Discourse Analysis of Teaching Materials Aligned with SDGs: Enhancing Educational Content for Sustainable Development

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Abstract. This article describes a discourse analysis of teaching materials designed to align with the Sustainable Development Goals (SDGs), aiming to enhance the effectiveness of educational content in promoting sustainable development. By examining the language, themes, and framing within these materials, the study identifies how well they convey the principles of the SDGs and support their integration into the curriculum. The analysis reveals key patterns in how sustainability concepts are presented, including the portrayal of global challenges, solutions, and the role of students in fostering change. Findings highlight both strengths and gaps in current materials, providing insights into how discourse shapes students' understanding of sustainability. The article discusses implications for educators and policymakers, offering recommendations for improving the alignment of teaching resources with SDG objectives to foster more impactful and engaging sustainability education.

Keywords: Discourse Analysis, teaching materials, SDGs

1   Introduction

The United Nations Sustainable Development Goals (SDGs) represent a global framework aimed at addressing pressing social, economic, and environmental challenges by 2030 [1]. It is stated that education plays a critical role in achieving these goals, as it equips individuals with the knowledge and skills necessary for sustainable development. However, the effectiveness of educational initiatives is heavily influenced by the quality and relevance of teaching materials.

To introduce the SDGs to students, these goals can be integrated into the curriculum through projects that connect local issues to the SDGs, hold discussions to raise awareness of global issues, use real-life examples across subjects, and encourage students to engage in SDG-relevant activities in their schools and communities, such as environmental campaigns or community service projects.

Discourse has a significant impact on certain students' comprehension and engagement with complex global issues in this day and age. In the contemporary world, the way students understand and become involved in complex global matters is profoundly influenced by discourse. The framing of an issue, the credibility of its sources, and the language employed are

all crucial elements that shape how young people perceive, make sense of, and respond to global challenges.

That situation identifies important trends in the way sustainability concepts are portrayed, such as the framing of global issues, the kinds of solutions that are given priority, and the roles that students are given in promoting change. The results provide a better understanding of how the discourse incorporated into these resources affects students' perceptions and grasp of sustainability, highlighting both the advantages and disadvantages of the current teaching tools.

2 Literature Review
2.1 Discourse Analysis

Discourse analysis has emerged as a critical tool for examining how language shapes and reflects social realities. As a multidisciplinary field, DA bridges linguistics, sociology, anthropology, and communication studies, offering a nuanced understanding of how language functions beyond its surface-level meaning. Rooted in the works of foundational scholars such as Fairclough [2]. discourse analysis provides insights into the ways language is used to construct meaning, negotiate power, and establish identities. It examines not only what is said but also how it is said, why it is said, and the social, cultural, and political contexts that influence communication.

In recent years, the scope of discourse analysis has expanded significantly, reflecting the evolving nature of communication in a globalized and digitalized world. Studies have increasingly focused on digital communication, where platforms such as social media, blogs, and online forums have created new spaces for discourse that challenge traditional power dynamics and enable novel forms of identity construction [3]. For instance, the rise of hashtag activism and online communities has demonstrated how discourse can mobilize social movements and reshape public opinion. Similarly, political rhetoric has become a key area of interest, with researchers analyzing how language is used to legitimize authority, manipulate public perception, and construct ideological narratives [4].

Discourse analysis is a research method used to study the ways in which language constructs social realities and power relations. It examines how meaning is created through language in various contexts, including texts, spoken discourse, media, and educational materials. In the context of teaching materials, discourse analysis helps identify the underlying ideologies, assumptions, and values embedded in the language used to discuss sustainability, social justice, and other SDG-related issues. It also allows researchers to investigate how these ideas are framed, who is included or excluded from the narrative, and whether the content encourages critical thinking and action toward sustainability.

2.2 Sustainable Development Goals (SDGs)

The most common definition of sustainable development, that was given in 1987 in the United Nations' publication "Our Common Future", also known as the Brundtland Report, and is now commonly used to define the modern idea of sustainability, defines sustainable

development as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" [6].

Fig 1. Summarized subset of the United Nations sustainable development goals[8]

In order to promote and successfully create a world based on the principles of sustainability, it is important to consider and examine the factors that affect the development and progress of sustainable development.

3   Methodology of Research

Documentary study is a research method used to collect data or information from various written sources or documents that are relevant to the topic being studied. This study relies on documents as the main material for analysis and understanding of a particular phenomenon, event, or issue.

Furthermore, Bowen explains that document analysis as a systematic, qualitative research method for interpreting and extracting meaning from written, visual, and electronic materials. [7]

The main goal of a documentary study is to gain a deeper understanding of a particular phenomenon or issue by examining existing sources. This method is often used in qualitative

research, where the data obtained from documents are analyzed to generate new insights or knowledge.

4 Result and Discussion

A major enabler to achieve SDGs is through education, in particular higher education, as it directly shapes the skills of future professionals. However, merely conveying sustainable development as teaching content, for example in engineering courses, is not considered sufficient any longer. Universities themselves are expected to assume responsibility for sustainable development, which requires aligning teaching methods as well. As such, this is intended to help students break out of the poverty cycle, overcome disadvantages due to stigmatization or discrimination, participate in society despite disabilities/impairments, learn to work autonomously, manage their wellbeing and health, apply creativity, solve complex problems without an obvious solution, and to gain intercultural competences, among many others.

