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Future-Ready Education: The role of English language and technology in meeting SDGs

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Abstract

As the world becomes increasingly interconnected, the role of English as a global lingua franca is more critical than ever. This keynote speech will explore the transformative potential of English language technology in advancing global education and contributing to the United Nations' 17 Sustainable Development Goals (SDGs). In a digital age, integrating English education with advanced technologies presents a unique opportunity to drive sustainable development. This study will highlight successful case studies from diverse regions, showcasing implementations of English language technology that have led to improved educational outcomes. These examples emphasize sustainable and inclusive approaches to leveraging technology for educational equity. By utilizing digital tools, such as AI-driven platforms, educational institutions can provide personalized and accessible learning experiences, supporting broader societal goals. The speech will also connect enhanced English skills to specific SDGs, such as Quality Education (Goal 4), Reduced Inequalities (Goal 10), and Partnerships for the Goals (Goal 17). It will demonstrate how English proficiency can empower individuals, bridge educational gaps, and promote global cooperation for sustainable development. Additionally, the keynote will discuss the challenges of deploying technology in education, such as the digital divide, data privacy, and the need for context-specific adaptations, offering solutions to maximize benefits while addressing potential drawbacks.

Keywords: Sustainable Development Goals, English Technology, Global Education, Digital Literacy, Equity

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1. INTRODUCTION

Imagine a world where divisions are replaced by unity, where every individual is empowered to reach their full potential. Picture a world where every individual has the opportunity to thrive, where education empowers minds, clean water sustains life, and gender equality is woven into the fabric of society. The Sustainable Development Goals illuminate our shared responsibility to transform this vision into reality, urging us to take bold and immediate action.

The Sustainable Development Goals (SDGs) (United, 2024), championed by the UN General Assembly's Open Working Group, represent a bold and comprehensive roadmap to tackle the world's most pressing challenges. Comprising 17 goals and 169 targets, these ambitions aim to foster a more sustainable future for all. Accompanying the SDGs is a preliminary set of 330 indicators, introduced in March 2015, designed to track progress along this transformative journey. While some of these goals build upon the foundations laid by the Millennium Development Goals, others embrace innovative ideas that address contemporary issues. (Hák, 2016).

In the rapidly advancing world of technology, English has solidified its position as the universal language that connects cultures across continents, linking the East with the West and the North with the South. It serves as the primary medium in domains such as, science, engineering, and technology (Parupalli Srinivas Rao, 2019). Language plays a crucial role in shaping international communication efforts. Students enhance their proficiency and communication by using various aspects of English language skills, including listening, speaking, reading, and writing. (Pazilah, 2019). One of the biggest advantages of using technology in language learning is its ability to make lessons more interactive and engaging (Nguyen, 2022).

English proficiency is now essential in an interconnected world, not only as a tool for effective communication but also as a key to accessing global knowledge and opportunities (Gomathi, Saravanan, & Kumar, 2024). As English continues to evolve and shape how we communicate globally, it plays a key role in making language learning more accessible for people everywhere (Liu, & Yan, 2022). The evolution of English education has transitioned through various approaches, reflecting changing pedagogical priorities and technological advancements. In the early 20th century, progressive eclecticism emphasized diverse methods, followed by a mid-century focus on rote learning. The 1960s to 1980s prioritized interactivity, authenticity, and compelling contexts. The 1990s shifted to developing new competencies, with the rise of Computer-Assisted Language Learning (CALL) in the 2000s and Web 2.0 tools enabling collaboration. The late 2000s introduced Mobile-Assisted Language Learning (MALL) for flexible learning, while the 2020s and beyond explore Robot-Assisted Language Learning (RALL), blending AI with education for personalized learning experiences. (Otto, 2017).

Technology has had a transformative impact on education, especially in language learning, by improving outcomes and encouraging more creative teaching methods (Sharma, 2009; Singhal, 1997). Also, technology is pivotal in enhancing learning experiences for students and significantly shapes the teaching strategies employed by educators. The advancement of technology has progressed alongside the growth of the English language, revolutionizing how we connect and communicate. (Altun, 2021). The intersection of technology and language learning has garnered increasing attention from researchers in recent years (Ahmadi, 2018).

In recent years, the integration of technology in education has significantly transformed language learning and teaching. From the early 20th century's use of basic media like texts, photos, and audio to the contemporary digital tools, technological advancements have continually reshaped educational methodologies. (Otto, 2017).

The integration of technology into English language teaching has transformed traditional approaches, offering numerous advantages to both teachers and learners. Authentic language resources, such as videos and news articles, provide students with exposure to real-world language use while enhancing cultural

competence. Interactive tools, like online games and digital whiteboards, foster engagement by accommodating different learning styles and promoting active participation. Additionally, adaptive learning technologies enable educators to personalize instruction, ensuring that individual learner needs are met effectively. Tools for language processing also play a crucial role in supporting speaking fluency, offering real-time feedback for pronunciation and fluency practice. (Magurie, 2024). Automated assessment tools, speech recognition software, and language proficiency tests enable learners to receive instant feedback on their pronunciation, grammar usage, vocabulary comprehension, and overall language proficiency (Chen, R. 2022). By strengthening communication skills in English, learners unlock personal and professional opportunities that drive both growth and success (Fryer, & Carpenter, 2006).

The SDGs are a holistic framework, addressing a wide range of interdependent issues. By teaching English through the lens of sustainable development, we prepare our learners to participate in these global conversations, equipping them with the communication skills necessary to engage with people from diverse backgrounds and work towards common goals. (Barber, 2023).

Each of the Sustainable Development Goals (SDGs) holds significant importance, but by focusing on the fourth goal, Quality Education, we recognize its critical role in shaping a better future. Educating children equips the next generation with the tools to fight poverty, prevent disease, and build more resilient and peaceful societies. The adoption of SDG 4 is not only an acknowledgment of the value of education but also a commitment to achieving more ambitious outcomes in education access, learning achievements, and skills development. To ensure every child can participate meaningfully in society, it is essential that all girls and boys gain access to quality education. (UNICEF, 2024).

Achieving Reduced Inequalities (SDG 10) is essential for creating a fair and inclusive world where everyone, regardless of their background, has equal access to opportunities and resources. This goal focuses on addressing disparities in income, eliminating discrimination, and ensuring social inclusion for marginalized groups such as women, minorities, and the economically disadvantaged. By promoting equality, societies can foster social harmony, drive economic development, and empower individuals to participate fully in community life. Collaboration among governments, organizations, and local communities is critical to breaking down barriers and ensuring no one is left behind. (UNICEF, 2024).

