

Secondary School Teachers' Experiences of Using Chatgpt to Support Learners with Special Educational Needs: A Qualitative Inquiry

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ABSTRACT: The purpose of the study was to investigate how secondary school teachers use ChatGPT to support learners with special educational needs (LSEN) in inclusive classrooms. The study focused on how teachers are using ChatGPT in their teaching practices. It investigated the benefits and challenges faced by teachers along with their views on the responsible use of generative AI in inclusive education. A qualitative inquiry was employed involving secondary school teachers having experience in handling learners with special educational needs in an inclusive education framework. Data were collected through semi-structured interviews and driven by thematic analysis.

The results produced four main themes: (1) ChatGPT as a tool for instructional planning and differentiated learning, (2) improving teaching efficiency and supporting learner diversity through ChatGPT,

(3) challenges and ethical concerns in using ChatGPT for inclusive education, and (4) responsible integration of ChatGPT in inclusive classrooms. The findings showed that teachers utilize ChatGPT to develop differentiated activities, clarify instructional materials, organize lessons, design learner-centered activities, as well as facilitate learning for diverse learners. In addition, teachers cited advantages like spending less time on preparations, organizing their lesson plans, getting new instructional ideas and more support for inclusive practice. Nonetheless, they faced difficulties with generic responses, the need for effective prompting, potential dependency on AI, as well as concerns over student privacy and responsible use.

The study concludes that ChatGPT represents a sound instructional support tool in inclusive education when guided by the teachers' professional judgment, pedagogical expertise, and ethical awareness. Instead of taking the place of teachers, ChatGPT can enhance teaching practices by providing extra resources and opportunities for creating responsive and inclusive learning environments for learners with special educational needs.

KEYWORDS: ChatGPT, generative artificial intelligence, inclusive education, learners with special educational needs, secondary school teachers, qualitative inquiry

I. INTRODUCTION

Educational practices are being profoundly changed due to the rapid advancement of digital technologies that provide teachers with the opportunity to enhance teaching and respond to learner needs. One of the emerging technologies attracting increased interest is generative artificial intelligence (AI) which produces text, provides instructional suggestions, assists in the preparation of lessons and supports other educational activities. One of the most popular generative AI tool, ChatGPT, is a large language model that can help teachers create learning materials, classroom activities, and instructional plans, among many other uses. In education, ChatGPT is seen as a potential technological support to enhance teachers' productivity and pedagogical practices. Recent research has highlighted that if used responsibly, generative AI could help teachers with the creation of learning materials, assessments, and customized learning support (Kasneji et al., 2023; Tlili et al., 2023). Nonetheless, the educational value of AI does not depend solely on the technology but also on teachers' capability to assess, adapt and contextualize the output produced by AI in accordance with learner needs and classroom situations.

In inclusive education, teachers must respond to the various learning abilities of learners, notably LSEN. In inclusive classrooms, teachers frequently adapt materials, differentiate tasks and activities, simplify learning tasks, and provide useful support strategies so all learners can be included meaningfully. In such context, ChatGPT may act as an alternative teacher resource that helps teachers generate ideas, create differentiated activities, and write accessible learning resources. Nevertheless, the implementation of AI in inclusive education has to be carefully deliberated as learners with special educational needs need individual support that

Secondary School Teachers' Experiences of Using Chatgpt to Support Learners with Special Educational Needs: A Qualitative Inquiry

ultimately relies on teachers' professional understanding and knowledge of individual differences.

The incorporation of ChatGPT in education can be viewed through the lens of the Technological Pedagogical Content Knowledge (TPACK) Framework (Mishra & Koehler, 2006). This framework advocates that for technology to be effectively integrated, teachers must engage their technological knowledge and pedagogical content knowledge. The framework for inclusive classrooms shows the need for teachers to use technology in the classroom for the specific needs of learners and the teaching outcomes. In this context, the Constructivist Learning Theory informs that teachers use learning resources and applies the interpretation of knowledge based on their experiences and different contexts.

