

# Sustainable Development Goals in Higher Education: A Study of Students' Awareness, Engagement, and Potential of AI Tools in Ludhiana

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**Abstract** - This study investigates the awareness and engagement of higher education students in Ludhiana with the United Nations' Sustainable Development Goals (SDGs). It also explores the potential of Artificial Intelligence (AI) tools in promoting SDG awareness and implementation among students. A survey based approach was used to gather data from students in various higher education institutions of the city. The findings reveal varying levels of awareness and engagement with SDGs among students, with some demonstrating a strong commitment to achieving these goals. The research further emphasizes the power of AI technology in raising awareness, education, and implementation of SDGs. The findings hold significance for universities, policymakers, and stakeholders that want to integrate SDGs and AI into curricula and operations.

**Keywords:** Sustainable Development Goals (SDGs), Higher Education, Artificial Intelligence (AI), Students

## I. INTRODUCTION

The concept of sustainable development has evolved over time, influenced by various milestones and key publications. The idea of conserving natural resources dates back to the 18th century, with thinkers like Hans Carl von Carlowitz advocating for sustainable forestry practices. However, the modern concept of sustainable development gained momentum in the 20th century through several significant events and publications.

### 20th Century Developments:

**Rachel Carson's "Silent Spring" (1962):** This influential book highlighted the environmental impacts of pesticides and sparked widespread concern about environmental degradation (Carson, 1962).

**United Nations Conference on the Human Environment (Stockholm, 1972):** This conference marked a significant shift towards recognizing the importance of environmental protection in the context of development (United Nations, 1972).

**The Club of Rome's "The Limits to Growth" (1972):** This report warned about the consequences of unchecked economic growth and resource depletion (Meadows et al., 1972).

**Brundt land Commission:** The Brundt land Commission's report "Our Common Future" (1987) defined sustainable development as "meeting the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987).

**Global Adoption:** The concept gained international recognition at the United Nations Conference on Environment and Development (Rio Earth Summit) held in 1992 where Agenda 21 was adopted. This was a significant step towards sustainable development.

### Sustainable Development Goals - 2015

The Sustainable Development Goals (SDGs) were established by the United Nations in 2015. The 17 SDGs were part of the 2030 Agenda for Sustainable Development, which was embraced by world leaders at a historic UN Summit in September 2015. These goals officially came in operation on January 1, 2016. The SDGs elaborate the success of the Millennium Development Goals (MDGs), Initiated in 2000, the provisions remained active until their termination in 2015. The new goals are distinctive in their universal applicability, urging both developed and developing nations to take collective action in fostering prosperity while ensuring environmental sustainability.

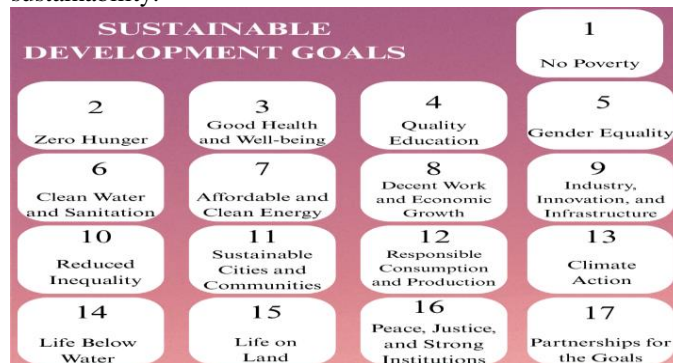


Figure 1- 17 Sustainable Development Goals

Source: Authors' own compilation

### 1.1 Role of Education in Promoting SDG Awareness and Achievement

Education is not only the focus of Sustainable Development Goal 4 (SDG 4) but also a foundational pillar for the successful realization of all other Sustainable Development Goals (SDGs). As highlighted by UNESCO (2020), education empowers individuals with the knowledge, skills, and values needed to be active global citizens, make informed decisions, and contribute meaningfully to the creation of a more inclusive, equitable, and sustainable world. Green Education, in particular plays a transformative role in breaking intergenerational poverty, enhancing health outcomes, and environmental conservation. The United Nations' 2030 Agenda is based on the role of Education for Sustainable Development (ESD) in ensuring learners to acquire knowledge and skills required to promote sustainable development. Supporting this perspective, the guidebook *Getting Started with the SDGs in Universities—developed by the Sustainable Development Solutions Network-Australia/Pacific—emphasizes that education serves as an enabler for all SDGs. This resource has been extensively cited by higher education institutions globally, underlining the integral role of universities in advancing sustainable development through education.*

