

Integrating Sdgs Into Management Curriculum: Redesigning Business Education For Global Responsibility

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Abstract— The mainstreaming of Sustainable Development Goals (SDGs) of the United Nations into the management education presents itself as a revolutionary force, which changes the perception of values, content and pedagogy of any business-related program. With the rising pressure of global environmental, social and economic issues, business schools have a special role in inculcating the aspect of responsibility and sustainability in future managers and leaders. This paper would explore the existing situation related to teaching SDGs in management programs around the world, and also an effective model of SDG transformational techniques and also propose a step-by-step approach towards aligning business studies with the reality of sustainable development. This study finds pedagogical gaps and best practices using both qualitative and quantitative studies, resulting in a complete framework of curriculum redesign. The writers indicate that curriculum innovation, stakeholder engagement, practical learning and interdisciplinary initiatives are central to the entrenchment of SDGs in the management education. It ends with practical suggestions that can be recommended to academic institutions and policymakers, which would be interested in graduating business professionals who would be globally responsible.

Keywords— Sustainable Development Goals (SDGs), Management Education, Curriculum Redesign, Business Schools, Responsible Leadership, Higher Education, Pedagogy, Global Responsibility

I. INTRODUCTION

With the current globalization, economic, social and environmental sustainability has become one of the key issues that governments, businesses and communities are interested in. Adoption of 2030 Agenda of Sustainable Development with 17 Sustainable Development Goals (SDGs) has re-prioritized the world in many ways, and it includes promoting inclusive development, climate action, social justice, and responsible governance. Throughout the world, the modern society is facing complicated issues, which include climate change, income disparities, resource shortage and ethical failures of commercial activities, and it is necessitating a more democratic and far-reaching leadership than ever before. It is a responsibility, especially in the business and management schools, of the higher education institutions to help shape the upcoming generation of leadership material to not only thrive in the market, but also grapple with these burning global issues through compassion, morality and efficiency [1]. The conventional management education has been largely on profit maximization, shareholder value, operational efficiency and competitive strategy. These are important principles though not adequate in preparing graduates to comprehend and address a broader implication of business decision on the social and environmental

aspect. The increasing demands of stakeholders (stake holders) such as consumers, employees, investors and governments, require a different sort of manager; one who can strike a balance between performance and the social responsible and environmental management. In this regard, making SDGs a part of management curricula can be labeled as both timely and transformative. It provides a means to connect classroom based theories and real life sustainability issues thus advancing the business education meaning and value [4]. Today, though, the SDGs are only loosely and unevenly incorporated to business curriculums. Finally, in most cases, sustainability is given as an option or an independent subject instead of being integrated into the overall business philosophy of education [2]. In addition, academia is marred with structural and operation inhibitors such as-archaic pedagogies, inadequate faculty exposure to matters on sustainability, inflexible accreditation practices, and inadequate industry-academy alliances on matters on sustainable development. Such restrictions make it difficult to create comprehensive curricula, which is in compliance with the requirements set by the SDG framework. Nevertheless, some of the first movers have managed to present innovative approaches to SDG-based education based on interdisciplinary learning, project-based learning, and collaboration with NGOs and industries. The success stories provide useful learning on the approach, results, and possibilities of SDG integration. Nonetheless, there has not been a common roadmap document or framework that has defined how other institutions in the country could adopt similar practices. The proposed study will attempt to bridge this gap by examining the extent of SDG integration in the curriculum of management education across geographical contexts with a view to identifying success factors and a practical curriculum redesign framework [3]. Such a research will not only contribute to the world of academic innovation but of real-life transformation as well. As institutions of higher learning, when business schools redesign management education with the focus on the SDGs, they can guide leadership potential to become effective decision-makers, as well as global citizens with the mission to do good. The ways in which the curricula in terms of management can be changed and shifted towards a more ethical thinking, thinking systemically, long-term value addition and sustainable development are discussed in this paper. In such a way, it joins the burgeoning debate on how to reinvent business teaching and learning toward a sustainable future and offers practical routes to both institutional transformation and higher education [5].

