Trend of Using ChatGPT in Learning Process and Character Education: A Systematic Literature Review

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Abstract. Generative pre-trained transformers (ChatGPTs) have become an increasingly interesting topic in education, particularly in student character development. However, the use of ChatGPT in learning and character education faces significant challenges. This systematic literature review article utilized the PRISMA protocol by using current literature from PubMed, IEEE, Xplore, and Scopus from 2017-2023 that presents an analysis of the challenges, opportunities, and solutions related to the use of ChatGPT in the context of character education. The results showed that the challenges include limited context, reliance on baseline data, and lack of direct supervision. However, there were also significant opportunities, such as creativity in designing learning scenarios, scalability in learning from large amounts of data, and the potential use of ChatGPT as a personal assistant for students. Several solutions were proposed to address these challenges, including developing specialized models, implementing filters or supervision mechanisms, and user education. Understanding these challenges, opportunities, and solutions has been essential to harness the full potential of ChatGPT in improving learning and character education.

Keywords: artificial intelligence; ChatGPT; learning process; character education; ethical implications

1. Introduction

The relationship between the learning process, character education, and the use of ChatGPT artificial intelligence in education is an increasingly relevant and interesting topic to investigate. This is based on research that states that AI ChatGPT plays a vital role in forming ethics when students do academic assignments (Sidiropoulos & Anagnostopoulos, 2024), and developing ICT skills for children (Zuhri et al., 2024). ChatGPT is also a tool for practical skills digital technology, social dialogue media, strengthening student self-efficacy, motivating

student learning, improving critical thinking skills, and teaching honesty in the use of chatbots with human intelligence (Mogavi et al., 2024). In this context, education is a process that involves the transfer of knowledge, skills, and values to individuals through various methods and approaches. Education aims to improve a person's academic abilities and shape individual character and morality (Hall, 2019; Leming & Della, 2021). Character education, on the other hand, is an integral part of education which aims to form a good personality, foster ethical values, and develop a responsible and caring attitude towards the surrounding environment (Lickona, 2018; Berkowitz, 2019; Narvaez et al., 2020).

The latest research on ChatGPT in education and learning has been carried out by many scholars globally, such as awareness in the classroom in the use of ChatGPT (Bender, 2024), ChatGPT in tourism education (Dalgıç et al., 2024), teachers' opinions about AI ChatGPT in language learning (Álvarez-Herrero, 2024), patient case-based learning (Lopez & Goh, 2024), and radiography education with ChatGPT (Amedu & Ohene-Botwe, 2024). Meanwhile, research on ChatGPT in education uses systematic literature review techniques, namely the ethics and impact of ChatGPT in education (Vargas-Murillo et al., 2023), digital learning management with ChatGPT (Faruq et al., 2023), and the transformation of education and learning with ChatGPT (Prananta et al., 2023). Moreover, there is also research about the use of ChatGPT in writing at universities (Imran & Almusharraf, 2023), ChatGPT in health care education (Muftić et al., 2023), and ChatGPT in research articles with various themes (Zamfiroiu et al., 2023). In terms of literature facts, there is still little systematic literature study found regarding trends and the use of ChatGPT in learning and character education; therefore, this research is needed to bridge findings regarding trends and use of ChatGPT in learning and character education in the latest literature published between 2017-2023.

In the context of this research, artificial intelligence (AI) is a computer product related to creating systems that can perform tasks that require human intelligence in the form of AI education via ChatGPT (Alfredo et al., 2024). With AI, applications and technologies can be developed that can understand, learn, and adapt to their environment in education and learning (Park & Kwon, 2024). ChatGPT is a language model built by OpenAI. ChatGPT is a form of implementation of AI that uses natural language modelling techniques based on neural networks to produce responsive and informative text widely applied in education and learning (Bhaskar & Gupta, 2024). ChatGPT is designed to interact with users through text conversations, providing answers, suggestions, information, and entertainment based on a given understanding of the context. In addition, AI and ChatGPT are relevant to character development, as has been stated by many scholars globally (Shank et al., 2021). AI, which was developed to assess human actions, attitudes, and behaviour, is believed to improve virtual-based character education (Asensio et al., 2014).