Research has discussed the general uses of artificial intelligence in education, but there is limited research on the reality of secondary school teachers using ChatGPT as a tool to assist special educational needs learners in inclusive classrooms. Many ongoing discussions revolve around the positive and negative effects of AI in education. Nevertheless, studies of teachers' use of ChatGPT, modification of AI text, and ethical issues have received particularly less attention.

It is important to understand teachers' experiences as the successful integration of AI is not merely a case of access to technology. Success also relies heavily on the instructional decisions, professional judgement, and responsible use of the content and functionality of the AI by teachers. Consequently, this study examines the experiences of secondary school teachers in using ChatGPT to assist students with special educational needs in inclusive classrooms. It aimed to identify how teachers use ChatGPT in their teaching practices, the benefits they perceive, the challenges they face, and their recommendations on the responsible use of generative artificial intelligence in inclusive education.

THEORETICAL FRAMEWORK

This study applies the Technological Pedagogical Content Knowledge (TPACK) framework by Mishra and Koehler (2006) which is grounded on the constructivist learning theory. These theoretical perspectives that underpin how secondary school teachers use ChatGPT in their teaching to assist learners with special educational needs in inclusive classrooms are discussed.

The TPACK Framework describes how technology can be effectively integrated when teachers' technological knowledge, pedagogical knowledge, and content knowledge interact with one another. Mishra and Koehler (2006) state that technology is not a stand-alone teaching component but is instead a resource that only acquires meaning when combined with appropriate pedagogy and subject knowledge. In this study, ChatGPT refers to an educational resource that the teacher uses, along with their expertise and knowledge of the learner needs. The framework assists in explaining how teachers adopt ChatGPT to develop differentiated activities, simplify teaching materials, organize lessons and create learning experiences suitable for learners with different abilities.

This study's finding illustrates TPACK, as the teachers were able to assess, adapt, and contextualize the AI-generated output before using it in the classroom. Teachers only use ChatGPT responses as a rough guide or suggestion but not ready-made instructional materials. They modify ChatGPT responses based on the abilities of their learners, classroom conditions, and curriculum requirements. This shows that technological knowledge and pedagogical decision-making should be combined particularly within inclusive education owing to the extensive variation in learners.

The constructivist learning theory guides this research. Constructivism refers to the way the learner learns or constructs knowledge through the active participation of mind and body. According to Piaget (1952), Bruner (1966) and Vygotsky (1978), constructivism maintains that teachers should not transmit knowledge as experts but act as facilitators who design meaningful learning experiences taking into account the contexts and needs of the learner. In this light, teachers are not just end users of technology but also interpreters, adapters, and transformers of the available resources, making it useful for learning.

The teachers' practices of simplifying ChatGPT-generated materials, translanguaging strategies, contextualizing activities, and modifying instructions, reveal the constructivist perspective for the learning enhancement of learners with special educational needs. Across these practices, technology proves educationally meaningful when teachers deliberately tie it to students' experiences and differences.

The frameworks provide a good lens for understanding teachers' experiences with ChatGPT in inclusive classrooms. TPACK describes the knowledge and skills required for effective technology integration, whereas constructivism describes how teachers use, adapt, and apply technological resources to develop more focused and inclusive learning opportunities. This study conceptualizes ChatGPT using these theoretical lenses as an assistive pedagogical tool to support teachers' practices and highlights the constant role of teachers in making educational decisions.

II. REVIEW OF RELATED LITERATURE

Generative artificial intelligence (AI) holds a promise for the enhancement of educational practices. Generative AI apps create texts, lesson ideas, activities, or replies directed by an individual user, unlike other app or digital tools that merely provide access to information. Due to the ability to aid teachers in preparing lessons, generating content, creating assessments, and planning

Secondary School Teachers' Experiences of Using Chatgpt to Support Learners with Special Educational Needs: A Qualitative Inquiry

instructions, ChatGPT has become popular among these applications.