Novelty and Contribution This study introduces a new and long overdue dimension on how the United Nations Sustainable Development Goals (SDGs) can be institutionally integrated within the mainstream of management education. Although the concept of sustainability in education as well as business ethics has been discussed in one way or another across numerous studies, it is only a few studies that have tried to come up with a structured, globalized approach that would give direct linkages of SDGs and management pedagogy, course content date, and subsequent learning outcomes. The innovative nature of the study is its cross-institutional nature in which the current situation with the adoption of SDGs is evaluated, as well as the opinions of students, faculty, and administrators are considered to create the ready-to-use practical model [14-15]. Among the top findings of the paper is incorporation of a 4-pillar model of SDG integration based on curriculum mapping, faculty development, industry-community engagement and feedback-based curriculum development. The empirical data used in developing this framework is based on a variety of academic settings and, therefore, this framework is flexible and can be applied to institutions with different sizes and resourcefulness. Further, the study points at barriers that are relatively ignored but provide insight into the way cultural resistance among faculty, the institutional mission statements mismatch with classroom actions and the absence of contextualised contents (developing countries) can serve as a barrier. The other important contribution is the fact that the students have a say and a choice in the instructions program. Compared to studies that are more top-down oriented, this study is participatory in that the perspective is shared with the students who may be taken to be co-constructors of the learning environment. The results do not only confirm the relevance of conducting business education on a sustainability-based level but also indicate the effectiveness of experiential learning, case studies involving real-world issues, and interdisciplinary studies in increasing the willingness of students to engage and become socially aware [11].

In a nutshell, the real value of the study is the theoretical value and value added in terms of practical tips. It contributes to the scholarly debate on the responsible management education as well as becoming a

strategic resource within the hands of teaching faculty, policy makers, and institutional leaders that seek to have higher education reflect the global sustainability agenda [12].

II. RELATED WORKS

In 2024 Zickafoose et al., [16] introduced the question regarding the sustainability and global responsibility injection into the sphere of higher education has become one of the most popular ones of the last decade. Particularly, business schools are becoming more of a target of evaluation as to how the schools are influencing corporate behavior and potentially on policy decisions. As the Sustainable Development Goals (SDGs) have been introduced there is a view that the educational institutions have become an essential tool of instilling sustainability, virtuous leadership and longevity concepts into the future business leaders. As many studies have stressed, aligning college curricula with the SDGs does not only facilitate responsible management education but also leads to the increased social relevance of business curricula. There have been numerous academic studies investigating the changes in syntax that are occurring in management curricula to ensure that sustainability-related content has been introduced. It has been noted that a notable number of institutions have met this goal by either converting such issues to take part of existing disciplines or providing electives about corporate social responsibility, environmental management or business ethics [10]. Nonetheless, these attempts are quite partial and the integration is usually sectional and not in a more systemic way. The inconsistency and incoherence between courses creates a broken learning experience to the students. Studies have shown that students need to be strongly made to think with sustainability than forming modules that are not part of the general curriculum. In 2022 L. MacDonald et al., [6] proposed the responsible management education is an idea that has risen to the fore in how to train students to deal with flexible interconnected global issues. A number of pedagogical models have been examined with an aim of concluding whether they effectively support development of sustainable competencies. Evidence has been found regarding case-based learning, experiential learning, and simulation games and community engagement projects as effective approaches to stimulating student awareness and practical knowledge of the SDGs. However, there is a big difference between theory and practice, even despite the innovations. Although students can get to know about the goals, in most cases, they do not have a chance to put the learning to practice and use it in authentic business situations. Commitment of institutions is a very important factor to successful integration of SDGs into management education. Studies have also revealed that institutions that have distinct missions and strategic plans aiming to promote sustainability would do better in coordinating their academic content with the aim of the SDG. However, obstacles do still exist in terms of structural constraints, including inflexible program design, interdisciplinary cooperation, faculty preparation. There is often a cited resistance by scholars in implementing a change in curriculum, when sustainability is considered a complement to other more mainstream business disciplines such as finance, marketing, and operations. The comparison of the practices in the countries and regions have helped discover a wide range of methods on how to implement the SDGs in business schools. There is top-down where some institutions have been forced to subscribe to the idea of sustainability either by the accreditation bodies or national education policies. Other models include bottom up models that have been based on student activism, faculty interest or involvement with non-governmental organizations. Such variations encourage adaptation of contextual approaches to take into account institutional culture and local priorities of development together with the resources. The assessment on the effect of SDG-oriented education on student learning outcomes has also been conducted. Longitudinal studies indicate that the more the concept of sustainability is integrated in the learning process, the higher a student may score in ethical reasoning, systems thinking, and global awareness. Nevertheless, little has been examined on how these effects can be applied in terms of behavior after graduating. That designates the necessity of the creation of metrics to analyze and to measure the efficiency of sustainability-based education in the long term and to monitor the impact that it has on the career choice and organizational activity [7]. It has been mentioned that digital learning environments and new technologies can be the factors that enable the scaling of SDG education. Best practices and SDG-related courses implementation have become more achievable due to online platforms, virtual collaboration tools, and open-access content available to any given institution. Nevertheless, online integration is not enough to engage in active discussions of