The importance of introducing AI technology in character education is becoming increasingly urgent, along with changes in social and cultural dynamics. Technology can effectively teach moral values and character to the digital

generation who live in an environment that is increasingly connected via social media networks (Hill, 2020). Easy access to unfiltered online content can influence the character development of children and adolescents (Jones & Smith, 2019). Moreover, the role of technology in everyday life also has an impact on character education. For example, children and teenagers spend more time in front of gadget screens than interacting directly with the environment around them (Brown et al., 2020).

At the same time, the urgency of character education is increasing along with technological developments. In an era where information can be quickly disseminated through social media and online platforms, individuals must have a solid character base to filter the information they receive (Johnson, 2018). Therefore, a holistic and integrated approach is needed to overcome challenges and meet the urgency of character education in the digital era. Character education must be conducted in the school, home, and community (Gomez et al., 2021). In addition, the intelligent and wise use of technology can also help convey character education messages to the younger generation (Lee et al., 2017).

ChatGPT is one of the rapidly emerging AI technologies. The use of ChatGPT in education offers significant potential (Radford et al., 2019; Hill, 2020; Zhong et al., 2020; Li et al., 2021). However, it is essential to understand the urgency of using ChatGPT in the context of character education and identify the problems that may be encountered (Clark et al., 2020; Yang et al., 2021). A study investigated using language models by AI technologies such as ChatGPT in various natural language processing tasks (Radford et al., 2019). Another study highlighted the importance of using ChatGPT technology in the learning process in the digital era (Hill, 2020). A further study evaluated chatbot applications in education by examining the relationship between students' use of ChatGPT and learning outcomes (Li et al., 2021). However, some research studies highlight some of the problems caused by using ChatGPT in the learning process, such as the privacy and data security of students using ChatGPT applications (Clark et al., 2020). Some see the humanistic consequences of using this technology in learning (Yang et al., 2021). Other research explores some of the ethical implications of using AI technology in learning (Andriansyah, 2023).

Based on the description above, it is essential to understand the urgency of identifying the challenges and opportunities of using ChatGPT in the learning process and its implications for character education. Therefore, this systemic literature review research intends to answer the challenges and opportunities of ChatGPT in learning and its implications for character education. The results of this study are expected to contribute to developing a more practical approach to using this technology to improve the quality of the learning process and character education in the educational environment.

The main objective of this SLR is to determine the challenges and opportunities of using ChatGPT in the learning process and its implications for character education. Addressing this objective the following research questions were formulated:
   1) What is the concept of character education and ChatGPT?

2)   How is ChatGPT used in the learning process?
3)   How is ChatGPT used in character education?
4)   What are the problems of applying ChatGPT in the learning process and character education?
5)   What are the challenges and opportunities of using ChatGPT in the learning process and character education?
6)   What is the solution to the challenges of the application of ChatGPT in the learning process and character education?

2.   Methodology

This research used a systematic literature review (SLR) method in describing and analysing the trend of using ChatGPT in the learning process and character education of the students. The analysis followed the stages prescribe by Ibda et al., (2023) as follows: identification, screening, eligibility assessment, and inclusion objectively according to the results of the data evaluated from the contemporary articles reviewed. The SLR method in this research systematically summarizes, synthesizes, and analyzes relevant research in a particular domain using the PRISMA technique regarding AI ChatGPT. The essential nature of SLR in this research was carried out by means of a systematic, transparent, and detailed approach (Atkinson, 2024). The process is fully documented so others can replicate it and produce consistent and trustworthy results. This SLR technique is applied to map the latest articles according to the use of ChatGPT in the learning process and character education. From the research questions designed by the researcher, a systematic literature review process was carried out according to the PRISMA flow, while the results were explained according to the research questions that had been determined. The process begins with identifying research questions, then conducting a literature search, selecting appropriate articles selection, and extracting data. The process made use of PRISMA flow, data analysis, and synthesis of findings to answer research questions.