Kasneci et al. (2023) explained that by aiding educators with many teaching-type activities, such as generating explanations, learning resources and offering personalized learning, large language models like ChatGPT can present excellent opportunities. In spite of that, they stressed that AI-generated outcomes require human assessment, as these technologies may produce false or out-of-context outputs. Consequently, the teacher's role continues to be essential to ensure that AI-supported instruction meets educational aims.

In the same way, Tlili et al. (2023) stressed that ChatGPT could be applied in education to assist the teacher and learner through interactive and personalized learning experiences. However, they cautioned that critical awareness, ethical implications and adequate regulatory frameworks are essential in ensuring that AI is maximally beneficial and minimally harmful.

A. ChatGPT and Teachers' Instructional Practices

The teacher entirely controls the use of technology and its implementation in the classroom. AI tools are not effective only because they are available. It is equally important for teachers to be pedagogically knowledgeable and able to adapt resources as per learners' needs. With the TPACK Framework of Mishra and Koehler (2006), integration of technology becomes meaningful when teachers use technological knowledge along with the pedagogy and content knowledge.

ChatGPT may assist teachers in creating learning materials, suggesting activities, providing lesson plans, and producing assessments in classroom settings. However, it is imperative for educators to thoroughly assess and adapt the material generated by AI so that it suits their learners. This significantly underlines the teacher agency within AI-supported education, which is a complementary use of technology to professional expertise and not a substitute for teacher decision-making.

The role of teachers becomes more crucial for inclusive education as they are expected to address diverse learner needs. Learners with special educational needs require adjustments in teaching, learning activities that are different from others, as well as learning materials which are suitable for diverse learner abilities and learning difficulties.

B. Artificial Intelligence in Inclusive Education and Differentiated Learning

Inclusive education provides meaningful learning experiences to every student no matter the differences in their abilities, learning needs, and educational backgrounds. Teachers in inclusive spaces use differentiated instruction to modify content, processes and learning activities for diverse learners.

ChatGPT and other artificial intelligence (AI) tools can support differentiated instruction in the classroom. These tools may help teachers to generate alternative explanations, simplify complex concepts, create different activities and develop learning resources for different ability levels. If a teacher is experienced, the AI will help them generate more flexible learning approaches and help teachers address individual learner differences.

The employment of technology as a means of supporting special educational needs learners reflects a learner-centered approach that acknowledges need for instruction to be adapted based on students' unique characteristics. In this respect, ChatGPT is another platform that helps instructors plan inclusive learning experiences while teachers remain responsible for their instructional decisions.

C. Challenges and Ethical Considerations in the Use of ChatGPT

Although ChatGPT offers a number of advantages to education, it also creates challenges. The reliability of artificial intelligence-generated information is one of the main concerns. Since AI responses depend on user prompts and data patterns available, the output may sometime be incomplete, generalized, or inappropriate for a specific educational context. Consequently, it is necessary for the teacher to critically validate and appropriately modify the AI-generated materials, if any, before using them in a classroom. One more potential concern is over-reliance on the AI technology. ChatGPT may improve efficiency of teachers, but excessive dependency may reduce teachers' involvement in planning and decision-making. AI should be used responsibly so that it offers assistance without replacing professional expertise.

When dealing with learners with special educational needs, privacy and ethics are two important considerations. The use of generative AI in education must comply with ethical standards. These include the protection of personal data, responsible use, and human-centered development and implementation (UNESCO, 2023). These considerations stress the importance of institutional rules and teacher training that ensure that AI applications support learning aims without violating learner rights.

D. Synthesis of the Literature

The literature examined shows that ChatGPT can be a valuable support tool for teachers in instructional practices, particularly lesson preparation, differentiated instruction and learning resources development. However, existing discussion also shows that integration of AI should be carried out responsibly through teacher evaluation, ethical awareness and guidelines. Although there are studies on the benefits and challenges of using AI in education, less is known about the ways in which secondary school teachers use ChatGPT to assist special education needs learners in an inclusive classroom.