Partnerships for the Goals (SDG 17) underscores the importance of collective action in achieving sustainable development. It highlights the need for governments, businesses, civil society, and international organizations to work together, combining resources, expertise, and innovation. By fostering global cooperation, SDG 17 ensures that countries can align their efforts, share knowledge, and build capacity for impactful solutions. These partnerships are the backbone of achieving the SDGs, ensuring that progress is inclusive, sustainable, and reaches every corner of the world. (UNICEF, 2024).

Duolingo's partnership with UNHCR illustrates the vital role of English in supporting refugee education and expanding opportunities through technology. The initiative aligns with the "15 by 30" pledge, aiming to increase refugee enrollment in higher education from 7% to 15% by 2030. In its first year, 21 out of 25 Scholars enrolled in universities across six countries, demonstrating the program's success in enhancing educational opportunities for refugees through a pioneering public-private partnership. (Duolingo University Access Program, 2024).

The Metropolitan University of Tirana (UMT) leverages English in its Robotech competition to support education, research, and innovation. By conducting workshops, activities, and guidelines in English, UMT ensures participants develop both technical skills and proficiency in a globally recognized language. This approach broadens access to educational resources, prepares students for international forums, and fosters communication in diverse contexts. Aligning with global standards, it connects participants with the global tech community, enhances learning opportunities, and contributes to achieving the UN Sustainable Development

Goals, particularly in quality education and reducing inequalities.

A survey was conducted among 204 students from both public and private universities, providing valuable insights into the role of technology and the United Nations Sustainable Development Goals (SDGs) in modern education. The survey examines students' perceptions of educational equity, inclusivity, and the integration of technology into their learning experiences. It also explores the influence of English language proficiency on academic outcomes, offering a comprehensive analysis of how higher education institutions are addressing the SDGs and preparing students for success in a technology-driven, globally connected world.

This research emphasizes the critical role of education and technology in achieving the United Nations Sustainable Development Goals (SDGs), with a specific focus on the transformative potential of English language technology. Previous studies have shown how technological advancements, including digital tools and platforms, significantly enhance language learning, with broader impacts on global education (Altun, 2021; Otto, 2017). Education plays a key role in addressing global challenges such as poverty, gender inequality, and limited access to quality education (Hák, 2016; UNICEF, 2024). However, there is a gap in understanding how English language technology can bridge educational divides, particularly in marginalized communities, and contribute to the achievement of SDGs. This study aims to fill this gap by exploring how

English language learning technology fosters inclusivity, supports SDG 4 (Quality Education), and helps reduce inequalities (SDG 10). By enhancing access to quality education and promoting language skills, technology can provide marginalized groups with the tools to succeed in an increasingly globalized world. Furthermore, it highlights the importance of global partnerships (SDG 17) in leveraging technology to promote equal educational opportunities for all, thus contributing to the broader SDG agenda.

1.1. Purpose of the study

The purpose of this study is to explore how advancements in English language learning technology can contribute to achieving the United Nations Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education), SDG 10 (Reduced Inequalities), and SDG 17 (Partnerships for the Goals). By examining the transformative role of digital tools in language education, this research aims to highlight the potential of technology to bridge educational gaps, promote inclusivity, and equip learners with the communication skills necessary for global engagement. The study focuses on how integrating English language technology can enhance educational access for marginalized communities, foster equity in learning, and create opportunities for personal and professional growth. It further emphasizes the importance of collaborative efforts between institutions, governments, and private organizations to ensure that technological innovations are utilized effectively to support sustainable development and reduce disparities in education. Through this investigation, the study aims to provide valuable insights into how technology can be leveraged to make education more accessible, equitable, and impactful in the context of global challenges.

2. METHODOLOGY

2.1. Research Model

This study employs a dual-approach methodology to examine the role of the English language and technology in achieving Sustainable Development Goals (SDGs), with a focus on the Robotech competition. The methodology explores how the integration of English as a medium for technological education fosters creativity, skill development, and global competencies among participants.

2.2. First Approach: The Robotech Competition

The primary focus is on the Robotech competition organized by the University of Metropolitan Tirana,

which engages high school students across Albania in robotics and AI technologies. This approach examines how the competition integrates the English language to facilitate technological education and promote the SDGs. The research explores the participant selection process, team dynamics, curriculum design, and project development, highlighting the role of English as a bridge for global collaboration and innovation.

The study also analyzes how Robotech addresses real-world challenges related to sustainable development, such as the blue and green economies and smart cities. By focusing on these aspects, the research demonstrates how the competition not only advances technological skills but also fosters interdisciplinary collaboration, critical thinking, and the ability to tackle global challenges through the use of English as a key tool.

2.2.1. Participant Selection

The Robotech competition targets high school students aged 14 and above from both general and vocational education tracks across Albania. The participant selection process emphasizes the use of English in project proposals, which are submitted by teams under the guidance of mentors. Proposals must address real-world challenges aligned with the SDGs, focusing on topics such as sustainable development, environmental conservation, and urban innovation. (University, 2024)

Teams are evaluated based on their creativity, the relevance of their project to contemporary issues, and their ability to articulate technical solutions effectively in English. The competition promotes inclusivity by encouraging participation from both urban and rural students, ensuring regional diversity and fostering equal opportunities for all. This emphasis on English proficiency equips students with skills needed for international collaboration and future career prospects.

2.2.2. Curriculum and Project Development

Robotech adopts a project-based learning approach, integrating English as a medium for instruction and collaboration. The curriculum blends theoretical concepts with practical applications, enabling students to explore robotics and AI while addressing critical challenges in sustainable development, such as smart cities and environmental conservation. Participants are required to present their projects and communicate their ideas in English, reinforcing the language's role in technological innovation and global discourse. Each project emphasizes innovative and sustainable solutions, encouraging students to experiment, iterate, and refine their ideas. By merging technology with English, Robotech prepares students to navigate a globalized world and contribute effectively to the SDGs. The competition employs English-language resources, such as Arduino manuals and technical guides, to teach students about sensors, actuators, and robotics programming. This dual-purpose approach enhances both technical and language skills, supporting SDG 4 (Quality Education). Students learn technical English terminology (e.g., "sensors," "actuators," "prototyping"), which strengthens their ability to engage with international resources and communicate their ideas globally. (University, M. T., 2024) This integration of English into the curriculum fosters cross-disciplinary learning, enabling students to address complex challenges effectively.

Mentors are trained to use technical English terminology to guide students effectively throughout the program. This ensures consistent use of English during team discussions, project development, and presentations, fostering an environment of linguistic and technical growth.