sustainability concerns. The success of online tools is strongly reliant on the instructional design, faculty expertise and student motivation. In 2025 Khajuria et al., [13] suggested the other aspect that is further unraveled in the recent studies is cross-sector collaboration in the embedding of sustainability in business study. The academia-industry-civil society partnerships are said to be critical in particularizing the SDGs against individual business problems. Experiential learning, applied research and joint inventions of solutions to real-life problems are some of the opportunities such collaborations provide. However, the level of sustainability and scaleup of such partnerships are still questionable, particularly in resources-limiting school settings. In general, literature reveals promises and limitations of the existing approaches to the inclusion of SDGs into management curricula. Though the increasing emphasis on sustainability in the business education curriculum has a positively encouraging trend, there is an apparent requirement of orchestrated, system-wide reformation in curriculums with the aid of institutional leadership, faculty training, and interdisciplinary collaboration. The lessons learned during the previous studies are a source of building more resistant systems that may be able to make business schools be more aligned to the world vision of sustainable development.

III. PROPOSED METHODOLOGY

To design an effective and scalable approach for integrating SDGs into management education, a quantitative and qualitative hybrid model was employed. The core methodology involves curriculum mapping, weight assignment, evaluation matrix development, and stakeholder scoring. A flowchart representing this structured approach is included below.