### 1.2 Potential of Artificial Intelligence (AI) in Enhancing SDGs Education

The potential of AI in data analysis, predictive modeling, and automation presents innovative solutions across various industries. AI in education enhances learning experiences and AI-powered tools support teachers and students in various educational settings. As per a 2024 survey –

Country/Region	% of respondents who feel positive about the impact of AI on education.
India	93%
Mexico	85%
Australia and New Zealand	78%
UK and Ireland	65%
US	69%

Table: 1 How do students and Teachers feels about AI in the Classroom

**Source:** Survey commissioned by the education company Turnitin and conducted by the research agency Vanson Bourne in August 2024. It included 3,500 participants, comprising 500 academic administrators, 500 educators, and 2,500 students. The online survey collected responses from Australia (350), India (700), Mexico (700), New Zealand (350), and the UK/Ireland (700).

Artificial Intelligence (AI) can play a vital role in enhancing awareness and interaction with the sustainable development goals (SDGs) by improving customized learning, real-time interaction with Chatboats, and immersive engagement using gamification and stimulations. AI platforms make information on SDGs customized to student's learning needs, simplifying

complex details using visualization and analysis. AI applications also prepare summaries, articles, and study material in several languages, rendering SDGs details accessible. AI facilitates global connectivity by connecting students around the world and improving problem- solving and critical thinking using interactive platforms .This enable active involvement of students in global sustainability and contribution towards achieving sustainable development goals. AI can be a game changer for sustainable and inclusive development.

## II. LITERATURE REVIEW

1. Sajjan Choudhuri (2019) "A research on sustainable development in India", in *International Journal of Recent Technology and Engineering* 8 (2S3), 1210-1215. This research is concluded by identifying the SDGs of gender equality, reduction in inequality, peace and justice, and responsible consumption and production as the most promising niches for future research in the area of sustainable development initiatives in India.
2. Ratri Parida, Rajesh Katiyar, Kirti Rajhans (2023) "Identification and analysis of critical barriers for achieving sustainable development in India", in *Journal of Modelling in Management* 18 (3), 727-755. Achieving sustainable development in terms of people, prosperity and partnership is the main aspect in any country's plan for development. This sustainable development has to be achieved in three crucial pillars, that is, economic, social and environmental factors in an integrated, balanced and methodical manner.
3. Hafsa Fajar Jati, Susilo Nur Aji Cokro Darsono, Dedy Tri Hermawan, Wahdi April Salasi Yudhi and Ferry Fadzlul Rahman (2019) "Awareness and knowledge assessment of sustainable development goals among university students". The objective of this research is to evaluate the level of awareness and understanding of the Sustainable Development Goals (SDGs) among university students at Universitas Muhammadiyah Yogyakarta, Indonesia.
4. Dourish & Bellotti (1992), Awareness is "an understanding of the activities of others, which provides a context for your own activity". In this context, awareness is defined based on the level of understanding.
5. Atasi Mohanty, Deepshikha Dash (2018) "Education for sustainable development: A conceptual model of sustainable education for India" in *International journal of development and sustainability* 7 (9), 2242-2255. This paper primarily focuses on UNESCO's Sustainable Development Goals (SDGs), particularly SDGs 4 — 'Quality Education and Lifelong Learning Opportunities for All' — along with its empirical and theoretical background.
6. Arba'at Hassana, Tajul Ariffin Noordina & Suriati Sulaiman (2010) "The status on the level of environmental awareness in the concept of sustainable development amongst secondary school students". This paper aims to assess the level of environmental awareness within the concept of sustainable development among secondary

school students. The research also identifies three classifications of concepts related to environmental awareness.

