studies could consider expanding the sample size by including research universities and further examining the ESG relationship comprehensively within the context of higher education. These findings enhance the current literature on ESG in education by highlighting students' perspectives on ESG implementation, offering valuable insights for policymakers and universities to strengthen the integration of ESG into the curriculum and to cultivate socially and environmentally conscious graduates prepared for global change.

Keywords: *Environmental, Social, and Governance (ESG), Sustainability, Ethical, Higher Education, Accounting*

1. Introduction

The formalization of the Environmental, Social and Governance (ESG) concept was started in 2004 after the United Nations (UN) introduced the Global Compact "Who Cares Wins" report. ESG gained prominence and became a global phenomenon among the stakeholders, which requires all organizations to embed it in their operations. Over two decades of global prominence, each sector plays its role and takes responsibility in achieving the Sustainable Development Goals (SDGs), including the education sector specifically in SDG 4 Quality Education (United Nations, 2025). The education sector plays a significant role in advancing ESG and achieving SDGs as a hub for research, education, and community engagement. In 2022, Higher Education Institutions (HEI) benefited most from increased funding from ESG-mandated funds, with a total of USD143.5 billion for education and research activities (Bursa Malaysia, 2022). This investment and these actions help HEI take the first step in preparing future leaders who can deal with sustainability challenges.

The Malaysian Ministry of Higher Education has mandated public universities to implement ESG policy as part of the 2030 Agenda for sustainable development. Aligning campus operations with sustainability metrics not only supports this agenda but also enhances the global standing of public universities in assessments such as the Times Higher Education (THE), Impact Rankings on SDGs and the Quacquarelli Symonds (QS) World University Rankings: Sustainability (Times Higher Education, 2024). Further, towards environmental sustainability, the UI GreenMetric World University Ranking conducted by Universitas Indonesia in 2010 is also another initiative to measure university green sustainability initiatives (Universitas Indonesia, 2025).

Consequently, transitioning to sustainable practices is not only a strategic imperative but also in the

universities' best interest. Consequently, many HEIs have taken the step by starting to embed ESG into their operations and curriculum development. For instance, Universiti Malaya (UM) came out with the discussion paper on "Leveraging sustainable finance for institutions of higher learning" in February 2025 to see how the HEI can help achieve these goals (Zullif, 2025). Despite challenges faced, with effective strategies, institutional support, and industry collaborations is possible to embed ESG concepts in curriculum development. This action is essential to equip students with a deeper understanding of ESG reporting requirements and related issues (Abo-Khalil, 2024; Alenezi & Alanazi, 2024).

The government initiative and the HEI actions will be achieved if all people understand and have an awareness of the ESG concepts. In addition, Wahab (2024) indicates that Service-Learning Malaysia-University for Society (SULAM) is one of the initiatives to link students to ESG elements with communities in the sense of civic duty. In his findings, SULAM brings a positive outcome for students by bridging academic learning with community engagement and providing a well-rounded education experience. This is related to social and environmental elements. Therefore, this study aims to explore students' perceptions of ESG principles within the context of higher education. The early understanding is essential for the success of ESG implementation and the SDGs goals. The selected undergraduate accounting students from the public universities in Malaysia will be chosen as the sample for the study.

The next section presents a literature review, providing context and insights from previous studies. This is followed by an explanation of the research methodology, including the target population, sampling process, and questionnaire design. The subsequent section outlines the key findings and offers a detailed discussion. Finally, the paper concludes by summarizing the results, acknowledging limitations, and suggesting directions for future research.

2. Literature Review

Environmental, Social and Governance in Higher Education

The incorporation of Environmental, Social, and Governance (ESG) principles into education is increasingly recognized as essential in shaping socially responsible and ethically grounded graduates. ESG in the context of higher education not only prepares students to understand global sustainability challenges but also encourages them to act as proactive contributors to societal transformation (Finatto et al., 2024; Teh, 2025). The concept of sustainability has evolved, transcending traditional economic goals to encompass social and environmental responsibilities. This evolution has been expanded in education, where institutions are increasingly called upon to model sustainable practices and instill these values in learners. One foundational approach to sustainability is the Triple Bottom Line (TBL) framework, first introduced by Elkington (1998, 2013). TBL advocates for balancing three core elements, namely people, planet, and profit, emphasizing that true sustainability arises from their interconnection.