2.2.3. Developmental Stages of Robotech

In its first year, the Robotech program introduced foundational training in robotics and programming to high school students from various cities in Albania. (University, 2024) . Participants learned to build basic robots and

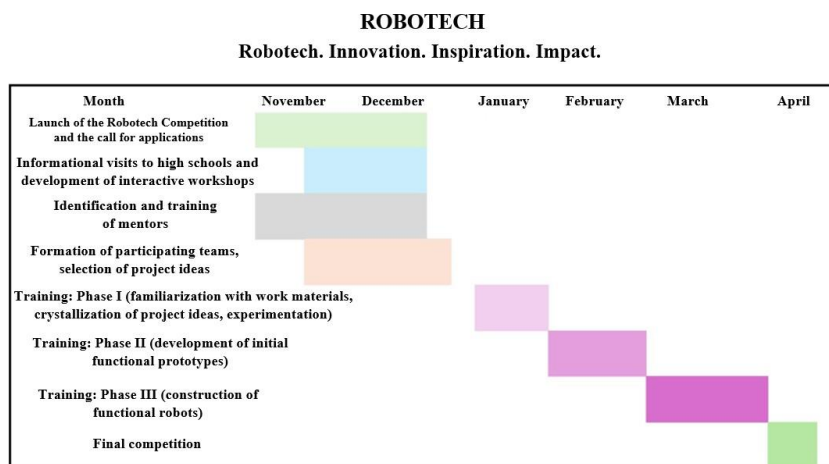
were exposed to English-based resources and terminology. The program supported SDG 4 (Quality Education) by equipping students with technical and language skills, fostering an understanding of technology through English.

The second year expanded into a competitive format, involving nine high schools in Tirana and engaging 60 students under the mentorship of trained educators. Teams developed advanced robotic solutions to real-world challenges, such as waste collection, air quality monitoring, and smart city traffic management. (University, 2024). The program emphasized project presentations in English, enhancing global communication skills, and promoting SDG 10 (Reduced Inequalities) by including students from diverse educational backgrounds.

Robotech’s integration of English and technology has proven instrumental in aligning educational efforts with SDG 17 (Partnerships for the Goals) by enabling international collaboration and innovation, preparing students to tackle global sustainability challenges.

In the current year, the Robotech competition is structured to span the academic year 2024 - 2025, offering students a practical and comprehensive learning experience in AI, robotics, and sustainable technological development, addressing key aspects of the Sustainable Development Goals (SDGs). English language plays a central role throughout this process, facilitating both technical learning and global communication. Figure 1 illustrates the main stages of the competition, followed by a more detailed description.

Figure 1. The Structure of the Robotech Competition



a) Start and Application Phase: The Robotech competition has officially started on November 1. The website and promotional materials, including competition rules, are now available to all interested high schools. Since this date, schools have been able to submit applications to participate. Teams must consist of 4-7 students, led by a supervising teacher. University mentors from the University of Metropolitan Tirana (UMT) are assisting in guiding the teams. Schools are encouraged to propose project ideas focused on green and blue economies, innovative technological development, smart cities, and other high-interest areas. (University, 2024)

b) Team Formation and Project Proposal: During November-December 2024, schools will form teams with balanced skills. Each team must include different roles, such as team leader, technical lead, and documentation lead. Teams will submit their initial project proposals, detailing their approach to solving a specific challenge using robotics and AI, aligned with the themes of green and blue economies, smart cities, etc. Proposals will be reviewed by the Robotech committee, and the most promising ideas will move forward. (University, 2024)

c) **Development Phase: Prototyping and Mentoring:** From January to March 2025, selected teams will attend training sessions conducted by Robotech experts in robotics, AI, and computer science. They will refine technical skills and develop functional prototypes addressing real-world environmental challenges. Each team will receive ongoing support from mentors and UMT faculty, who will guide them in project development, technical troubleshooting, and team management. Regular progress reports will be submitted. (University, 2024)

d) **Final Phase of the Competition:** In mid-April 2025, teams will present their completed projects at a national event. A panel of judges will evaluate the projects based on innovation, feasibility, environmental impact, technical execution, and teamwork. Prizes will be awarded in categories such as Best Innovation, Most Impactful Environmental Solution, Best Technical Implementation, and Audience Choice Award. (University, 2024)

2.2.4. Expansion of Research Focus on SDGs

Initially, this research concentrated on three core SDGs: Quality Education (Goal 4), Reduced Inequalities (Goal 10), and Partnerships for the Goals (Goal 17). These goals underscore the importance of equitable access to education and the role of global partnerships in achieving sustainable development. English, as a universal medium of communication, is integral to facilitating global partnerships and enabling knowledge exchange across borders, thus playing a crucial role in addressing these SDGs.

As the research progressed, additional SDGs, such as SDG 11: Sustainable Cities and Communities, SDG 14: Life Below Water, and SDG 15: Life on Land, emerged as critical areas where technology and education intersect. The application of technological advancements, including robotics, AI, and sustainable innovations, is essential in tackling environmental sustainability challenges. Additionally, English serves as the primary language for disseminating knowledge, collaborating on research, and accessing global solutions that can address these environmental concerns.

This research examines how technology and education, facilitated by English, empower students to design solutions for urban sustainability, biodiversity conservation, and climate change mitigation. By integrating English into this process, the research emphasizes how language and technology together foster inclusive and innovative solutions, contributing to a more sustainable, equitable future in alignment with the SDGs.

2.3. Second Approach: Student Survey on Sustainable Development Goals

The second approach of the research shifts its attention to the broader educational landscape. The study introduces the development of a survey designed to assess students' perceptions regarding the integration of Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 10 (Reduced Inequalities), with an emphasis on the role of English language proficiency and technology in shaping their educational experiences.

2.3.1. Research Design

This study adopts a quantitative research approach, utilizing a survey methodology to collect data. This survey aims to capture a comprehensive understanding of how students across various institutions perceive the effectiveness of educational practices that incorporate SDGs, how they view the impact of language and digital skills in their academic journey, and how these factors contribute to their preparedness for addressing global challenges.

2.3.2. Participants

The study sample consisted of 204 students enrolled in both public and private universities. Participants represented diverse academic levels, including undergraduate, graduate, and postgraduate students. This broad range of participants ensured a comprehensive understanding of perspectives across various educational stages and disciplines.

2.3.3. Survey Instrument

Data collection was conducted using a structured online questionnaire. The survey was divided into three key sections to align with the study objectives:

2.3.3.1. Section 1: SDG 4 - Quality Education:

This section focused on students' understanding of inclusivity, accessibility, and the quality of education they receive.