7. Xinqun Yuan, Le Yu, Hao Wu (2021) "Awareness of sustainable development goals among students from a Chinese senior high school". Education is an essential component of the Sustainable Development Goals (SDGs). Using a questionnaire survey, this study measured self-reported knowledge, sources of information, learning contexts, priorities, and the impact of the SDGs on personal life and career planning.
8. Meena Laiphrakpam, Sayam Aroonsrimorakot, Aribam Rama Shanker (2019) "Environmental education and awareness among students in India, Japan and Thailand for sustainable development". The article aims to establish the background and importance of environmental education for sustainability. It also aims to review the various environmental education practices and strategies currently adopted in the education systems of different countries.
9. Miguel Leiva-Brondo, Natalia Lajara-Camilleri, Anna Vidal-Meló, Alejandro Atarés, Cristina Lull (2022) "Spanish university students' awareness and perception of sustainable development goals and sustainability literacy". The implementation of Agenda 2030 and the Sustainable Development Goals (SDGs) by the United Nations in 2015 aims to create a more sustainable world across all countries and for all stakeholders. Higher Education Institutions (HEIs) play a crucial role in enhancing students' knowledge of sustainability.
10. Maurice I Wee, Fatin Nabilla Ariffin, Theam Foo Ng, Ahmad Firdaus Ahmad Shabudin (2017) "Awareness and attitudes towards sustainable development amongst higher education students in Penang, Malaysia". This study revealed that respondents' awareness of the concept and issues of sustainable development was well developed; however, it varied in terms of semantics and interpretations of what sustainable development encompasses.
11. Beatrix Alguérn (2021) "How to bring about change—a literature review about education and learning activities for sustainable development". The aim of this literature review was to increase knowledge on education and learning activities (ELAs), along with the learning outcomes they address, in the context of higher education for sustainable development (SD), using UNESCO's eight core competencies for SD as a foundational framework.
12. Selvam Veeran, Ashok Duraiswamy, Pratheepkanth Puwanenthiren, Rajalakshmi Venkatesan (2024) "Assessment of students' awareness, knowledge, and accessibility of Sustainable Development Goals (SDGs)". The SDGs focus on global efforts to end poverty and discrimination and ensure the peace and well-being of all. The agenda is based on certain themes such as people, plants, prosperity, peace and partnership.
13. Pin Lean Lau, Monomita Nandy & Sushmita Chakraborty (2023) "Accelerating UN Sustainable Development Goals with AI-Driven Technologies: A Systematic Literature Review of Women's Healthcare". Examination of the

contributions of artificial intelligence (AI) in healthcare adequately represent the realm of women's healthcare. This would be relevant for achieving and accelerating the gender equality and health sustainability goals (SDGs) defined by the United Nations.

14. Massimo Regona, Tan Yigitcanlar, Carol Hon & Melissa Teo (2024) "Artificial intelligence and sustainable development goals: Systematic literature review of the construction industry". A comprehensive investigation is critical to explore and understand the multifaceted applications of AI in fostering sustainability across all phases of a construction project. This paper aims to examine how AI can be effectively integrated across the key project phases.
15. Hatoun S. AlSagri & Shahab Saquib Sohail (2024) "Evaluating the role of Artificial Intelligence in sustainable development goals with an emphasis on "quality education". By reducing barriers to educational equity and supporting lifelong learning, AI contributes not only to enhancing educational outcomes but also to the broader pillars of sustainability—social, economic, and environmental

### III. RESEARCH GAP

Despite the growing body of research on awareness and accessibility of Sustainable Development Goals (SDGs) among students, a significant gap exists in the literature. A comprehensive review of fifteen studies revealed that no research has been conducted on college student's awareness and engagement about SDGs in Ludhiana and potential role of AI in promoting the same. This study aims to address this gap.

#### 3.1 Objectives of Research:

The objective of research is to examine:

1. Knowledge of SDGs and primary sources of this information among college students in Ludhiana.
2. Use of AI tools in assessing information about SDGs as compared to traditional methods.
3. Perceptions about effectiveness of AI tools in accessing SDGs
4. Frequency of student participation in sustainable practices / daily life activities.
5. and suggest actionable recommendations based on its findings to improve student community's awareness and participation regarding SDGs

### IV. METHODOLOGY

This study employed a primary survey approach to investigate the awareness and accessibility of Sustainable Development Goals (SDGs) among students of various colleges in Ludhiana. A Google Form-based questionnaire was circulated via email and online platforms to various colleges. The google form was designed to gather information on students' awareness and accessibility of SDGs in part one along with demographic information of the respondents. In part two, questions related to usage of AI in comparison with traditional methods for accessing information on SDGs were asked. Part three of the questionnaire focussed on gathering information about student perceptions about effectiveness of AI in accessing SDGs. Part

four of the questionnaire dealt with frequency of student involvement in suitable activities / practices. The study utilized a structured questionnaire to collect primary data, enabling efficient data collection and analysis. The study collected responses from 800 participants, which provided it with a substantial sample size to study awareness, attitudes, and practices of student community towards Sustainable Development Goals (SDGs) and how they utilized Artificial Intelligence (AI) to achieve sustainability.