In the context of education, these concepts focus on contributing to society and minimizing their environmental impact, including managing their financial well-being. The ESG principles in the 2004 UN report *Who Cares Wins* provided a clearer structure for evaluating sustainable practices (United Nations Global Compact, 2004). While ESG was initially prominent in corporate finance and investment, its relevance has extended to sectors like education. Universities and schools are now being assessed on their ESG performance. Recent research on ESG and sustainability education highlights many positive outcomes. Singh (2024) indicates that HEIs that incorporate ESG principles into their curriculum development and course syllabus can enhance students' awareness and responsibility on ESG. This could enrich their academic experience and better prepare them for complex real-world problems.

Sustainability Theory in ESG Education

From a theoretical standpoint, ESG research is largely grounded in stakeholder theory and institutional theory. The application of stakeholder theory to ESG in education suggests that institutions respond proactively to the expectations of their stakeholders, including students, faculty, parents, and the community. Li et al. (2021) highlight how responsiveness to stakeholder concerns enhances legitimacy and institutional trust. In practice, this could involve integrating sustainability into university syllabi, engaging students in green campus initiatives, or fostering partnerships with local communities.

Meanwhile, institutional theory explains how educational institutions may adopt ESG practices in response to regulatory pressures or to align with global best practices. For example, Chatterji and Toffel (2010) demonstrate how rating systems can motivate performance improvements, which in the educational realm could translate to sustainability certifications or rankings. Studies by Jayachandran et al. (2013) and Koh et al. (2014) reinforce that focusing on social and environmental dimensions can mitigate risks and enhance institutional resilience, an increasingly vital concern in an era of climate change and social transformation. This study categorizes ESG principles into three core dimensions, namely Environmental Awareness (EA), Social Responsibility (SR), and Governance and Ethics (GE). These dimensions collectively capture the breadth of ESG engagement among university students. Social, environmental, and governance criteria are vital in the educational process for an educational institution as a sector of educational services (Akopyants et al., 2024). Yeo et al. (2025) incorporate additional elements 'economic' in proposing the sustainability framework for higher education in Malaysia.

Environmental Awareness

Environmental awareness (EA) within educational contexts refers to both cognitive understanding and behavioral alignment with sustainability principles (Littledyke, 2008). This includes familiarity with key global issues such as climate change, environmental degradation, and the concept of CSR. Furthermore, it encompasses the practical application of this awareness, such as recycling and energy conservation. Research emphasizes that environmental literacy must go beyond theoretical knowledge; it should inspire students to adopt environmentally responsible habits in their daily lives (Kopnina & Meijers, 2014). Institutions that integrate sustainability into their curriculum contribute meaningfully to the development of environmental stewardship among learners (UNESCO, 2017). Nurillayev (2024) found that environmental education and overall ESG education help to reduce the number of emissions and lower the youth unemployment rate. This means that better education in these areas is linked to improvements in both environmental and social outcomes. Questions in this category assess not only awareness but also the adoption of environmentally sustainable practices, reflecting the extent to which environmental education influences behavior.

Social Responsibility

The social responsibility (SR) pillar of ESG education examines students' civic involvement, their respect for diversity, and their exposure to ethical and social content within the academic syllabus. Active participation in community service (Afzal & Hussain, 2020), valuing inclusivity in the classroom, and feeling safe and supported in a diverse university environment are markers of social engagement. Educational frameworks that prioritize social responsibility emphasize the role of the curriculum in fostering empathy, mutual respect, and a sense of civic duty (Turker, 2009). Carroll's (2016) model of CSR further supports this notion by identifying ethical and philanthropic responsibilities as fundamental elements of responsible behavior. Including ESG and CSR topics in university courses equips students with the tools to navigate social complexities and act with awareness and integrity. Yeo et al. (2025) found in their study that the university had diligently attended to the welfare and well-being of its students and staff, underscored the significance of maintaining an environmental agenda, and had an excellent governance policy, from a social sustainability standpoint.

Governance and ethics

The governance and ethics (GE) component relates to how students internalize and act upon ethical standards, institutional regulations, and principles of fairness. In this study, governance is operationalized through students' compliance with rules, their willingness to report misconduct, and their valuation of ethical conduct in daily life. Ethical development is a cornerstone of educational governance, as it ensures students not only understand but also uphold academic integrity and fairness (Feday, 2017). Institutions play a critical role in modelling governance by promoting transparency and ethical conduct as cultural norms. The Association to Advance Collegiate Schools of Business (AACSB) (Association to Advance Collegiate Schools of Business, 2020) also underscores the importance of embedding ethical reasoning as a core learning objective. By evaluating students' ethical behavior and their responses to injustices, this dimension reveals the effectiveness of ethical education in shaping principled individuals.