2.3.3.2. Section 2: SDG 10 - Reduced Inequalities:

This section examined students' perceptions of equity in education and the extent to which their institutions address disparities in educational opportunities.

2.3.3.3. Section 3: Future-Ready Education, English Language, and Technology:

This section explored students' views on the integration of technology into their education, their self-assessed English language skills, and how these factors help them understand global challenges related to the SDGs.

2.3.4. Data Collection and Analysis

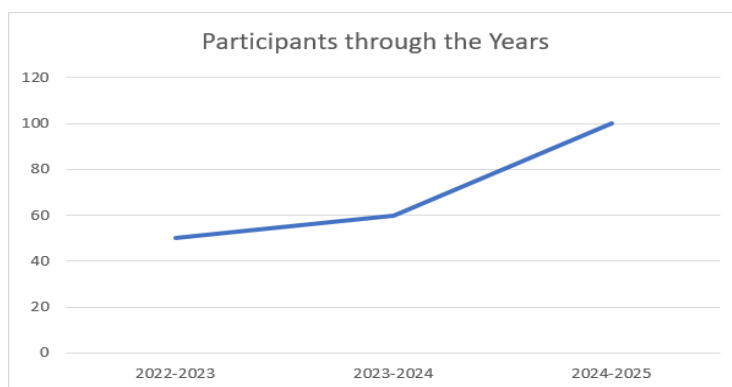
The survey was administered online, enabling participation from a geographically diverse group of students. Data collected from the responses were analyzed quantitatively to identify trends and patterns in perceptions related to the integration of SDGs, English language proficiency, and technological tools in education.

3. RESULTS

3.1. First Approach: Insights from the Robotech Competition

Figure 2.

Evolution of Robotech Participants Over the Years



The findings from the first part of this study provide valuable insights into the growth and development of the

Robotech program. The graph (Figure 2) illustrates a clear upward trend in the number of participants in the Robotech program over the three-year period from 2022-2023 to 2024-2025. The data shows a steady growth in engagement, with the number of participants increasing from around 50 in the initial year to approximately 70 in the second year, and then reaching around 100 in the final year. (University, M. T., 2024)

The integration of technology and English plays a key role in the Robotech program's success and its alignment with the SDGs. This progression suggests that the Robotech program is gaining significant popularity and successfully attracting more high school students to participate each year. The growing number of participants aligns well with the program's stated vision of providing students exposure to robotics and equipping them with valuable technical skills and collaborative abilities.

Furthermore, the information provided about the Robotech program's expansion to additional cities in Albania supports the interpretation that the observed increase in participants is a direct result of the program's expanding reach and impact across the country. This geographic expansion has likely been a key driver behind the steady rise in the number of students engaging with the Robotech initiative over the three-year timeframe depicted in the graph. English as the global language for knowledge sharing enhances the program's capacity to engage with international collaboration.

In summary, the graph clearly demonstrates the Robotech program's growing popularity and its ability to engage a steadily increasing number of high school students, likely due to the expansion of the program to new regions within Albania. This trend aligns with the program's objectives and highlights its successful implementation in fostering technical skills and innovation among the participating students.

3.1.1. Implementation Strategy in Alignment with SDGs

- SDG 4: Quality Education

Impact: Robotech offers hands-on learning in robotics, programming, and STEM, enhancing education quality and preparing students for tech careers. English, as the global language of science, ensures access to international resources and networks, supporting SDG 4 for inclusive education.

Broader Contribution: This prepares students to contribute to the global knowledge economy, driving innovation and sustainable growth.

- SDG 10: Reduced Inequalities

Impact: Expanding Robotech to underserved areas bridges the educational gap, providing equal access to STEM education and opportunities. English ensures students can access global learning materials and connect with the broader tech community.

Broader Contribution: Reducing inequalities fosters inclusivity, helping students from diverse backgrounds participate fully in economic and social life.

- SDG 11: Sustainable Cities and Communities

Impact: Robotech helps students develop smart city solutions, such as energy efficiency and waste management, requiring knowledge of English to access global resources. This supports SDG 11 for sustainable urban development.

Broader Contribution: Students gain skills to create sustainable cities, using technology and English to shape resilient urban infrastructure.

- *SDG 14: Life Below Water and SDG 15: Life on Land*

Impact: Robotech promotes eco-friendly robotics projects focusing on water conservation and land preservation. English aids students in accessing environmental knowledge and sharing solutions.

Broader Contribution: Students develop environmental awareness, using technology and English to protect ecosystems and manage resources sustainably.

- *SDG 17: Partnerships for the Goals*

Impact: Robotech’s partnerships with organizations like COD Albania and the Prime Minister's Office enhance students' learning, with technology and English facilitating collaboration across sectors.

Broader Contribution: These partnerships foster knowledge exchange and prepare students to tackle global challenges, supporting SDG 17 through collective action.

- *Overall Impact on the SDGs*

Through Robotech, students are not only learning technical skills but also understanding how these skills relate to global issues. This helps create responsible, knowledgeable citizens who are prepared to tackle complex challenges like inequality, urbanization, and environmental sustainability, furthering the UN’s vision for a more just, equitable, and sustainable world by 2030.

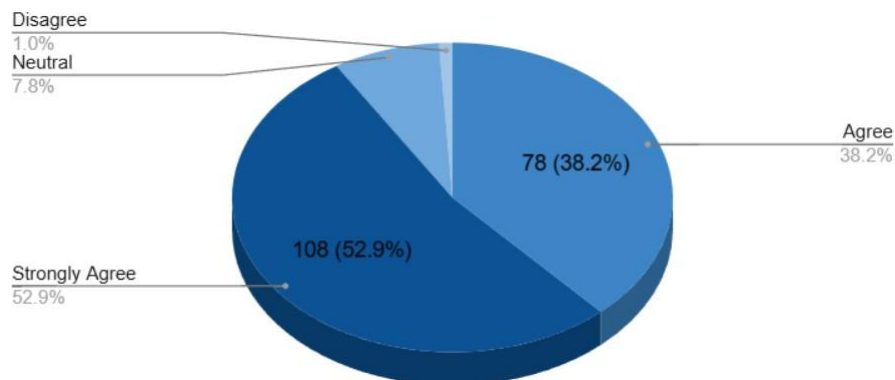
3.2. Second Approach: Student Survey on Sustainable Development Goals

This survey explores students' views on the alignment of their institutions with the United Nations Sustainable Development Goals (SDGs), specifically SDGs 4, 10, 14, and 15. It covers areas such as quality education, inclusivity, equal access to opportunities, and the role of English language and technology in preparing students for global challenges. The responses provide insights into how effectively institutions are addressing these goals and highlight areas for improvement.