Secondary School Teachers' Experiences of Using Chatgpt to Support Learners with Special Educational Needs: A Qualitative Inquiry

This study investigates how teachers actually use ChatGPT and the benefits, difficulties, and suggestions for responsible AI use for inclusion, thereby contributing to the increasing literature on this topic.

Statement of the Problem

The aim of this qualitative study is to examine how secondary school teachers use ChatGPT to assist the learner with special educational needs (LSEN) in an inclusive classroom. This study sought to answer the following research questions:

1. How do secondary school teachers use ChatGPT to support learners with special educational needs in inclusive classrooms?
2. What benefits do secondary school teachers perceive in using ChatGPT to support learners with special educational needs?
3. What challenges do secondary school teachers encounter when using ChatGPT in supporting learners with special educational needs?
4. What insights and recommendations can be drawn from teachers' experiences regarding the responsible integration of ChatGPT in inclusive education?

III. METHODOLOGY

Qualitative descriptive research design was employed in this study to investigate secondary school teachers' experiences of using ChatGPT to assist learners with special educational needs (LSEN) in inclusive classrooms. Since the study intends to understand the actual experiences of teachers, their practices, perceived benefits, challenges and views about the use of generative artificial intelligence in classrooms, a qualitative approach was considered suitable. The design of the study helped to capture the views of the participants and provided an extensive account of the use of ChatGPT as an instructional support tool in inclusive education.

A. Participants and Selection Process

The study participants were eight (8) secondary school teachers from a public secondary school with experience teaching learners with special educational needs in an inclusive education classroom. The participants were chosen through purposive sampling and identified through their direct engagement of teaching LSEN and experience using ChatGPT in their teaching processes.

Purposive sampling was used as this study needed participants who can give relevant information pertaining to the phenomenon in question. The teachers chosen for the study were considered appropriate data sources due to their first-hand experiences adapting teaching, creating learning activities, and supporting diverse learners through technology-enhanced teaching practices.

B. Data Collection

Data was collected through face-to-face semi-structured interviews from the subjects. To develop the interview questions, the study's four research questions were utilized. Thus, the questions focused on teachers' use of ChatGPT, perceived benefits, challenges and recommendations for responsible use of AI in inclusive education.

The duration of each interview was 10 to 20 minutes. With the consent of the participants, responses were recorded in writing and electronically through audio recording to reflect their responses. The interview protocol of the study was validated by an educator to ensure that the questions are in alignment with the aim and objectives and catering qualitative data for the study.

C. Ethical Considerations

Throughout the study, ethical principles were followed. Prior to the interviews, participants were informed of the research objective, what their participation entailed, and that they could withdraw from the research at any time without consequence. All participants provided their consent before data collection began. To protect participant confidentiality, pseudonyms have been used throughout the findings in place of real names. The researchers ensured that there was no personally identifiable information of the special educational need learners in the interview responses. All collected information was kept confidential and only used for research purposes.

D. Data Analysis

The interview data was analyzed thematically through familiarization with the data, coding the data, identifying themes, reviewing themes and interpreting the findings. The researchers analyzed the interview transcripts and notes for recurring patterns and meaningful categories that emerged from teachers' experiences with ChatGPT.

Through the thematic analysis process, four major themes emerged: (1) ChatGPT as a Tool for Instructional Planning and Differentiated Learning, (2) Improving Teaching Efficiency and Supporting Learner Diversity through ChatGPT, (3) Challenges and Ethical Concerns in Using ChatGPT for Inclusive Education, and (4) Responsible Integration of ChatGPT in Inclusive Classrooms. Such themes were utilized to interpret the experience of teachers and how ChatGPT in supporting inclusive education can play a role.