Together, these categories offer a robust framework for assessing how well ESG principles are integrated into the academic experience. They also provide a lens through which to examine the preparedness of students to contribute to sustainable and ethically sound societal development. This tripartite structure aligns with the

best international practices in education for sustainable development and offers a comprehensive approach to evaluating ESG engagement among learners. Overall, integrating ESG into the education framework not only supports sustainable development goals but also prepares students to be responsible global citizens. Embedding ESG principles into the governance and operations of educational institutions is no longer optional, but it is essential for fostering ethical leadership, environmental stewardship, and long-term institutional sustainability. Ho and Kim (2024) indicate that the environmental and governance areas were the priorities of educational demand for ESG awareness among university faculty; for instance, energy-saving education and fair and transparent policies and treatment shall be introduced and strengthened.

3. Methodology

Research Design

This study adopts a quantitative research approach using a survey method to examine university students' understanding and awareness of integrating ESG in their daily lives and university. This approach is widely used and acceptable to assess students' attitudes, awareness, and practices due to its capacity to yield generalizable findings (Creswell, 2014).

Population and Sampling

The population of this study comprises undergraduate accounting students that taking Ethics and Governance courses at two Malaysian universities: Universiti Teknologi MARA (UiTM) and Universiti Pendidikan Sultan Idris (UPSI). These institutions were purposively selected to allow for a comparative analysis between different types of higher education institutions. The study population is likely to provide generalizable findings, as UiTM represents a sample from the comprehensive university and UPSI represents a sample from a focused university. Using the purposive sampling method allows the researcher to deliberately select participants who are expected to provide relevant and insightful data, particularly those currently studying Ethics and Governance topics (Etikan, Musa, & Alkassim, 2016). A final total of 174 respondents participated in the questionnaire from both universities.

Research Instrument

The research instrument was self-developed and segmented into four sections: (1) demographic background, (2) environmental awareness (EA), (3) social responsibility (SR), and (4) governance and ethics (GE). There are five survey items in EA and SR, while three survey items in GE. The items were constructed based on prior research and frameworks in sustainability education and CSR, adapted to reflect the higher education context. The questions are rated on a seven-point interval Likert scale ranging from 1 as "strongly disagree", 2 "disagree", 3 as "somewhat disagree", 4 as "neither agree or disagree", 5 as "somewhat agree", 6 as "agree" and 7 as "strongly agree" to capture degrees of agreement and frequency (Vagias, 2006).

Data Collection Procedures

Data was gathered using an online survey platform (Google Forms), which facilitated efficient distribution and accessibility for students from both participating universities. Students were invited to participate through teaching lecturers and faculty administrators, who provided brief introductions about the purpose of the study. All respondents were informed that their participation was voluntary and that anonymity and confidentiality would be maintained throughout the research process.

Data Analysis Techniques

Upon the data collection process, the data were transferred into a Microsoft Excel spreadsheet, and descriptive analysis, including the minimum, maximum, and mean score for each of the survey items, was presented to derive the findings of the study on the students' understanding of ESG.

4. Findings and Discussion

Descriptive Findings

The respondents are 174 undergraduate students in accountancy programs. 79% (138) are female students, while 21% (36) are male students. Table 1 provides descriptive information, including the minimum, maximum, and mean score for each of the survey items under Environmental Awareness (EA), Social

Responsibility (SR), and Governance and Ethics (GE). Overall, the minimum value ranges from the majority of 1.00, 2.00 (EA2) and 5.00 (GE3), while the maximum value is 7.00 for all three dimensions. Interestingly, item GE3, denoted as ‘*Do you think ethical behavior is important in your daily life?*’ was responded with a minimum value of 5, indicating the respondents agree that ethical behavior is essential to be integrated in their daily life in practicing the concept of environmental, social and governance (ESG). Ethical behavior is the pillar of ESG; without ethical behavior, the element of ESG and corporate social responsibility cannot be reflected and applied.