Stage 1: Literature Search

The literature search was conducted through several steps. First, the articles had to have been published between 2017 and 2023. Second, the articles had to be indexed in PubMed, IEEE, Xplore, and Scopus databases. Third, the articles searched had to be relevant to the trend of using ChatGPT in the learning process and character education. Fourth, the article search used the Publish or Perish 7 application using the API Key. Fifth, the selected articles had to be written in English. Finally, the search keywords consisted of artificial intelligence, "ChatGPT," "generative pre-trained transformer," "learning process," "ethical implication," "character education," "problematics," "challenge," "opportunity," and "solution."

Stage 2: Article Selection

Relevant articles were selected based on inclusion criteria according to the PRISMA technique in this research, which focuses on challenges, opportunities, and solutions for using ChatGPT in learning and character education. From the results of the literature search phase, 399 articles were found. Subsequently,

several irrelevant articles were eliminated, and 30 relevant articles were selected for inclusion in Mendeley 1.19.8 software. The articles were then saved in RIS format. The RIS files were imported into the VOSviewer 1.6.18 application to carry out initial network mapping of relevant themes. The process involved several steps, namely (a) map creation based on bibliographic data; (b) data reading from reference manager files; (c) file selection from folders; (d) selection of analysis type and counting method; (e) verification of selected keywords; and (f) completion of the process. The initial analysis showed that the visualization of article distribution based on keywords was also carried out in the VOSviewer application, which can be seen in Figure 1 below:
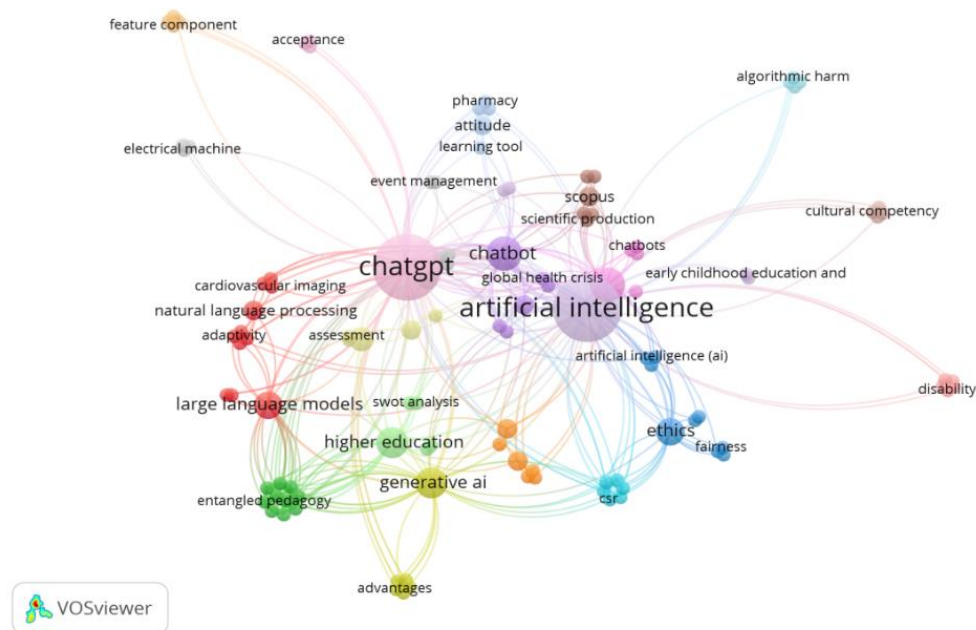

Figure 1. Initial network visualization of the VOSviewer application

Figure 1 shows discussions and studies on using ChatGPT in the learning process and character education. These were very close to studies such as concepts relating to AI, ChatGPT, chatbots, learning tools, ethics, and fairness. Based on the mapping of 89 keywords in VOSviewer occurrences, it was found that the most studied themes were AI, 24 keywords, ChatGPT, 20 keywords; chatbots, 17 keywords; learning tools, 11 keywords; ethics, nine keywords; fairness, eight keywords; while the remaining with under seven keywords were not used as a study.