## V. DATA ANALYSIS AND INTERPETATION

		Percent	Frequency
Gender	Female	60.6	483
	Male	39.4	317
	Total	100	800
Age	18 - 21	65	520
	21 - 24	35	280
	Total	100	800

5.1(a) Table: 2 Demographic Statistics of respondents

**Source:** Primary Data (Survey Method)

**The demographic statistics reveal:**

- Gender Distribution:** Females dominate the respondent pool (60.6%), while males comprise 39.4%. This trend is consistent with observations in many educational institutes where female students outnumber male students, with this dominance often being even more pronounced at the postgraduate level.
- Age Distribution:** The majority of respondents (65%) fall within the 18-21 age range, corresponding to undergraduate studies, while 35% are in the 21-24 age range, likely representing postgraduate students. This age distribution aligns with the expected demographics of students at these educational levels.

(1) Knowledge about SDGs		Percent	Frequency
(1a) SDGs Awareness	Yes	51.7	414
	No	48.25	386
(1b) Familiarity with the all 17 SDGs	Not at all	17.39	72
	Slightly Familiar	68.11	282
	Extremely Familiar	14.49	60
(2) Primary source of Information about SDGs	School/College Curriculum	56	232
	Social media	55.07	228
	News websites	29.46	122
	Workshops/Conferences/Seminars	24.63	102

	AI Tools	19.8	82
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5.1(b) Table: 3 Awareness about SDGs among Respondents

**Source:** Primary Data (Survey Method)

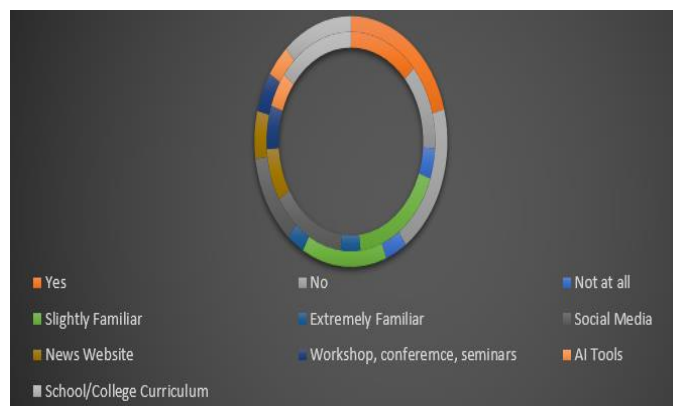
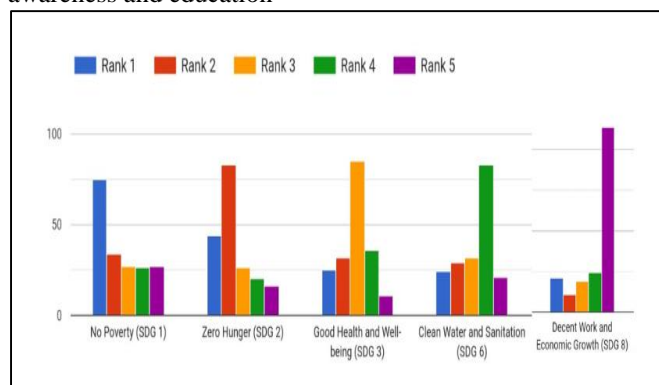


Figure No.-2 Preference for Primary Sources of Information about SDGs ( need changes )

**Source:** Primary Data (Survey Method)

The above data highlights a concerning lack of awareness about Sustainable Development Goals (SDGs) among students, with 51.7% of respondents indicating they have not heard about SDGs. Among those aware, 68.11% are only slightly familiar, and 17.39% are not familiar at all. This data was gathered based on two key parameters: knowledge about SDGs and primary sources of information about SDGs. Knowledge about SDGs was assessed by determining whether respondents had heard about SDGs and their level of familiarity with all 17 SDGs. The primary sources of information about SDGs were identified as school/college curriculum (56%) and social media (55.07%). The limited reliance on AI tools (19.8%) and workshops/conferences/seminars (24.63%) suggests opportunities for exploring these channels to enhance SDGs awareness and education.