Table 1: Descriptive Information (N=174)

Items	Min	Max	Mean
<i>Environmental Awareness (EA)</i>			
EA1 - Do you know about environmental, social, and governance?	1.00	7.00	5.90
EA2 - Are you aware of climate change and its effects?	2.00	7.00	5.11
EA3 - Do you know about Corporate Social Responsibility?	1.00	7.00	5.94
EA4 - Do you recycle?	1.00	7.00	5.53
EA5 - Do you turn off lights and electronics when not in use?	1.00	7.00	5.55
<i>Social Responsibility (SR)</i>			
SR1 - How often do you participate in community service or volunteer work?	1.00	7.00	5.32
SR2 - Do you respect diversity and inclusion in your classroom?	1.00	7.00	5.99
SR3 - Do you feel safe and supported in your university environment?	1.00	7.00	6.02
SR4 - Does your university's syllabus teach you about Environmental, Social, and Governance?	1.00	7.00	5.28
SR5 - Does your university's syllabus teach you about Corporate Social Responsibility?	1.00	7.00	5.94
<i>Governance and Ethics (GE)</i>			
GE1 - Do you follow the rules and regulations of your university?	1.00	7.00	6.13
GE2 - Do you report or stand against unfair practices (e.g., bullying, cheating)?	1.00	7.00	5.56
GE3 - Do you think ethical behavior is important in your daily life?	5.00	7.00	6.41

Source: Authors

Environmental Awareness

The mean score reported based on Table 1 for EA is in the range of 5.11 to 5.94. The highest mean score recorded of 5.94 for EA3 is represented by *Do you know about Corporate Social Responsibility?* This indicates that the respondents somewhat agree that they possess knowledge about Corporate Social Responsibility (CSR). The term CSR is widely used in Malaysia, especially in business and management, since it was first introduced in 2006. Most of the public and private business entities, including non-profit entities, integrate the CSR concept into their business activity, making the public aware of the CSR implementation. Public listed companies, for instance, are required to report their CSR initiative annually in their corporate annual report. In addition, the highest mean score was followed closely by EA1 refers to *Do you know about environmental, social, and governance?* (Mean = 5.90). It shows that respondents agree that they possess knowledge of ESG. Even though sustainability and ESG are among the newly referred terms, CSR is still dominant and highly regarded as a concept of social responsibility, thus it reflects this finding.

Meanwhile, the lowest mean score reported is EA2 (Mean = 5.11), which represents *Are you aware of climate change and its effects?*. This portrays the fact that the respondents are relatively less aware of information and knowledge about climate change and its effects compared to other environmental issues. Further, they may have unstructured information on climate change from various sources. All other EA items reported mean scores above 5, indicating that respondents generally agree they are knowledgeable about ESG (EA1) and practice energy-saving behaviors such as turning off lights and electronics when not in use (EA5). The finding aligns with the earlier studies by Kopnina and Meijers (2014) and Nurillayev (2024).

Social Responsibility

The mean scores reported are within the range of 5.28 to 6.02. Based on Table 1, the highest mean score was reported by SR3, and it is closely followed by SR2 and SR5. The highest mean score of 6.02 shows the statement *Do you feel safe and supported in your university environment?*, indicating that the respondents agree and

perceive strong support in the university environment. SR2 refers to *Do you respect diversity and inclusion in your classroom?* And SR5 refers to *Does your university's syllabus teach you about Corporate Social Responsibility?* With mean scores of 5.99 and 5.94, respectively, these findings suggest that universities are increasingly promoting gender diversity and fostering inclusion practices such as opening the intake to people with difficulties. The university is also integrating CSR into its academic programs to raise awareness among students, such as through the implementation of SULAM, to provide students with the opportunity to contribute knowledge, skills and competencies in their field towards solving problems or issues within communities. Other courses also integrate out-of-classroom activities that involve CSR elements. This reflects the findings of this category.

Interestingly, the lowest mean score recorded was for item SR4 (Mean = 5.28), which asked whether the university's syllabus teaches ESG topics. A mean score above 5 implies that the ESG is covered under the university syllabus. However, it is still the lowest among all items. This raises concerns about the coverage of ESG and how it systematically integrates into the curriculum. The lower score suggests that some element of ESG may be present at the moment. However, at some point, it may not be well highlighted and systematically delivered and mapped to the university curriculum. It is also possible that the student is uncertain whether the coverage falls under the ESG, reflecting that the university curriculum needs to be refined to better align with the ESG elements. This finding is consistent with previous research conducted by Afzal & Hussain (2020) and Yeo et al. (2025).