Stage 3: Data Extraction
Data extracted from the article included information about the urgency, challenges, opportunities, and solutions for using ChatGPT in the context of the learning process and character education, the methods used, main findings, and conclusions drawn. Data was extracted systematically to ensure completeness and accuracy of information. In this research, SLR applied the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) technique to identify, filter, and evaluate eligibility, including data to be analysed and presented in

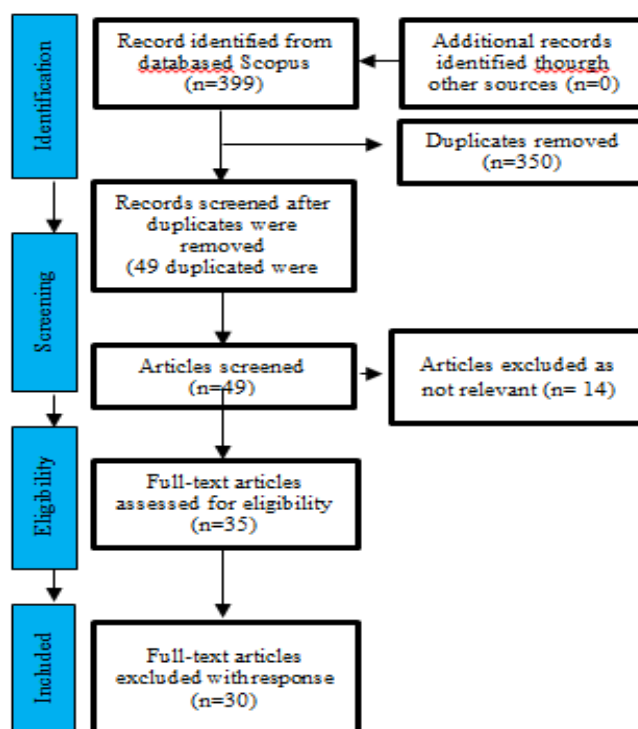narrative form. The article search process using the PRISMA flow diagram can be seen in Figure 2 below:

Figure 2. PRISMA flow diagram for systematic review (Ibda et al., 2023)

Article findings via Publish or Perish 7 on the Scopus database totalled 399 (see Figure 2). Next, the names based on keywords and the remaining 49 similar articles were checked based on the keywords used. There were 350 similar articles. Of the 49 articles, 14 irrelevant articles were discarded, and 30 full-text articles were selected according to the research question in terms of title, abstract, keywords, and substance. The next stage was entering the RIS file from Mendeley into the NVIVO 12 Plus application to be analysed and studied, and the results presented according to the research question.

Stage 4: Data Analysis
The extracted data were analysed qualitatively to identify patterns, trends, and key findings related to the urgency, challenges, opportunities, and solutions of using ChatGPT in the learning process and character education. The analysis was conducted with attention being paid to the context and methodology of each article.

Stage 5: Synthesis of Results
The findings from the analysed articles were synthesized into an overarching conclusion on the urgency of the challenges, opportunities, and solutions of using ChatGPT in character education. This conclusion contained information on the impacts, benefits, challenges, opportunities, and solutions associated with using this technology.

3. Results and Discussion

3.1 Concept of Character Education and ChatGPT

Character education can be defined as a learning process that aims to shape and develop individual character through teaching positive moral, ethical, and personality values (Lickona, 2018). Character education is about teaching values and helping individuals understand, internalize, and apply those values in everyday life (Berkowitz, 2019). The main objective of character education is to create individuals who have a high sense of morality, are responsible, and care about the surrounding environment (Narvaez et al., 2020). In addition, character education also aims to help individuals develop empathy, cooperation, and honesty (Leming & Della, 2021). Thus, character education aims to create citizens who can contribute positively to society.

However, in implementing character education, many problems are currently faced. One of these is the challenge of determining the values which individuals should teach and internalize (Kohlberg & Hersh, 2020). In addition, the dynamic changes in social and cultural values are also a challenge in character education (Gibbs, 2019). Furthermore, character education is also faced with problems integrating these values into the formal education curricula (Wiggins & McTighe, 2017). Lack of support from various parties, including parents and communities, also hinders character education efforts (Bryan & Day-Vines, 2021).

Generative pre-trained transformer (GPT) is a language model developed by Open Artificial Intelligence (OpenAI) to benefit and fulfill human life needs. GPT uses the transformer architecture, which consists of a series of encoder and decoder layers, to generate high-quality text (Radford et al., 2019). ChatGPT is an AI model that uses machine learning algorithms to generate responsive and contextualized text in human conversations. Machines such as ChatGPT can understand language through algorithms and machine learning models drilled with human language data. The process involves tokenization, context understanding, machine learning models, feature extraction, and language modelling (Radford et al., 2019). It is even said to rely on 175 billion documents of various types in the public domain (Prihandini, 2023).