5.1 (c) Figure No.-3: Importance wise Ranking of 5 most relevant SDGs for UDC's by Respondents

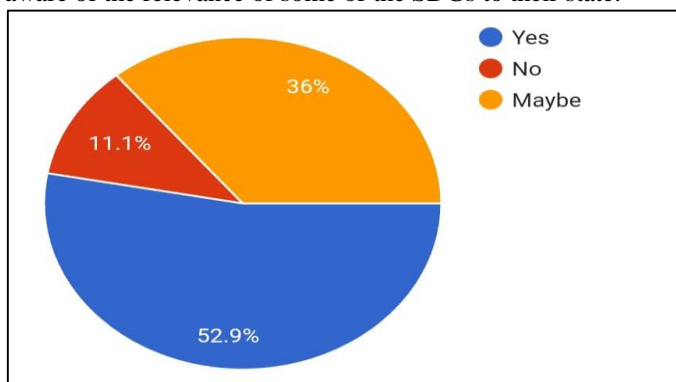
**Source:** Primary Data (Survey Method)

The survey asked the respondents to rank the five most important Sustainable Development Goals (SDGs) according to the United Nations Development Programme (UNDP) based on

their own personal preferences. It is observed from the findings that the opinion of the youth, in general, is aligned with the UNDP's ranking of the top five most important SDGs. The determined ranks are -

1. No Poverty (SDG 1): As the most relevant SDG by the respondents, as per UNDP's ranking.
2. Zero Hunger (SDG 2): Ranking second according to the respondents, in conformity with the UNDP ranking.
3. Good Health and Well-being (SDG 3): Third-Ranked by the respondents, in line with UNDP's ranking.
4. Clean Water and Sanitation (SDG 6): Even if the respondents considered this goal the fourth most urgent, the prescribed ranking of UNDP is different; nevertheless, the goal continues to hold value.
5. Decent Work and Economic Growth (SDG 8): Placed fifth by the respondents, in line with UNDP's own fifth ranking of it's significance.

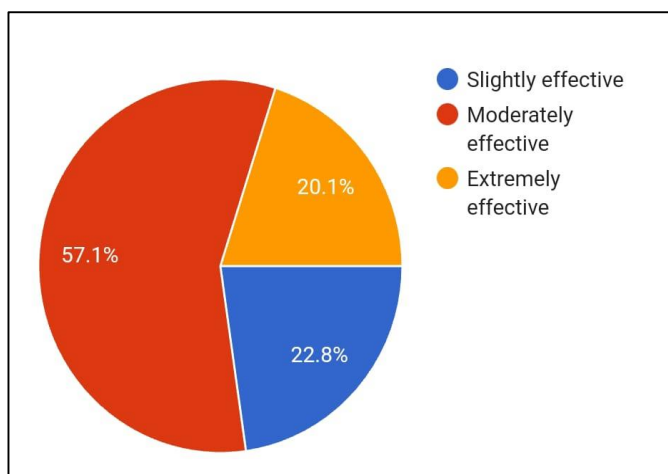
These results indicated that young minds in Ludhiana are well aware of the relevance of some of the SDGs to their state.



5.2 Figure No.-4: Preference of AI over Traditional methods for accessing knowledge regarding SDGs

**Source:** Primary Data (Survey Method)

The pie chart illustrates the preference of respondents for using AI over traditional methods for accessing knowledge about Sustainable Development Goals (SDGs). A significant majority, 52.9%, prefer AI, while 11.1% do not, and 36% are



undecided. This suggests a strong inclination towards leveraging AI for SDG-related information. The chart highlights a notable openness to innovative technologies in the pursuit of sustainable development knowledge.

Figure No.5: Perception about effectiveness of AI Tools for awareness and accessibility of SDGs

**Source:** Primary Data (Survey Method)

The pie chart illustrates the perceptions about effectiveness of AI tools in accessing information about Sustainable Development Goals (SDGs) among student community in Ludhiana. A significant majority, 57.1%, find these tools moderately effective, while 22.8% consider them slightly effective. Notably, 20.1% of respondents deem AI tools extremely effective in this context. Overall, the chart suggests that AI tools are generally perceived as having some level of effectiveness.