Governance and Ethics

The highest mean score is GE3 as indicated in Table 1, which is the question asked *Do you think ethical behavior is important in your daily life?* The mean score reported is 6.41, which indicates that the respondents agree with the importance of ethical behavior in their everyday actions. Similarly, item GE1 refers to *Do you follow the rules and regulations of your university?* Also reported with a high mean score of 6.13, above 6. Item GE1 is also closely interrelated to GE3, which implies that the respondents are rule-abiding as they follow the rules and regulations of their university. By adherence to the rules and regulations, a person can be seen as a reflection of ethical conduct. The findings suggest that the respondents recognize the value of ethical behavior through compliance with university rules and regulations.

The lowest mean score reported is GE2, which refers to *Do you report or stand against unfair practices (e.g., bullying, cheating)?* The mean score reported is 5.56, which the respondents somewhat agree with their ability to report unfair and wrongdoing practices. However, it is discovered to be the lowest among other items in GE indicates that the respondents seem unlikely to report against unfair practices. This implies that it may be due to their attitude, which does not concern their surroundings. In addition, the regulators and policymakers need to make the reporting platform more friendly and accessible. By having a specified platform or medium, the wrongdoing can be easily reported, and action can be immediately taken. Awareness among the students shall be emphasized through a campaign and information on the importance of reporting any wrongdoings and unfair practices.

Based on the 174 responses, the finding reveals that the ESG is present but covered in a limited manner. Overall, GE reported the highest mean score, followed by SR and EA. This finding indicates that all three variables are important from an academic perspective. The finding of GE indicates that students perceive the importance of ethical behavior by adhering to the rules and regulations. However, the university must emphasize students' role in raising awareness of environmental and social issues and in encouraging them to report unfair practices. Additionally, all items in SA and EA show a positive level. For instance, students are aware of the CSR concept as compared to ESG. This is evidenced by practicing recycling, conserving unnecessary energy. However, they are less aware of climate change and its effects. In addition, students feel supported in university through diversity and inclusion. Their university integrates CSR into its syllabus, and this is reflected by its awareness of CSR. However, they tend to be less involved in community service or volunteer work, and this needs to be integrated into the ESG syllabus to enhance students' involvement. Engagement in community service showed variability, indicating areas where educational reinforcement is needed. This result is in line with the research conducted by Ho and Kim (2024) and the aspiration stated by Feday (2017).

Comparison between Comprehensive and Focused Universities

Table 2 indicates the mean scores for comprehensive and focused universities across three dimensions (EA, SR and GE). Overall, the mean scores range from 5.60 to 6.03, indicating a generally positive response across all areas. Among these three dimensions, GE is reported as the highest mean score for both comprehensive and focused universities, suggesting that respondents (i.e., students) place a strong importance on governance and ethical values. While EA and SR reported quite similar mean scores of 5.60 and 5.71, respectively, showing a moderate but consistent level for both areas.

Table 2: Comparisons of Total Mean Scores

Types	Environmental Awareness (5 items)	Social Responsibility (5 items)	Governance and Ethics (3 items)
Comprehensive university	5.35	5.50	5.90
Focused university	6.27	6.24	6.37
Overall	5.60	5.71	6.03

Source: Authors

Based on Table 2, the focused university outperformed the comprehensive by reporting the highest mean scores of all three dimensions. The focused university's mean score is above 6, which means the respondents agree that they perceive strong integration of ESG aspects in their university, academic and daily practices. On the other hand, a comprehensive university reported a mean score below 6, indicating the respondents somewhat agree with the ESG integration, but it might not be well covered. The lower mean score may be attributed to a wider generalized curriculum offered, where the element of ESG is not explicitly embedded across all programs and the programs are not well mapped to the ESG elements. This led to difficulties for students to identify such content within their courses. Moreover, the comprehensive university's diverse academic offerings and larger student body might contribute to a more diluted delivery of ESG-related initiatives, potentially affecting students' perceptions and engagement with these topics. Focused universities often focus and concentrate on specific disciplines or themes, allowing for a more targeted and integrated approach to ESG education.