Within two months of its launch, ChatGPT was recorded to be the fastest-growing AI application ever, having 100 million monthly active users (Andriansyah, 2023). The GPT architecture consists of a large number of cascaded transformer layers. Each layer consists of a self-attention mechanism and a feedforward network (one of the simplest and most basic types of artificial neural networks), which enable the model to understand and generate text with complex structures (Vaswani et al., 2017). GPT is trained using a self-supervised learning approach, where the model learns from data without requiring specific labels. The model is trained with large text datasets from various sources, such as books, articles, and websites. ChatGPT's authenticity results from the self-supervised learning approach used in its training. This approach involves learning from data that does not require labels to be added manually. Instead, models such as mine learn from

existing internal data structures to identify functional patterns, structures, and representations (Brown et al., 2020). One of the main advantages of GPT is its ability to generate high-quality, human-like text. The model is capable of producing coherent and contextualized text, as well as understanding language nuances and sentence structure. Models such as ChatGPT can generate cohesive and contextualized text and understand linguistic nuances and sentence structure. This ability comes from training using a large amount of human language data. Models such as ChatGPT are trained using a self-supervised learning method where the model learns from the data without needing specific labels that mark the context or meaning of each sentence. Instead, the model learns patterns and relationships within the massive text data. This process allows the model to understand the context around words, phrases, and sentences and to generate text that fits the given context (Radford et al., 2019). GPT has been used in various applications, including text generation, language translation, dialog systems, and sentiment analysis. The model performs impressively in various natural language processing tasks (Devlin et al., 2019).

3.2 Use of ChatGPT in the Learning Process

The use of ChatGPT in the learning process has undeniable urgency. The algorithms used in ChatGPT enable the generation of responsive and contextualized text (Radford et al., 2019). From the researcher's perspective, the context and authenticity of ChatGPT are recognized and understood through several processes in the system, from language processing, context understanding, machine learning, authenticity checks, and comparing the original with ChatGPT. ChatGPT can recognize and understand the context and produce coherent and contextually appropriate text. This can create a more personalized and adaptive learning experience for students according to their learning styles (Zhong et al., 2020).

In addition, ChatGPT can also be a valuable tool in providing real-time feedback to students (Li et al., 2021). By analyzing the interaction between students and ChatGPT, the system can provide information about students' understanding of the material, their difficulties, and the areas that need improvement. This can speed up the learning process and help students better understand the material. However, its reliability cannot be taken for granted. On the other hand, the urgency of using ChatGPT in character education must also be considered. This technology can help increase student engagement in character learning through an interactive and engaging learning experience (Hill, 2020). With ChatGPT, students can engage virtually in character-building dialog, giving them space to reflect, question, and respond to real-life situations.

Even though it has excellent potential, ChatGPT faces several challenges in the learning process and character education. One of them is the problem of reliability and quality of responses produced by the model (Hill, 2020). Because ChatGPT uses a generative approach, the responses are not always accurate or relevant to a particular learning context. Additionally, there are concerns regarding the need

for more human-to-human interaction in using ChatGPT in learning (Yang et al., 2021). Social interaction between students and teachers or among students is an essential aspect of learning that must be replaced entirely.

3.3 Use of ChatGPT in Character Education
Using ChatGPT in character education can enable students to practice and apply character values in situations relevant to real life. Through interaction with ChatGPT, students can engage in character-building dialogues, such as empathy exercises, effective communication, and moral decision-making (Hill, 2020). This helps students understand the character values more profoundly and internalize them in their daily behaviour. In addition, the use of ChatGPT can also facilitate in-depth discussion and reflection on character values among students. ChatGPT can further act as a mediator in group discussions or online forums, helping students explain their thoughts, ask questions, and respond to classmates' views (Zhong et al., 2020). This creates a collaborative learning environment and supports social and interpersonal character development.