Section 1: SDG 4 - Quality Education

Figure 3.

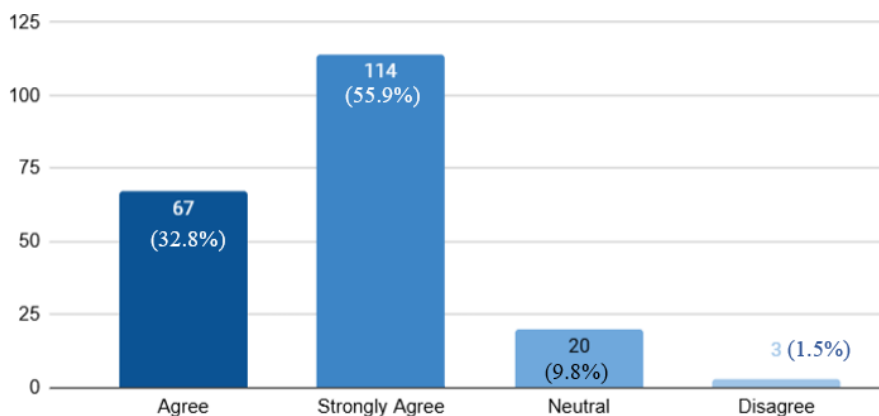
Accessibility of Quality Education



The question "My institution provides quality education that is accessible to everyone, regardless of background" yielded overwhelmingly positive responses (Figure 3). A majority of participants, 52.9% strongly agreed and 38.2% agreed, resulting in 91.1% of respondents endorsing the institution's inclusivity. A small minority (7.8%) remained neutral, while only 1% of the responses indicated disagreement. These results indicate a strong perception of the institution's commitment to ensuring accessibility and inclusiveness in education.

Figure 4.

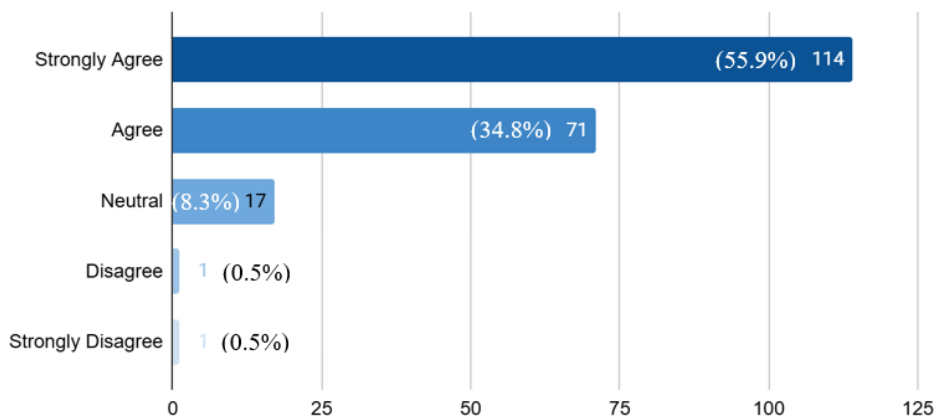
Equal Opportunities for Academic Success



Responses to the statement "All students are given equal opportunities to achieve academic success" were similarly positive (Figure 4). A total of 55.9% strongly agreed, while 32.8% agreed, reflecting that 88.7% of respondents believe the institution fosters equitable academic success. Only 9.8% expressed a neutral opinion, while 1.5% disagreed. These findings emphasize the institution's commitment to equity in educational outcomes, with a small portion of students expressing reservations.

Figure 5.

Access to Learning Materials and Technology



Access to necessary learning resources was assessed through the statement "I have access to the learning materials and technology needed for my studies" (Figure 5). The results reveal that 55.9% strongly agreed and 34.8% agreed, with 90.7% of respondents expressing satisfaction. A small proportion (8.3%) remained neutral, while a very small percentage disagreed, suggesting that access to learning materials and technology is generally not a significant issue within the institution.

Table 1: Support for Extracurricular Learning Opportunities

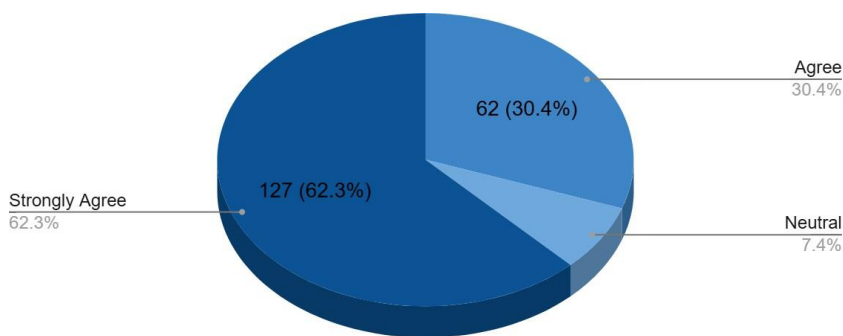
Responses	Number of responses	%
Strongly Agree	110	53.9
Agree	66	32.4
Neutral	24	11.8
Disagree	3	1.5
Strongly Disagree	1	0.5

The next question "My institution supports learning opportunities that extend beyond the classroom" provided insight into the availability of extracurricular learning resources (Table 1). A majority of respondents, 53.9% strongly agreed and 32.4% agreed, resulting in 86.3% of participants expressing a positive view. A smaller percentage (11.8%) remained neutral, while 1.5% disagreed and 0.5% strongly disagreed, indicating the institution's support for extracurricular initiatives despite a small level of disagreement.

Section 2: SDG 10 - Reduced Inequalities

Figure. 6

Equal Treatment Regardless of Economic Background



The statement "All students, regardless of economic background, are treated equally at my institution" received a strong affirmative response (Figure 2.1). A majority of respondents, 62.3%, strongly agreed, while an additional 30.4% agreed, indicating that 92.7% of participants perceive the institution as equitable in its treatment of students from diverse economic backgrounds. Only 7.4% remained neutral, with no negative responses reported. These findings reflect a robust institutional culture of fairness and equality.