5. Conclusion and Recommendations

This study sheds light on how undergraduate accounting students perceive ESG principles within their academic experience. While ESG topics are included in the syllabus, they are often presented in a fragmented and inconsistent way, suggesting a need for better structure and integration. Among the three ESG dimensions, students placed the highest importance on GE, showing that they value ethical behavior and understand its role in both their education and future careers. SR and EA were also viewed positively, though with slightly lower mean scores, pointing to areas that need more attention, especially in raising awareness about climate change and encouraging active engagement with environmental and social issues, such as encouraging recycling, conserving energy, involvement in community service and volunteer work and being alert to the surrounding alert through reporting unfair practices. In addition, university needs to be one step ahead by embedding ESG as part of their syllabus and curriculum and mapping it clearly so that ESG is better addressed, so that their understanding can be deepened even further.

This study enlightens the current literature on ESG in education. This study offers a valuable finding to policymakers, regulators and universities in developing strategies and policies related to ESG in education, embedding ESG into the current syllabus and curriculum systematically, as well as implementation practices of ESG inside and outside universities that can be applied by students. This will fill in the gap in the current curriculum delivery. This study also sheds light on practitioners to collaborate with the university to provide practical ESG implementation to better prepare graduates to meet real-world expectations around ethical and sustainable practices. Future research could employ other methods of data collection, such as interviews, to obtain a deeper understanding of how students engage with ESG concepts. This data could be expanded into a longitudinal study to determine whether this awareness leads to a persistent impact beyond the classroom.

References

- Abo-Khalil, A. G. (2024). Integrating Sustainability into Higher Education: Challenges and Opportunities for Universities Worldwide. *Heliyon* 10(2024) e29946. <https://10.1016/j.heliyon.2024.e29946>
- Afzal, A., & Hussain, N. (2020). Impact of Community Service Learning on the Social Skills of Students. *Journal of Education and Educational Development* 7(1), 55-70, 2020. <http://dx.doi.org/10.22555/joeed.v7i1.2988>
- Akopyants, I.M., Vartanova, K.Y., Kiseleva, A.V., Mikhailovskaya, I.N., Patsora, I.V. (2024). ESG Agenda in the Educational Process of a University. In: Sergi, B.S., Popkova, E.G., Ostrovskaya, A.A., Chursin, A.A., Ragulina, Y.V. (eds) *Ecological Footprint of the Modern Economy and the Ways to Reduce It. Advances in Science, Technology & Innovation*. Springer, Cham. https://doi.org/10.1007/978-3-031-49711-7_13
- Alenezi, M., & Alanazi, F. (2024). Integrating environmental, social, and governance values into higher education curriculum. *International Journal Evaluation & Research Education*, 13(5), 3493-3503. <https://10.11591/ijere.v13i5.29440>
- Association to Advance Collegiate Schools of Business. (2023). 2020 guiding principles and standards for business accreditation (June 2023 ed.). <https://www.aacsb.edu/-/media/documents/accreditation/2020-aacsb-business-accreditation-standards-june-2023.pdf>
- Bursa Malaysia. (2022). Bursa Digital Research Market updates – A total of USD143 billion of ESG funds have been invested in Bursa Malaysia. Bursa Malaysia. <https://www.bursamalaysia.com>
- Carroll, A.B. Carroll's pyramid of CSR: taking another look. *International Journal of Corporate Social Responsibility* 1, 3 (2016). <https://doi.org/10.1186/s40991-016-0004-6>
- Chatterji, A.K., Toffel, M.W. (2010): How firms respond to being rated. *Strategic Management Journal*. 31(9): 917-945.
- Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: Sage.
- Elkington, J. (1998): Partnerships from cannibals with forks: The triple bottom line of 21st-century business. *Environmental Quality Management* 8(1), 37-51.
- Elkington, J. (2013): Enter the triple bottom line. - In *The Triple Bottom Line*, Routledge 16p
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*, 5, 1-4. <https://doi.org/10.11648/j.ajtas.20160501.11>
- Feday, S. (2017). Academic Dishonesty in Ethiopian Higher Education and Its Implications for Corruption. *Beijing Law Review*, 8, 10-20. <https://doi.org/10.4236/blr.2017.81002>
- Finatto, C.P., Fuchs, P.G., Aguiar Dutra, A.R. and Guerra, J.B.S.d.A. (2024). Environmental, social, governance and sustainable development goals: promoting sustainability in universities, *International Journal of Sustainability in Higher Education*, 25(6), 1121-1136. <https://doi.org/10.1108/IJSHE-11-2022-0361>
- Ho Joong Sung, & Eun Joo Kim. (2024). Analysis of ESG importance and the current level of educational needs of university faculty. *Library of Progress-Library Science, Information Technology & Computer*, 44(2), 254-268.
- Jayachandran, S., Kalaignanam, K., Eilert, M. (2013): Product and environmental social performance: Varying effect on firm performance. *Strategic Management Journal* 34(10), 1255-1264.
- Koh, P.S., Qian, C., Wang, H. (2014): Firm litigation risk and the insurance value of corporate social performance. *Strategic Management Journal* 35(10), 1464-1482.
- Kopnina, Helen & Meijers, Frans. (2014). Education for sustainable development (ESD): Exploring theoretical and practical challenges. *International Journal of Sustainability in Higher Education*. 15. 188-207. <https://doi.org/10.1108/IJSHE-07-2012-0059>
- Li, T.-T., Wang, K., Sueyoshi, T., & Wang, D. D. (2021). ESG: Research Progress and Future Prospects. *Sustainability*, 13(21), 11663. <https://doi.org/10.3390/su132111663>
- Littledyke, M. (2008). Science education for environmental awareness: approaches to integrating cognitive and affective domains. *Environmental Education Research*, 14(1), 1-17. <https://doi.org/10.1080/13504620701843301>
- Nurillayev, E. (2024). Embedding ESG in finance education: the impact of ESG education within graduate finance programs on ESG-related problems, *International Journal of Sustainability in Higher Education*, Vol. ahead-of-print No. ahead-of-print. <https://doi.org/10.1108/IJSHE-06-2024-0388>