		Percent	Frequency
Role of Educational Institutions in promoting sustainability	Yes, Actively	86.8	346
	Not At All	16.4	68
Ways of Promotion of Sustainability and SDGs in HEIs	Incorporating SDGs into Curriculum	28.9	100
	Organising Awareness Campaigns	21.96	76
	Providing Sustainability Workshop	16.9	72
	Encourage Students led Initiative	23.8	98

5.4 (a)Table:4 Role of HEIs in Promoting SDGs  
5.5

**Source:** Primary Data (Survey Method)

The data reflects that educational institutions play a significant role in promoting sustainability, with 86.8% of respondents acknowledging active efforts by their institutions. Only a small percentage (16.4%) felt that no such efforts were made. When it comes to methods of promoting sustainability and SDGs (Sustainable Development Goals) in higher education institutions (HEIs) in Ludhiana, organizing awareness campaigns was the most common approach (21.96%), followed by incorporating SDGs into the curriculum (28.9%) and encouraging student-led initiatives (23.8%). Additionally, 16.9% reported the provision of sustainability workshops. This indicates that while institutions are generally proactive, there is still room for strengthening and diversifying strategies to promote sustainability among students.



		Percent	Frequency
	<b>Very Important</b>	<b>82.5</b>	<b>324</b>
<b>Importance of sustainability</b>	<b>Somewhat Important</b>	<b>16.4</b>	<b>74</b>
	<b>Not Very Important</b>	<b>1.1</b>	<b>16</b>
<b>Participation in SDG related activities by students</b>	<b>Yes</b>	<b>87.43</b>	<b>362</b>
	<b>No</b>	<b>12.56</b>	<b>52</b>
	<b>Tree Plantation Drives</b>	<b>58.1</b>	<b>180</b>
	<b>Clean-up Campaigns</b>	<b>54.1</b>	<b>168</b>
<b>Participation in different programs of sustainability</b>	<b>Awareness Workshops</b>	<b>38.5</b>	<b>122</b>
	<b>Sustainable Product Projects</b>	<b>20.9</b>	<b>70</b>
	<b>Volunteering for Environmental Organisation</b>	<b>21.6</b>	<b>68</b>
	<b>Social Justice and Equality</b>	<b>28</b>	<b>116</b>
<b>Student interest in SDG related topics</b>	<b>Economic Growth and Innovation</b>	<b>25.12</b>	<b>104</b>
	<b>Public Health and Well being</b>	<b>16.90</b>	<b>70</b>
	<b>Environmental Sustainability</b>	<b>29.95</b>	<b>124</b>

5.4(b) Table:5 The crucial role of sustainability in daily living  
**Source:** Primary Data (Survey)

The data highlights a strong awareness and engagement with sustainability among students. A significant majority (82.5%) consider sustainability to be very important in their daily lives, while 16.4% view it as somewhat important. Among the activities, tree plantation drives (58.1%) and clean-up campaigns (54.1%) were the most popular, followed by awareness workshops (38.5%), sustainable product projects (20.9%), and volunteering for environmental organizations (21.6%). In terms of interest in SDG (Sustainable Development Goals) topics, environmental sustainability attracted the highest interest (30.2%), followed by social justice and equality (28%), economic growth and innovation (25.12%), and public health and well-being (16.90%). Additionally, a remarkable 87.43% of students reported participating in SDG-related activities, showcasing a strong commitment toward sustainable development goals.

## VI. KEY FINDINGS AND CONCLUSIONS

(1) The survey revealed notable differences in awareness of Sustainable Development Goals (SDGs) among male and female college students. Out of 800 total respondents, 388 (48.5%) reported being aware of SDGs, while 412 (51.5%) reported being unaware. A breakdown by gender shows that among those aware of SDGs, 139 (35.8%) were male and 249 (64.2%) were female. In contrast, among those unaware, 178 (43.2%) were male and 234 (56.8%) were female. These findings suggest that female respondents were more likely to be aware of SDGs than their male counterparts, with a higher proportion of females (64.2%) reporting awareness compared to males (35.8%). The male-to-female ratio among those aware of SDGs was approximately 1:1.79, highlighting a significant gender disparity in SDG awareness.

The survey reveals that respondents generally agree on the importance of No Poverty (SDG 1) as the most relevant Sustainable Development Goal, aligning with the United Nations Development Programme's (UNDP) ranking. The respondents' rankings are largely in sync with the UNDP's ranking of the top five relevant SDGs, indicating a shared understanding of the most critical development challenges. However, there is variation in rankings for other SDG of , Clean Water and Sanitation, highlighting respondents understanding of its importance in the local context of Punjab, particularly in Ludhiana, where access to clean water and sanitation is a significant concern. This deviation underscores the respondents' awareness of the specific needs and challenges of their region.