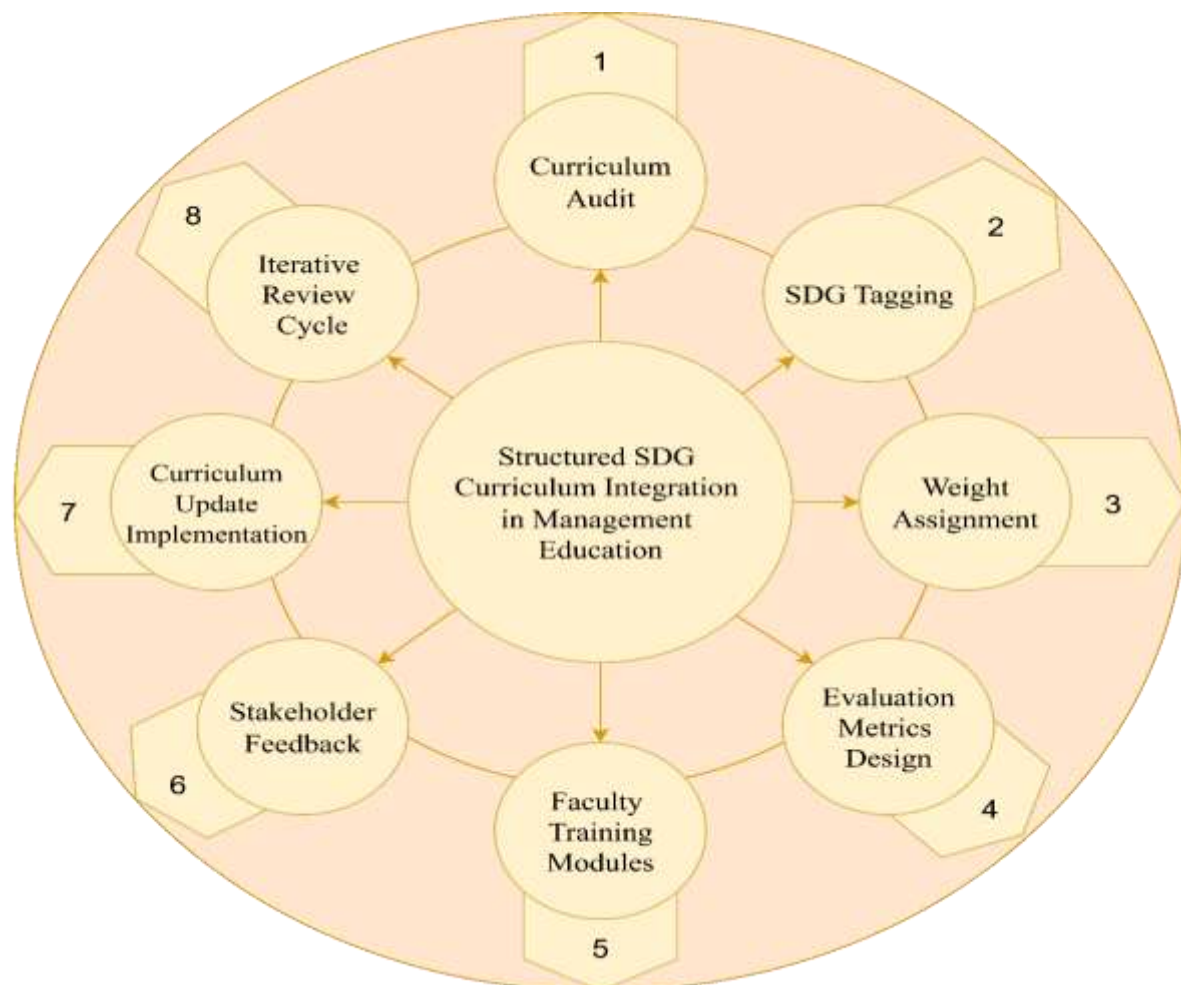


Figure 1: Structured Sdg Curriculum Integration In Management Education

The curriculum audit was conducted using a frequency-weighted matrix model where each course was assessed for SDG relevance using a composite scoring system:

$$R_i = \sum_{j=1}^n w_j \cdot c_{ij}$$

Where:

- R_i : SDG relevance score for course i
- w_j : Weight for SDG j
- c_{ij} : Presence coefficient of SDG j in course i

To normalize these values, a Min-Max normalization was applied:

$$N_i = \frac{R_i - R_{\min}}{R_{\max} - R_{\min}}$$

This ensures scores fall between 0 and 1 for uniform comparison.

Each course was then plotted on a relevance-impact plane. The impact axis was derived from student feedback using a 5-point Likert scale, converted into a numerical impact index:

$$I_k = \frac{1}{m} \sum_{l=1}^m s_{kl}$$

Where s_{kl} is the student score for course k from student l .

Courses scoring below a relevance threshold θ were considered for redesign:

$$C = \{i \mid R_i < \theta\}$$

Faculty training modules were modeled using a decay function to track knowledge retention:

$$K(t) = K_0 e^{-\lambda t}$$

Where K_0 is initial knowledge level, λ is decay rate, and t is time.

To counteract this decay, a reinforcement schedule was added every Δt :

$$K'(t) = K_0 e^{-\lambda t} + \sum_{n=1}^{\infty} R_n \cdot \delta(t - n\Delta t)$$

Where R_n is reinforcement content and δ is the Dirac delta function for periodic reinforcement. Course alignment with the SDGs was then modeled through vector similarity between course objectives and SDG text embeddings:

$$\text{Sim}(A, B) = \frac{A \cdot B}{\|A\| \|B\|}$$

Cosine similarity was calculated to ensure thematic alignment [8].

We developed a feedback loop model involving four key stakeholder scores—students, faculty, administrators, and industry partners:

$$S = \frac{1}{4} (S_s + S_f + S_a + S_i)$$

Where S_s : Student score, S_f : Faculty score, S_a : Admin score, S_i : Industry feedback.