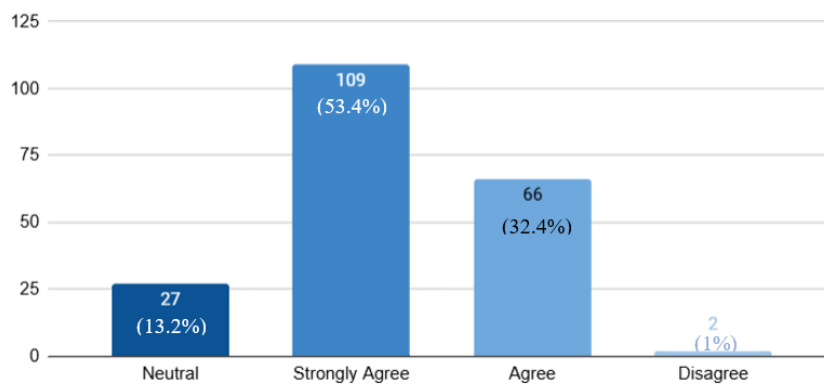
Table 2: Support for Diversity and Inclusivity Through Policies

Responses	Number of responses	%
Strongly Agree	106	52
Agree	80	39.2
Neutral	17	8.3
Disagree	1	0.5
Strongly Disagree	-	-

When asked whether "My institution supports diversity and inclusivity through its policies", the responses also indicated high levels of agreement (Table 2). Specifically, 52% strongly agreed and 39.2% agreed, resulting in a combined 91.2% positive perception of the institution’s commitment to diversity and inclusivity. A small percentage (8.3%) were neutral, and only a negligible 0.5% disagreed. This highlights the institution’s proactive approach to fostering an inclusive environment through policy initiatives.

Figure 7.

Equal Access to Internships, Scholarships, and Career Resources



The question "Students from all backgrounds have equal access to internships, scholarships, and career resources" revealed slightly lower but still favorable perceptions (Figure 7). 53.4% strongly agreed and 32.4% agreed, totaling 85.8% positive responses. However, 13.2% remained neutral, suggesting some uncertainty or variability in students’ experiences. The 1% of respondents who disagreed, along with the neutral responses, suggest areas where improvements could further enhance perceptions of equity.

Table 3: Awareness of Initiatives Aimed at Reducing Inequalities

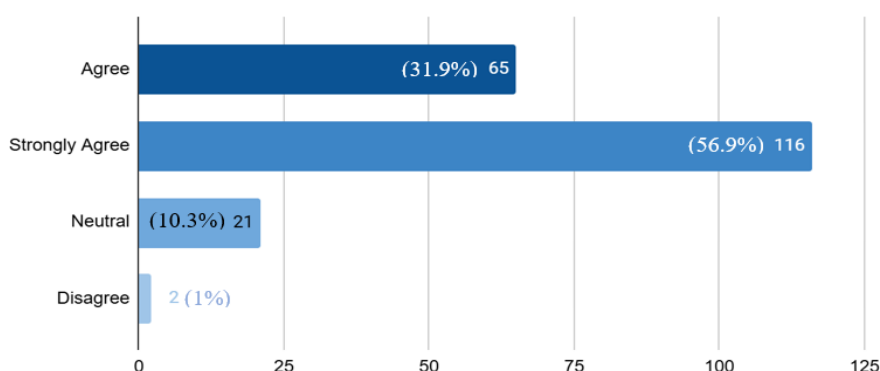
Responses	Number of responses	%
Strongly Agree	88	43.1
Agree	77	37.7
Neutral	31	15.2
Disagree	7	3.4
Strongly Disagree	1	0.5

For the statement "I am aware of initiatives at my institution aimed at reducing social and economic inequalities", responses reflected a mix of agreement and neutrality (Table 3). While 43.1% strongly agreed and 37.7% agreed (totaling 80.8% positive responses), a notable 15.2% were neutral, 3.4% disagreed, while 0.5% strongly disagreed. These findings suggest that, while most students acknowledge the institution's efforts to address inequalities, there is still room to enhance awareness and visibility of such initiatives.

Section 3: Future-Ready Education, English Language, and Technology

Figure 8.

Learning English and Global Awareness



The statement "Learning English enhances my understanding of global issues, including the SDGs" elicited overwhelmingly positive responses. A majority of participants (56.9%) strongly agreed, with an additional 31.9% agreeing, culminating in a remarkable 88.8% agreement rate. The negligible neutral responses (10.3%) and the 1% of participants who disagreed highlight the institution's success in utilizing English to enhance global awareness and improve understanding of sustainability challenges.

Table 4: English Language Skills and Access to International Resources

Responses	Number of responses	%
Strongly Agree	121	59.3
Agree	65	31.9
Neutral	18	8.8
Disagree	-	-
Strongly Disagree	-	-

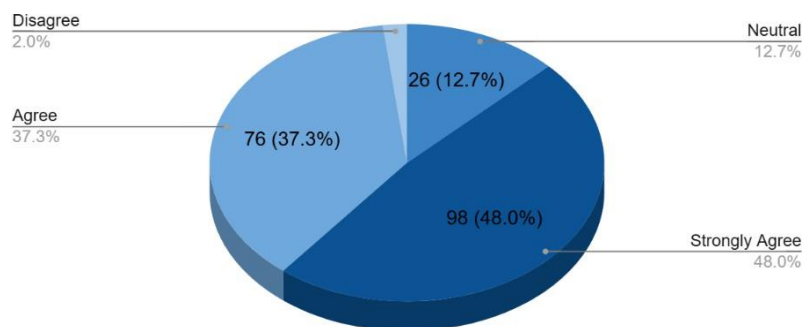
Participants also endorsed the statement "My English language skills help me access international resources and networks related to the SDGs" with strong agreement. A substantial 59.3% strongly agreed, and 31.9% agreed, resulting in an overall agreement rate of 91.2%. Neutral responses (8.8%) indicate minimal reservations, while the absence of negative feedback underscores the institution's success in equipping students with language skills critical for engaging in international discourse.

Table 5: Digital Skills for Sustainable Development

Responses	Number of responses	%
Strongly Agree	102	50
Agree	72	35.3
Neutral	24	11.8
Disagree	5	2.5
Strongly Disagree	1	0.5

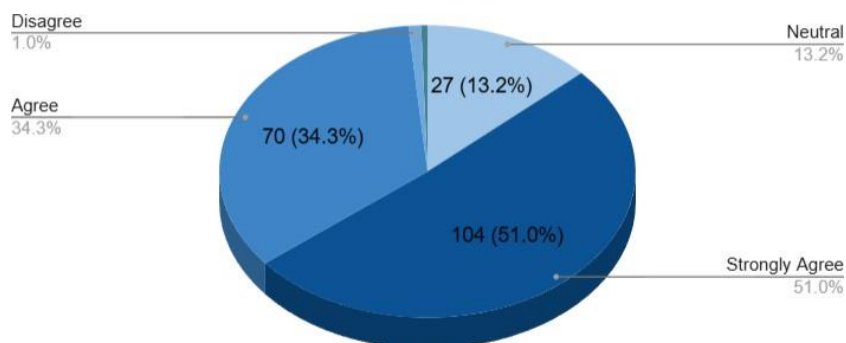
The question “*My institution provides digital skills training essential for sustainable development*” revealed a solid majority of agreement, with 50% strongly agreeing and 35.3% agreeing, representing a combined total of 85.3%. However, a notable 11.8% of participants remained neutral, a small minority (2.5%) disagreed, while 0.5% strongly disagreed, suggesting room for enhancement in this area.