Secondary School Teachers' Experiences of Using Chatgpt to Support Learners with Special Educational Needs: A Qualitative Inquiry

IV. RESULTS

The study's interview data analysis yielded four dominant themes that characterize secondary school teachers' experiences of using ChatGPT to support LSEN in an inclusive classroom. The themes described teachers' use of ChatGPT, the benefits, the challenges faced by the teachers, and their opinions on responsible AI-use in inclusive education. In general, the findings indicate that teachers consider ChatGPT to be an instructional aid that enhances teaching practices, but requires teachers' professional judgment, contextualization and ethical use.

Theme 1. ChatGPT as a Tool for Instructional Planning and Differentiated Learning

The first theme exemplifies how teachers made use of ChatGPT to facilitate planning and teach pupils with special educational needs (SEN), complementing their learning. Many participants shared they used ChatGPT to create differentiated activities, simplify instructions, and generate reading and teaching activities. Nevertheless, they stressed the importance of reviewing, modifying, and contextualizing AI-generated outputs before use with learners. One participant shared: T1: "I use ChatGPT in teaching learners by searching appropriate activities that cater to individual needs, especially those LSEN. I use it in creating differentiated activities. I also use translanguaging to help LSEN and slow learners understand the lesson better." Another participant described ChatGPT as an accessible instructional support: T2: "For me, ChatGPT is like a best friend because it is always there whenever I need it, especially when LSEN learners are having difficulties. It gives suggestions on what strategies and activities I can use based on their needs." T4 explained the importance of modifying AI-generated materials: T4: "When my LSEN learners do not understand my instructions or activities, I seek help from ChatGPT to provide directions that fit both LSEN and regular learners. I contextualize the outputs so that learners can relate more to the lesson." T5 further emphasized its role in promoting participation: T5: "I use it as a response to the needs of each learner in inclusive education. I use ChatGPT in discussion parts and reading activities because I want my LSEN learners to participate, read, and recite."

According to the responses, teachers do not perceive ChatGPT as a substitute for making instructional decisions, seeing it instead as a tool that expands their capacity to create inclusive learning experiences. Teacher used translanguaging, asked AI to rephrase responses for clarity in language, and contextualized activities as per learner need.

This finding corroborates the TPACK Framework of Mishra and Koehler (2006) which states that the effective use of technology takes place when teachers use technological knowledge with pedagogical knowledge and content knowledge. The findings also demonstrate constructive involvement where teachers actively use and adapt the available resources based on the experiences and contexts of the learner.

In agreement with Kasneci et al. (2023), the use of generative AI can aide teachers in creating lesson plans and instructional material. Likewise, according to Tlili et al. (2023), AI tools are truly meaningful in education if teachers critically reflect on and modify content generated by the tools for their own purposes.

Theme 2. Enhancing Teaching Efficiency and Supporting Learner Diversity through ChatGPT

The second theme summarizes the perceived benefits of using ChatGPT in inclusive classrooms. Research participants described ChatGPT as a time-saving tool, an idea generator for instruction and lesson organization, and a means for developing activities for diverse learners. T1 shared that ChatGPT helped improve lesson preparation: T1: "It saves time and makes my lesson organized. It makes the flow of my lesson organized and appropriate to the needs of my class." T3 highlighted the significant reduction in preparation time:

T3: "Before, finding the appropriate teaching process and activities took two to three hours. Now it takes less than ten minutes."

T5 explained how ChatGPT supports more interactive teaching: T5: "It provides faster lesson preparation, saves time, and helps create interactive class discussions." Participants also reported that ChatGPT helped them to generate differentiated activities, assessment ideas, and strategies for diverse learners. Because of these benefits, teachers could focus more on learners and on instructional delivery.

According to the analysis, teachers leverage ChatGPT to work more effectively as they can quickly plan and access teaching materials. As per earlier studies, generative AI can support teachers in the development of materials, brainstorming, and personalized instructions, among others (Kasneci et al., 2023).