- Singh, T. P. (2024). Incorporation of ESG principles in education. *Asia Education Review*. Retrieved from <https://www.asiaeducationreview.com/others/vista/incorporation-of-esg-principles-in-education-nwid-1129.html>
- Teh, H. (2025). Rationales and factors influencing universities' engagement with sustainability: an exploration of two Malaysian universities from stakeholders' perspectives. *Journal of Contemporary East Asia Studies*, 1–26. <https://doi.org/10.1080/24761028.2025.2471624>
- Times Higher Education (2024). University Impact Rankings 2024. Retrieved from <https://www.timeshighereducation.com/impactrankings>
- Turker, D. (2009). Measuring Corporate Social Responsibility: A Scale Development Study. *Journal of Business Ethics*, 85, 411-427. <https://doi.org/10.1007/s10551-008-9780-6>
- UNESCO. (2017). Education for sustainable development goals: Learning objectives. Paris: UNESCO. Retrieved from <https://www.unesco.org/en/articles/education-sustainable-development-goals-learning-objectives>
- United Nations. (2025). The 17 goals: Sustainable Development Goals. <https://sdgs.un.org/goals>
- United Nations Global Compact. (2004). Who cares wins: Connecting financial markets to a changing world. United Nations. <https://documents1.worldbank.org/curated/en/280911488968799581/pdf/113237-WP-WhoCaresWins-2004.pdf>
- Universitas Indonesia. (2025). Welcome to UI GreenMetric World University Rankings. Retrieved May 29, 2025, from <https://greenmetric.ui.ac.id/about/welcome>
- Vagias, W.M. (2006) Likert-Type Scale Response Anchors. Clemson International Institute for Tourism & Research Development, Department of Parks, Recreation and Tourism Management. Clemson University, Clemson. <http://www.clemson.edu/centers-institutes/tourism/documents/sample-scales.pdf>
- Wahab, Muhammad Zarunnaim. (2024). Evaluating the Impact of Service-Learning Malaysia-University for Society (SULAM) on Student Learning and Community Engagement. *International Journal of Academic Research in Progressive Education and Development*. <https://13.10.6007/IJARPED/v13-i3/22077>
- Yeo, A. C. M., Lim, C. Y., Tay, L. C., & Chin, M. Y. (2025). Establishing an integrative sustainability framework for higher education in Malaysia: Economic and EESG aspects. *Quantum Journal of Social Sciences and Humanities*, 6(1), 218–236. <https://doi.org/10.55197/qjssh.v6i1.602>
- Zullif, M. A. (2025). Leveraging sustainable finance for institutions of higher learning. Universiti Malaya Sustainable Development Centre.