ChatGPT can also enable personalized and adaptive learning according to students' needs and preferences (Li et al., 2021). On the other hand, using ChatGPT also raises ethical and moral problems for students. These problems are related to content authenticity, plagiarism, privacy issues, and information bias (Taja, 2021). By analyzing the interaction between students and ChatGPT, the system can adjust character learning materials and activities according to students' level of understanding and interest. This can help ensure that every student has a relevant and meaningful learning experience in their character development.

3.4 Problems of ChatGPT Implementation in the Learning Process and Character Education
One of the problems faced is the reliability and quality of responses produced by the ChatGPT model. ChatGPT uses a generative approach; the responses made are only sometimes accurate or relevant to a particular learning context. Apart from being a problem, this is also a risk when using ChatGPT (Hill, 2020). In addition, concerns are related to the lack of human-to-human interaction in using ChatGPT in learning. Social interaction between students and teachers or among students is an essential aspect of learning that technology cannot fully replace. ChatGPT cannot wholly replace authentic and meaningful human interaction.

However, several steps can be taken to mitigate this and ensure that ChatGPT is used responsibly through viewing ChatGPT is only a tool, not a human who is capable of human-human interaction activity, digital literacy, digital ethics, education-training, and supervision as in learning education by teachers (Yang et al., 2021). Privacy and security issues are also a concern in implementing ChatGPT in learning. The interaction between students and ChatGPT may involve the exchange of personal or sensitive information, which requires measures to ensure the security of student data (Clark et al., 2020; Jones & Brown, 2020;

Budhwar, 2023).

The use of ChatGPT in character education runs the risk of neglecting the humanistic aspects of character learning. More personalized and in-depth interactions between students and teachers are often crucial in developing character values such as empathy and cooperation (Zhao et al., 2020; Miller & Smith, 2020). Increased reliance on ChatGPT can reduce human-to-human interaction in the learning process, reduce interpersonal aspects and social skills, and make people too lazy to think authentically about their intelligence (Heejung & Songmi, 2021). ChatGPT is also cited as having ethical implications in research and publication (Andriansyah, 2023). As a learning tool, the use of ChatGPT creates anxiety for its users (Ansyah, 2022). Not all students have equal access to technology. Artificial intelligence may deepen accessibility gaps and inequalities, neglecting students who do not have access to devices or sufficient connectivity (Choi & Park, 2019). The negative impact of ChatGPT has the potential to increase risks associated with biased and false information, context insensitivity, privacy concerns, and ethical dilemmas (Wang et al., 2022; Budhwar, 2023).

3.5 Challenges and Opportunities of using ChatGPT in the Learning Process and Character Education
Using ChatGPT in the context of learning and character education brings several challenges that need serious attention in implementation efforts. The first challenges relate to biased data, false content, limited and inaccurate context, and a lack of moral messages (Radford et al., 2019). The second challenge is privacy and security concerns. Concerns about privacy and security are also significant issues in using ChatGPT in education. There is a need for strict policies to protect students' personal information which is revealed during interaction with ChatGPT (Clark et al., 2020).

Using ChatGPT in learning and character education also brings several opportunities. First is the personalization of learning, a learning approach to identify students' interests, needs, abilities, and learning styles. ChatGPT can deliver character content that suits each student's learning needs by understanding individual preferences, needs, and learning styles (Li et al., 2021). The second opportunity is higher student engagement. Interaction with ChatGPT tends to be more appealing to today's digital generation. Students tend to be more engaged in and enthusiastic about learning when using technology they know and understand (Yang et al., 2021). By considering the challenges and opportunities associated with using ChatGPT in the learning process and character education, more effective approaches can be developed to integrating this technology into the educational environment. These activities can be integrated into policies, curricula, materials, learning, and evaluation (Zuhri et al., 2024).

3.6 Solutions for Implementing ChatGPT in the Learning Process and Character Education

One solution to overcome the problem of noise and response quality produced by the ChatGPT model is to carry out model fine-tuning, namely the process of taking a model in the ChatGPT system that has been previously drilled and adapting it to certain specific tasks or data through initial model selection, preparation data, evaluation and tuning, advanced testing and adjustment. Fine-tuning allows the model to be adapted to a specific learning context to generate more relevant and appropriate responses (Zhong et al., 2020). In addition, it is essential to integrate ChatGPT technology with human-to-human interaction in learning. This can be done by combining ChatGPT with human facilitators, such as teachers or mentors, who can provide students with more personalized guidance and feedback. Teachers and mentors can use ChatGPT to learn to write texts, interact, practice questions, and learn across scientific disciplines (Yang et al., 2021).