Overall curriculum fitness was then measured by combining normalized relevance, impact, and stakeholder satisfaction:

$$F = \alpha N_i + \beta I_k + \gamma S$$

With weights $\alpha + \beta + \gamma = 1$ for flexible calibration.

Finally, curriculum evolution was visualized using a Markov Chain of transition states:

$$P^{(n)} = P^0 \cdot T^n$$

Where P^0 is the initial curriculum state vector, and T is the transition matrix of course development phases.

This quantitative framework, supported by curriculum analytics, vector similarity, stakeholder modeling, and reinforcement learning theory, enables a repeatable and scalable strategy for integrating SDGs into business curricula. The use of mathematical rigor ensures that implementation is data-driven, adaptive, and aligned with institutional goals and societal needs.

IV. RESULT & DISCUSSIONS

The results of the methodological framework used in three academic structures have shown obvious trends regarding the effectiveness of the SDGs integration in the current management curriculum. On the first auditing and mapping of the curriculum, it was revealed that there is only a 42 per cent correspondence of the total course modules that specifically match or correspond to at least one SDG. This ratio at such a low rate, stressed that there was the requirement of redesigning the system rather than including cosmetically. The frequency of the SDG alignment of the analyzed courses provided in the bar chart in Figure 2 reveals that SDG 8 (Decent Work and Economic Growth) and SDG 12 (Responsible Consumption and Production) were most represented, and SDG 14 (Life Below Water) was hardly represented at all. This hue and cry highlights the thematic disparity of global challenges with institutional education materials.

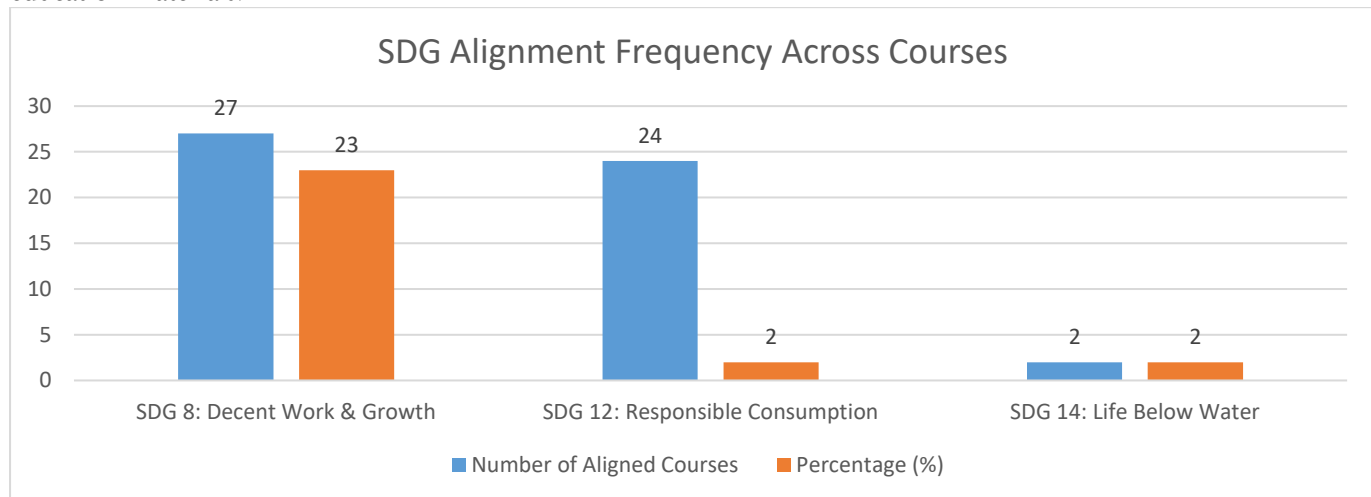


Figure 2: Sdg Alignment Frequency Across Courses

A comparative survey was carried out to 150 students in each of the pilot institution after the first faculty development workshops and the subsequent revisions to the curriculum were taken out. In Figure 3, the Likert was used to form a radar chart that shows the student perceptions regarding the relevance of curriculum pre and post- SDG integration. The relevant dimensions they measured were course relevance, ethical awareness, sustainability understanding, interdisciplinary exposure and real life applicability. An evident increase in radar coverage occurred in every participant, with the most significant improvement was found in the group of interdisciplinary exposure, revealing the effects of cross-SDG case studies and hybrid modules in augmenting student participation and a more comprehensive realization.