Figure 9.
Technology and Real-World Challenges



Responses to “*Technology in my education prepares me to address real-world challenges, including those in the SDGs*” demonstrated broad support. While 48% strongly agreed and 37.3% agreed (totaling 85.3%), a neutral stance was observed among 12.7% of participants. A minimal 2% of participants expressed disagreement, suggesting that, while the majority perceive technology as adequately integrated, minor gaps remain in application.

Figure 10.
Skills for Thriving in a Technology-Driven World



Participants largely affirmed the statement “My education equips me with the skills needed to thrive in a global, technology-driven world”. A total of 51% strongly agreed, while 34.3% agreed, leading to an 85.3% agreement rate. Neutral responses (13.2%) and rare disagreement (1.5%) point to the institution's commendable focus on preparing students for global competitiveness.

Table 6: Critical Thinking and Problem-Solving

Responses	Number of responses	%
Strongly Agree	103	50.5
Agree	79	38.7
Neutral	18	8.8
Disagree	4	2
Strongly Disagree	-	-

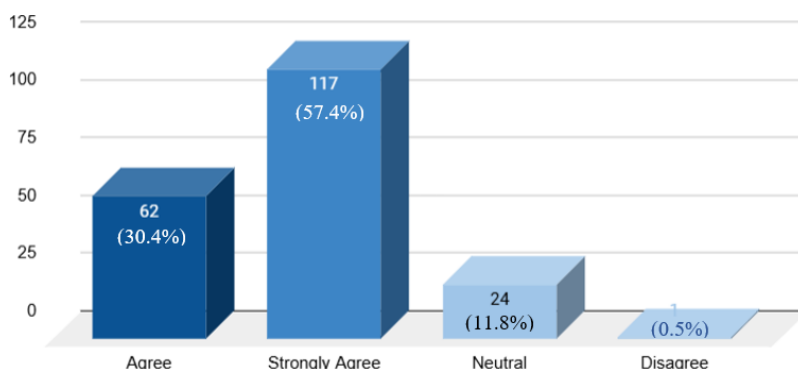
The institution’s role in promoting critical thinking is evident in responses to “My institution encourages critical thinking and problem-solving skills to support sustainable goals.” A strong agreement was noted among 50.5% of respondents, with 38.7% agreeing, resulting in a combined agreement of 89.2%. Neutral feedback (8.8%) and rare disagreement (2%) suggest general satisfaction with these efforts.

Table 7: Access to English-Language Resources

Responses	Number of responses	%
Strongly Agree	104	51
Agree	70	34.3
Neutral	27	13.2
Disagree	3	1.5
Strongly Disagree	-	-

For “I have access to English-language resources that inform me about global sustainability efforts,” 51% strongly agreed, and 34.3% agreed, yielding an 85.3% overall agreement. Neutral responses (13.2%) and a minimal disagreement rate (1.5%) highlight the institution’s provision of relevant resources while identifying slight room for improvement.

Figure 11.
English Proficiency and Technology Skills



The statement “English proficiency and technology skills are essential for engaging in international discussions on sustainable development” received strong support, with 57.4% strongly agreeing and 30.4% agreeing. With a total agreement of 87.8%, neutral responses (11.8%) and minimal disagreement (<1%) affirm the importance of these skills in fostering international engagement.

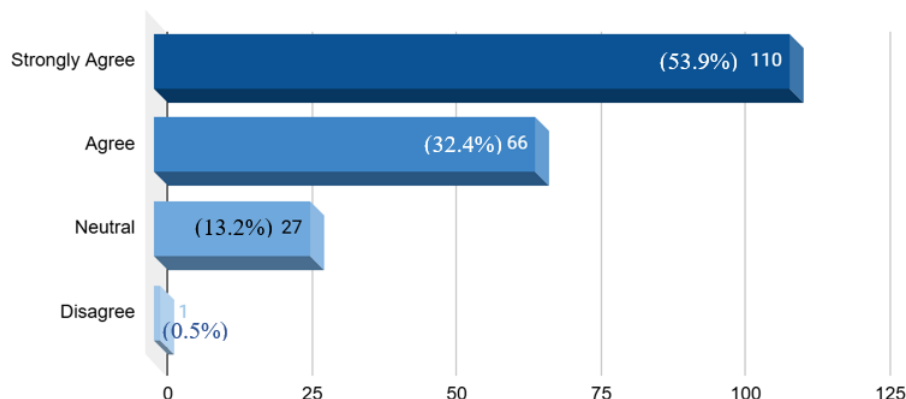
Table 8: English and Global Connections

Responses	Number of responses	%
Strongly Agree	114	55.9
Agree	65	31.9
Neutral	21	10.3
Disagree	4	2
Strongly Disagree	-	-

For “Learning English has increased my connection to global issues, especially those related to sustainability,” responses were highly favorable. A majority of 55.9% strongly agreed, while 31.9% agreed, resulting in an 87.8% agreement rate. Neutral responses (10.3%) and negligible disagreement reflect the institution’s effectiveness in strengthening global connections through English education.

Figure 12.

Cross-Cultural Exchanges in English



Lastly, the statement “*My institution encourages cross-cultural exchanges in English focused on sustainability*” was positively received. A total of 53.9% strongly agreed, and 32.4% agreed, representing 86.3% agreement. Neutral responses (13.2%) and rare disagreement (0.5%) indicate that these exchanges are well-supported, though opportunities for further development exist.

4. DISCUSSION

The United Nations Sustainable Development Goals (SDGs) provide a comprehensive framework for addressing the world’s most pressing issues, with SDG 4—Quality Education—serving as a key pillar for driving broader progress. SDG 10 (Reduced Inequalities) and SDG 17 (Partnerships for the Goals) are closely interconnected with SDG 4, as education is fundamental to reducing disparities and fostering collaborative global action. (Barber, 2023). The role of technology in education is pivotal for advancing these goals, particularly in the context of English language learning, which enables cross-cultural communication and global cooperation. English, as a global lingua franca, plays a central role in the development of global partnerships and the reduction of inequalities through education.