4.1 Recommendations for Enhancing Educational Content for SDGs

Based on discourse analysis, several recommendations can be made to enhance educational materials for promoting sustainable development:
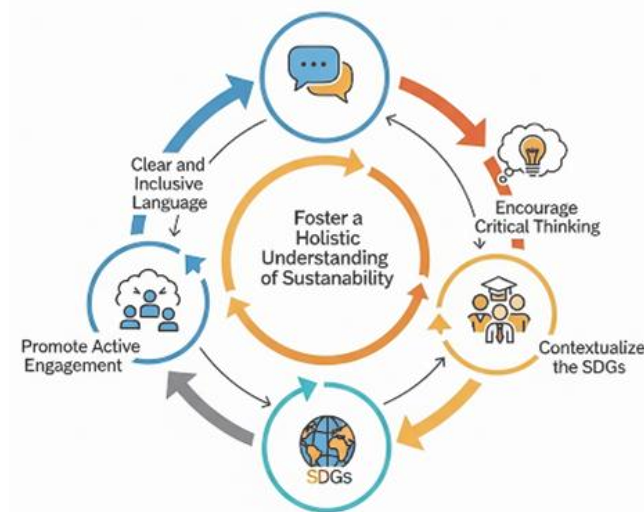
Fig 2. Recommendations for Enhancing Educational Content for SDGs

a. Clear and Inclusive Language
Teaching materials should use clear and accessible language to explain SDGs, avoiding jargon or overly technical terms. It is essential to include diverse voices and perspectives, particularly those of marginalized communities, to reflect the global and inclusive nature of the SDGs.
b. Encourage Critical Thinking
Educational content should encourage students to critically engage with sustainability issues and question dominant narratives. This includes exploring the root causes of

inequality, environmental destruction, and social injustice, and considering alternative models of development.

c. Promote Active Engagement

Materials should move beyond passive learning and include activities that encourage active participation. Case studies, simulations, role-playing, and community-based projects can help students apply their learning and develop practical solutions for sustainable development.

d. Contextualize the SDGs

While the SDGs are global, they must also be contextualized for local realities. Teaching materials should address both local and global challenges, helping students understand how they can contribute to the SDGs in their own communities and the wider world.

e. Foster a Holistic Understanding of Sustainability

Sustainability is not just an environmental issue—it is deeply connected to social, economic, and political dimensions. Teaching materials should promote a holistic understanding of the SDGs, highlighting the interconnections between various goals and their impact on human well-being and the planet.

4.2 The Role of Discourse in Teaching Materials

Discourse refers to the ways in which language and communication shape our understanding of the world. In the context of teaching materials, discourse is not only about the content itself—what is being taught—but also how it is framed, whose perspectives are represented, and what underlying values are embedded in the narratives.

For teaching materials to be aligned with the SDGs, it's essential to analyze the discourse that underpins them, as this determines how effectively sustainability and the principles of the SDGs are communicated to students. Discourse analysis can reveal the extent to which these materials:
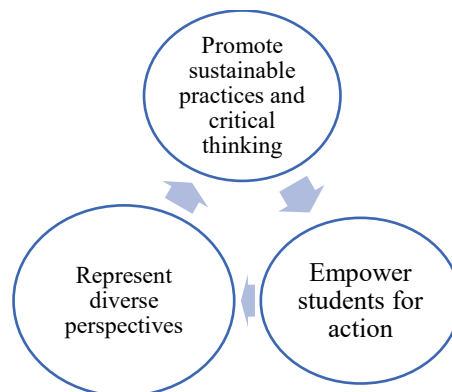

Fig 3. The Role of Discourse in Teaching Materials

a. Promote sustainable practices and critical thinking
Discourse in teaching materials is crucial for promoting sustainable practices and critical thinking because it shapes how students understand and engage with complex, real-world issues. It goes beyond simply presenting facts and encourages students to analyze, question, and form their own well-reasoned perspectives on sustainability.

b. Represent diverse perspectives
Discourse in teaching materials plays a vital role in representing diverse perspectives by shaping how students understand different cultures, histories, and social issues. Rather than presenting a single, monolithic view, a robust discourse acknowledges that knowledge is constructed from multiple viewpoints. This approach is essential for promoting empathy, critical thinking, and inclusivity in the classroom

c. Empower students for action
Discourse in teaching materials plays a crucial role in empowering students for action by shaping their cognitive, social, and critical skills. Rather than just transmitting information, the language and structure of educational texts can actively engage students, encouraging them to analyze, question, and ultimately apply their knowledge to real-world contexts.

Discourse is more than just language; it's a way of understanding the world and shaping social reality. In teaching materials, the type of discourse used can either reinforce existing, often unsustainable, practices or challenge them.

Discourse analysis thus provides a means to evaluate not only the factual content of teaching materials but also the ideologies and power relations embedded within them. It enables educators, curriculum developers, and policymakers to refine their approach to teaching the SDGs, ensuring that the content is not only informative but transformative.

5   Conclusion

Discourse analysis provides a valuable lens through which we can critically examine the ways in which teaching materials align with the SDGs and how they communicate sustainability issues to students. By analyzing the language, representation, power dynamics, and pedagogical approaches used in educational content, we can enhance the effectiveness of education in promoting sustainable development. Ultimately, the goal is to create educational materials that empower students to not only understand the SDGs but to actively engage in creating a more sustainable and just world for all.

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