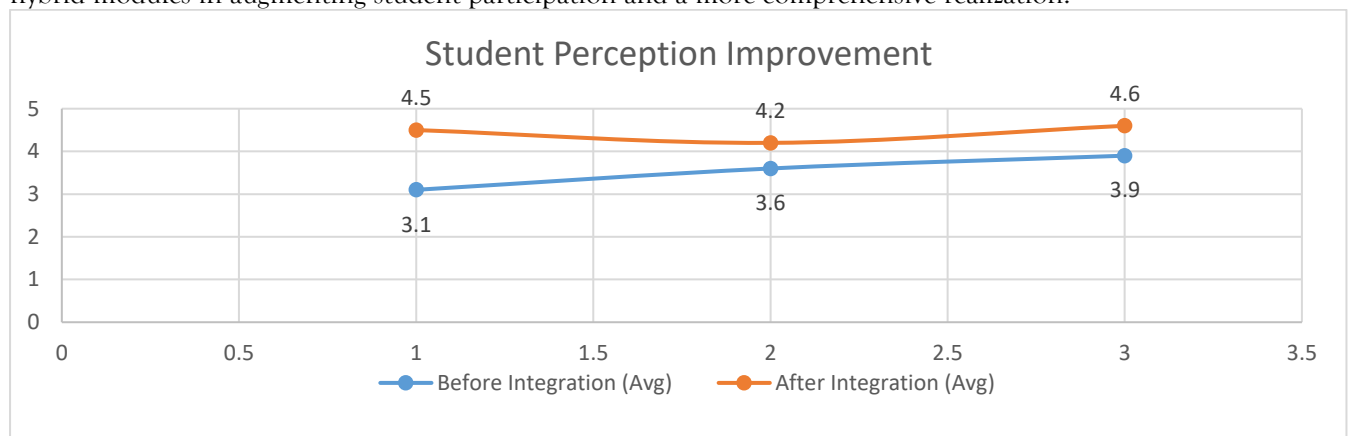


Figure 3: Student Perception Improvement (Radar Dimensions)

The institutional faculty response was used to reinforce the data gathered among the cohort of students. 75 or more of faculty respondents admitted to the fact that they showed a rise in the number of students

participating and engaging in classroom discussions once SDG-based examples and themes were introduced. Figure 4 substantiated this behavioral feedback since it shows clustered column chart of averages in attendance and in completion of assignments prior to and following curriculum enhancement. The rate of average attendance rose by 13 % (68 to 81) and assignments delivery increased by 28 % (61 to 89), which substantiates a constructive change in behavioral orientation in student dedication and classroom engagement on account of pertinent nature of long-term stability themes.