To address privacy and security concerns, measures are needed to ensure that student data processed by ChatGPT is securely protected. Implementing strict privacy policies and using encryption technology can help protect students' personal or sensitive information (Clark et al., 2020). In addition, it is also necessary to develop learning content that focuses more on holistic character development. The use of ChatGPT can be supported with learning materials specifically designed to increase an understanding and practice of character values such as empathy, integrity, and cooperation. This can be achieved through virtual character-based role simulation activities, interactive case studies featuring certain characters, joint problem-solving via ChatGPT, discussions with scenarios using ChatGPT, and reflection and evaluation activities together with groups guided by the teacher (Hill, 2020).

Other solutions include developing an optimized ChatGPT model specifically for the context of learning and character education (Vaswani et al., 2017), implementing filters or supervision mechanisms to ensure the text generated is in line with the desired values (Deng et al., 2013), and providing training to users on how best to direct and supervise interactions with ChatGPT (Liu et al., 2019). In implementing these solutions, involving various stakeholders, including teachers, students, and technology developers in the planning and evaluation process is essential. Cross-sector collaboration will help ensure the implemented solutions are relevant and effective in improving students' learning processes and character development.

The findings regarding ChatGPT trends in education and character learning in this research are an essential part of primary, secondary, and higher education. These findings include the concept of character education and ChatGPT, the use of ChatGPT in the learning process, the use of ChatGPT in character education, the problems of implementing ChatGPT, the challenges and opportunities for implementing ChatGPT, and the solutions offered in implementing ChatGPT which are essential to apply in education. Educator creativity in using ChatGPT

is the key to the success of character education (Resnick, 2024). Research indicates that ChatGPT encourages creativity, critical thinking, and teacher sensitivity in implementation and is not separated from character education (Yan, 2024). This confirms that this research provides a significant contribution and added value in encouraging teachers to implement solutions for employing ChatGPT in character learning.

4. Conclusion

This research reveals trends in the use of ChatGPT in the learning process and character education in literature published between 2017 and2023. Research findings reveal that the application of ChatGPT in character education promises significant progress in improving the quality of student character learning. There needs to be a careful approach to ensure that this technology does not replace but supports humanist and sustainable character education efforts in the learning process. The urgency of using ChatGPT in the learning process and character education is its potential contribution to learning diversity, student engagement, development of communication skills, flexibility in learning, and development of critical thinking skills. The limitations include limited context, reliance on initial data, and no direct supervision. By understanding the relationship between AI ChatGPT and character education, ChatGPT technology's potential can be optimized to increase character education's effectiveness and create an inclusive and empowering learning environment.

The solution that can be offered is a holistic and sustainable approach. The integration of ChatGPT technology in the learning and character education process must be balanced with developing strategies to ensure that human-to-human interaction remains the primary focus while also paying attention to the security and privacy aspects of student data. The novelty of this research offers a new paradigm and view that there are opportunities in education learning to implement ChatGPT-integrated character education. Several development strategies can be used, including training and supporting digital literacy teachers using ChatGPT in learning, developing quality and targeted content, combining digital and conventional methods, teacher and student collaboration, and regular monitoring.

This research is limited to reviewing articles from 2017 to 2023, and does not include field research. Limitations and obstacles were revealed in the literature search tool: because it only uses Publish or Perish version 7, some articles are not open and cannot be downloaded, and only articles relating to the trend of using ChatGPT in the learning process and character education are indexed by Scopus. Therefore, the findings cannot be generalized according to the context, topic and broad educational theme. The balance of the articles' findings is limited to the period between 2017 and 2023. However, the quarterly format indicates that the research will be carried out in a particular cycle that lasts three months, even though this research has yet to be carried out perfectly. A balance between research components is essential to ensure that each research cycle includes the

steps necessary to make significant progress toward research goals. Future researchers need to explore further in-depth research on using ChatGPT in the learning process and character education.

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