4.1. Benefits of Educational Technology in English Language Learning

Educational technology offers transformative potential in expanding access to learning opportunities and improving educational quality, especially in the context of English language learning. Initiatives like Duolingo’s partnership with UNHCR demonstrate the power of technology in providing language learning resources to refugees, contributing to SDG 4 by enhancing access to education and SDG 10 by reducing inequalities. Through such platforms, marginalized groups are offered the opportunity to learn English and other key languages, breaking down barriers to communication and global participation.

Similarly, University Metropolitan Tirana’s Robotech competition highlights the role of hands-on learning in technology, encouraging innovation while also promoting SDG 4 by preparing students for the future workforce through robotics, programming, and problem-solving skills. These initiatives also emphasize the importance of English, as it is often the medium of instruction for technology and innovation fields globally. By fostering English proficiency, students are better equipped to access international resources, connect with

global experts, and contribute to global conversations on sustainable development.

Moreover, the integration of technology fosters global partnerships, a central tenet of SDG 17. Digital platforms allow educators and learners to collaborate across borders, share resources, and engage in joint initiatives that support the SDGs. Technology not only enhances learning experiences but also facilitates the exchange of knowledge and best practices. In the realm of English language learning, this global exchange ensures that educational advancements are shared worldwide, thereby strengthening international cooperation and advancing the SDGs. Digital platforms such as virtual language exchange programs enable learners to practice English with native speakers, improving fluency and cultural understanding, which are key to fostering global cooperation.

4.2. Challenges and Disadvantages

Despite its significant potential, the integration of technology in education presents several challenges. The digital divide remains a major concern, particularly in low-income and rural areas where access to devices, the internet, and digital literacy remains limited. This divide can undermine the achievement of SDG 4 and SDG 10, as students without proper access are excluded from the benefits of technology-enabled education. Additionally, language barriers, particularly for non-English-speaking students, can hinder access to these technologies and content.

Excessive reliance on technology may also impact the development of interpersonal skills and critical thinking, which are essential for personal and professional growth. While learning English online can be effective, it is equally important for students to engage in face-to-face interactions to develop communication skills in real-life contexts. Furthermore, as technology evolves rapidly, educators may struggle to keep pace with new tools and methodologies, requiring continuous professional development to maintain effectiveness in teaching English.

Another major concern is data privacy and security, particularly as more educational institutions shift to digital platforms. The collection of personal and academic data through these platforms necessitates robust safeguards to protect students' privacy, especially as more children and young adults engage in online English learning environments.

5. CONCLUSION

This research highlights the critical role of English language learning and technology in achieving the Sustainable Development Goals (SDGs), particularly SDG 4 – Quality Education, SDG 10 – Reduced Inequalities, and SDG 17 – Partnerships for the Goals. As the world becomes increasingly interconnected, English proficiency is essential for global communication, and the integration of technology in education plays a pivotal role in equipping students with the language skills needed to participate in the global economy and address global challenges.

Initiatives such as Duolingo's partnership with UNHCR and the Robotech competition by the Metropolitan University Tirana illustrate how technology can bridge educational gaps, promote inclusivity, and provide opportunities for marginalized communities, aligning with the goals of SDG 4 and SDG 10. These projects are particularly significant in the context of English language learning, as they enable learners from disadvantaged backgrounds to access English language education and connect with the broader world. In this way, technology not only enhances access to education but also empowers learners to gain the skills needed to reduce inequalities and foster global cooperation.

Furthermore, the role of technology in enhancing English language learning goes beyond just providing resources for students; it facilitates global collaboration and sharing of knowledge. Digital platforms allow learners to interact with peers and educators across borders, broadening their educational experiences and enabling them to engage in cross-cultural dialogue. This global connectivity is key to advancing SDG 17, as it fosters partnerships between nations, institutions, and organizations, ensuring that educational advancements—especially in English language proficiency—are shared and accessible to all.

However, challenges such as the digital divide and privacy concerns must be addressed to ensure that all learners, regardless of their socio-economic status or geographical location, have equitable access to the technological tools required for English language learning. Overcoming these challenges will ensure that technology can fulfill its potential to advance SDG 4 and SDG 10 by providing all individuals with the opportunity to learn English, connect globally, and participate in sustainable development efforts.

By combining technology, English language proficiency, and innovative teaching methods, we can create an inclusive educational environment that equips students with the language skills and knowledge needed to thrive in a rapidly changing world. Ultimately, through effective collaboration between educational institutions, governments, and private organizations, we can ensure that English language education, powered by technology, plays a central role in fulfilling the promise of SDG 4, reducing inequalities, and building sustainable global partnerships to achieve the SDGs.

6. RECOMMENDATION AND FUTURE DIRECTIONS

To effectively address the challenges and advance the goals outlined, a few key recommendations and future directions are necessary:

1. **Expand Digital Infrastructure:** Governments and private sectors should collaborate to improve internet connectivity, particularly in rural and underserved areas. This would enhance access to online education and resources, ensuring that technology does not become an additional barrier for students in these regions.
2. **Develop Context-Specific Content:** It's important to create educational materials that cater to diverse linguistic and cultural contexts. This includes translating learning tools into various languages and developing content that is culturally relevant and adaptable to different learning styles.
3. **Strengthen Digital Literacy Programs:** Schools, community organizations, and governments should invest in comprehensive digital literacy programs to equip both students and teachers with the skills necessary to navigate and utilize technology effectively. This would help overcome technological gaps and ensure all stakeholders are prepared to engage with digital education tools.
4. **Encourage Public-Private Partnerships:**
5. Governments should incentivize partnerships between the public and private sectors to address technological gaps in education. By combining resources, expertise, and innovation, more scalable and sustainable solutions can be created to improve access to technology, reduce costs, and enhance educational quality.
6. **Focus on Teacher Professional Development:** The importance of continuous teacher training cannot be overstated. Programs that equip teachers with the knowledge and tools to integrate technology into their classrooms should be made more accessible. These programs should also focus on pedagogical strategies that support personalized learning and help address the diverse needs of English learners.
7. **Global Collaboration and Knowledge Sharing:** International collaboration should be encouraged to share best practices, lessons learned, and innovations in English language education. This could involve

Daiu, S. & Pole, X. (2024). Future-Ready Education: The role of English language and technology in meeting SDGs. *International Journal of Innovative Research in Education*, 11(2), 89-110. <https://doi.org/10.18844/ijire.v11i2.9592>

partnerships between countries, as well as with NGOs, to improve educational access and equity on a global scale.

- 8. Monitor and Evaluate Progress:** Regular monitoring and evaluation of initiatives should be conducted to ensure that efforts are leading to tangible improvements. Data on student outcomes, technology access, and teacher competency can help identify gaps and adjust strategies accordingly.

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