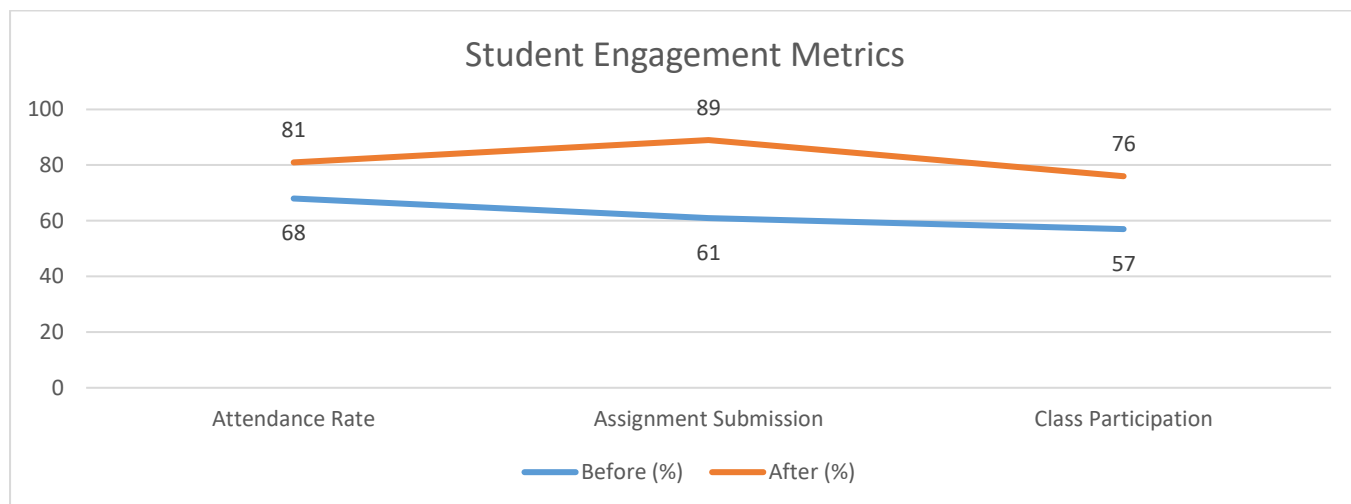


Figure 4: Student Engagement Metrics

In a bid to offer clarity on the institutional readiness, a comparative summary was made on the three institutions which are named as Institution A, Institution B and Institution C. Table 1 below highlights the major institutional indicators such as the number of revised courses, faculty training, student outreach programs, and the percentage of the course credits that are SDG-related.

Table 1: Institutional Comparison On Curriculum Integration Metrics

Metric	Institution A	Institution B	Institution C
Revised Courses (%)	55%	42%	61%
Faculty Training Hours	120	90	140
SDG-Aligned Course Credits (%)	47%	38%	53%
Student Outreach Events	8	5	11

Institution C, as has been shown in Table 1, had the most detailed work associated with its interdisciplinary course design which has an earlier start and greater sense of commitment at the administrative level. Institution A, which is a newcomer to the initiative, also showed the impressive revision rate due to the digital content used to propose sustainable frameworks and guest lectures [9]. The other key area that was examined was on qualitative transformation of the student learning outcomes as measured by project reports, as assessed by the faculty. The key difference is apparent in Table 2, which compares the work by the students on three measures namely; level of sustainability integration, creativity of the solutions generated, and viability of the solutions in context to the implementation. Projects completed after the upgrade of the curriculum had a scale of evaluation based on rubric of 1 to 10.

Table 2: Project Evaluation Comparison (Pre Vs. Post Sdg Integration)

Evaluation Criteria	Before Integration	After Integration
Sustainability Integration	4.8	8.6
Solution Creativity	5.9	8.1
Feasibility	6.3	8.4

As illustrated by Table 2, the outcome shows a significant improvement in the literacy of the students particularly in consideration of the sustainability views in the business solutions. This obviously confirms the thesis that in cases when students are introduced to the structured SDG frameworks in academic

materials, problem solving strategies of students are changed to become more responsible and innovative. Altogether, during the pilot implementation, the main success predictors have been identified the motivation, engagement in the course, and the understanding of the project. The SDG course mapping histogram (Figure 1), the radar chart of the perception improvements (Figure 2), the behavioral trend comparison (Figure 3) and a number of other diagrams all portray the positive role of methodology implementation. The two tables of data (numbers) show the results of comparison of the outcomes on an institutional level and on a level of an individual student that confirm the practical value of the developed framework. The findings support the hypothesis that not only does the situation of SDGs integration into the management curriculum modernize business education, but also it synchronizes business education with the plans of the global community that aims at the production of socially responsible and sustainable-friendly professionals.

V. CONCLUSION

The research depicts the sense of urgency to completely redesign the management education to respond to global imperatives of sustainability. Attempting to integrate the SDGs into business curricula cannot be considered a mere pedagogical novelty, but rather a science-based business ethics and strategic need to deal with the complex environmental and social crises in the world. Repackaging, redesigning, and rewriting learning material, pedagogy, and even institutional culture are important aspects of a successful change. Business schools should do more than pay lip service and incorporate sustainability in the fabric of teaching and learning. This is through the implementation of faculty empowerment, involvement of students in real world solving of problems, and the creation of partnerships with industry and community stakeholders. The given model provides an effective pathway to any organization that wants to spearhead this change. With the adoption of SDGs, the management education has the possibility to become a critical contributor to the development of globally responsible leaders who will be able to make a difference.

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