(2)The majority of respondents (52.9%) prefer AI over traditional methods, indicating a significant inclination towards technological innovation. A minority (11.1%) of respondents expressed a preference against AI, highlighting potential concerns or reservations regarding its adoption.A substantial proportion (36%) of respondents remained undecided, suggesting a need for further education or clarification regarding the benefits and implications of AI.

(3) Regarding effectiveness of AI tools in creating awareness and accessibility of SDGs 20.1% of respondents believe that AI tools are extremely effective in accessing SDG information. This highlights the potential of AI technology in enhancing information accessibility and supporting SDG-related initiatives.However 57.1%, perceive AI tools as moderately effective in accessing information about SDGs. This suggests that AI tools still have room for improvement in providing comprehensive and accurate information. 22.8%, of respondents consider AI tools to be only slightly effective. This indicates that there are limitations or challenges associated with using AI tools for SDG-related information access.

(4)The study shows a strong and clear emphasis on sustainability among respondents, with 82.5% considering it "very important" in their daily lives. A majority proportion (68.3%) of studenta have participated in sustainability-related

activities, such as tree planting campaigns (58.1%), cleaning campaigns (54.1%), and awareness workshops (38.5%). Students are interested in a range of topics related to the Sustainable Development Goals (SDG) such as social justice and equality, (28%), environmental sustainability (30.2%), and 25.4% on economic growth and innovation. Significantly, a majority (91%) of students have participated in SDG-related activities, showing a high degree of interest in sustainability among the student students. Overall, the study shows a positive trend towards sustainability, as a majority of respondents not only appreciate but also actively participate in sustainability-related activities.

## VII. CONCLUSION

This study offers useful information regarding the awareness and availability of Sustainable Development Goals (SDGs) among college students in Ludhiana. The results reveal a worrying gap in awareness, with a mere 48.5% of the respondents demonstrating awareness of SDGs. The research emphasizes the necessity for increased awareness and education programs to fill the knowledge gap and encourage SDGs adoption among college students. The result of this study are anticipated to be useful for policymakers, educators, and stakeholders alike in designing focused strategies aimed at enhancing SDG knowledge and access among young people, in turn supporting the achievement of the 2030 Agenda for Sustainable Development. This study has far-reaching implications for teachers, policy makers, and stakeholders, highlighting the imperative necessity of collective action to instill SDGs in education curricula and inculcate sustainable practices among college students, and thus create a more knowledgeable and participating community.

## VIII. SUGGESTIONS

1. Develop SDG-Focused Curricula: Educational institutions should develop curricula that incorporate SDGs, promoting interdisciplinary learning and sustainability education.
2. Workshops and training programs: Organize workshops, seminars, and training programs to educate students about SDGs and their role in achieving them.
3. Utilize AI-powered resources: Leverage AI-powered tools, platforms, and apps to provide students with interactive and engaging learning experiences related to SDGs.
4. Institutional involvement: Encourage institutions to promote SDG awareness and provide resources, support, and infrastructure for students to learn about SDGs.
5. Community engagement: Organize community-based projects and activities that involve students in SDG-related initiatives, promoting practical learning and application.
6. Create SDG-themed educational material: Create engaging, interactive, and informative material (e.g., videos, podcasts, infographics) that teaches students about SDGs.
7. Trainer training: Train teachers with the tools and material necessary to effectively implement SDGs into their practice.
8. Promote interdisciplinary approaches: Encourage interdisciplinary approaches to Studying SDGs, involve several subjects and perspectives.
9. Encourage Student-Led Initiatives: Institutions should extend resources and facilitation for student-led initiatives to empower students to own SDG-related projects and activities.
10. AI-Powered Learning Platforms: Set up AI-powered learning platforms that are able to provide personalized learning experiences, adaptive testing, and instant feedback.
11. Collaborative Projects: Organize interdisciplinary collaborative projects that make use of AI in solving SDG-related issues to enhance problem solving and hands-on learning.
12. AI Literacy Programs: Develop AI literacy programs for students to study AI fundamentals, applications, and ethics, so that they can be ready for an AI-centric future.
13. Industry-Academia Collaborations: Encourage collaborations among academic institutions and industry stakeholders to create and deploy AI-driven solutions to address SDG-related challenges, giving students hands-on experience and access to actual implementation areas.

These implications and policy recommendations can assist institutions of education to enhance their position in promoting SDGs and encouraging a culture of sustainability.

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