The findings also suggest that efficiency does not completely eliminate the importance of teacher competency. Teachers have a responsibility to choose materials appropriately and ensure any proposed AI used is suitable for the learners and the curriculum.

Theme 3. Challenges and Ethical Concerns in Using ChatGPT for Inclusive Education

The third theme discusses the challenges faced by teachers in using the ChatGPT system. Participants raised concerns regarding generalized responses, inconsistent suggestions, accessibility to the internet, dependence on the AI, and privacy of learners. T1 shared: T1: "Sometimes the suggestions change and ChatGPT gives different answers. I proofread the outputs and sometimes refer to other sources." T3 explained that AI responses may require further refinement: T3: "Sometimes the suggestions are too general."

Secondary School Teachers' Experiences of Using Chatgpt to Support Learners with Special Educational Needs: A Qualitative Inquiry

If the prompt is incomplete, the answer is not specific.” T4 emphasized the importance of confidentiality:

T4: “I became careful not to provide all information of the LSEN students. I use pseudonyms.”

Participants expressed concern that the overreliance on ChatGPT would affect the teachers’ independent thinking and planning. They stressed that the AI has to support while the teacher stays in control of the decision.

The findings corroborate UNESCO’s (2023) recommendation for generative artificial intelligence in education to include ethical knowledge and safeguarding personal data. The difficulties being faced by teachers suggest that successful implementation extends beyond having access to technology, but requires digital literacy and critical evaluation.

Theme 4. Responsible Integration of ChatGPT in Inclusive Classrooms

The fourth theme refers to the teachers’ perspective and recommendation about the responsible use of ChatGPT. Participants emphasized the key role of moderation, appropriate prompts, teacher training and guidelines for AI to assist teachers and not to substitute them.

T3 shared: “Teachers can create their own draft first and ask ChatGPT to improve it so they will not become too dependent.” T5 emphasized responsible use: “Use it properly and wisely. Provide specific prompts so you can get better responses from ChatGPT.” As expressed by participants, there is a need for professional development opportunities, especially seminars and workshops on prompt theory, ethical use, and appropriate AI use. The need to protect the information of learners and the continued responsibility of the teacher for decision-making were also stressed. The findings highlight the importance of human-centered AI in education. UNESCO (2023) states that artificial intelligence should be used to strengthen the capacity of teachers and enhance meaningful learning, and not to replace them. The findings showed that ChatGPT has the potential to help teachers with lesson planning, differentiation, and learner-centred activities in inclusive education. Teachers’ professional judgment and ethical awareness will determine whether or not, and to what extent, AI will be used as a complementary teaching resource.

VI. CONCLUSION

The study focused on the experiences of secondary school educators who implemented ChatGPT as a resource to assist learners with special educational needs (LSEN) in the classroom. According to the study, the teachers are using ChatGPT as an educational assistant to plan activities, produce differentiated tasks, modify study materials, create classroom procedures and cope with learner’ diversity.

Research suggests teachers believe ChatGPT can improve their teaching efficiency, reduce preparation time, help generate teaching outcomes ideas, and as such maximize response and inclusion. The teachers were able to make learning activities in accordance with the capacities and needs of their learners through ChatGPT. The use of AI in education has shown promising results across various regions and specialized prompting has yielded excellent responses, but challenges like overdependence on AI and student data concerns have emerged. The challenges highlight the importance of critical reflection, professional judgement and ethical awareness on the role of the teachers.

Overall, the study indicates that educators may consider utilizing ChatGPT as a supplementary tool for inclusion education based on their pedagogical evaluations and decisions. By using advanced teaching methods and tools, teachers can utilize artificial intelligence to make learning easier. Therefore, the teacher is expected to engage in learner understanding, modify the instruction, and make teaching meaningful for learners with special educational needs. Teachers must receive well-structured continuous training, instruction policies and guidelines for their practices along with balanced usage of technology.

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Secondary School Teachers' Experiences of Using Chatgpt to Support Learners with Special Educational Needs: A Qualitative Inquiry

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