ABSTRACT

Objective: This research aims to review various character education methods that impact children's sustainable intellectual, mental and character development.

Method: The research method is a bibliometric study based on a literature review in the form of articles taken from publications in journals published and indexed by SCOPUS with the keywords “Character Education”, "Empathy", and "Children's Education" in the period 2021 to 2024. Computational mapping analysis for bibliometric publication data using VOSviewer application.

Result: The research results show that the articles used as references totalled 129 articles discussing character education, children's education and empathy. The results of the analysis with the help of VOSviewer show that character education is closely related to positive psychology and emotions, and children's education is closely related to compassion, intervention, and character strength. Based on density visualisation, research on empathy is always developing and is still being researched by researchers.

Keywords: Bibliometrics, Children Education, Character Education, VOSviewer.

DESENVOLVIMENTO SUSTENTÁVEL DE CRIANÇAS E EDUCAÇÃO DE CARÁTER: ANÁLISE BIBLIOMÉTRICA USANDO O VOSVIEWER

RESUMO

Objetivo: Esta pesquisa visa rever vários métodos de educação do caráter que impactam o desenvolvimento intelectual, mental e de caráter sustentável das crianças.

Método: O método de pesquisa é um estudo bibliométrico baseado em uma revisão de literatura na forma de artigos extratos de publicações em periódicos publicados e indexados pela SCOPUS com as palavras-chave "Educação de Caráter", "Empatia" e "Educação Infantil" no período de 2021 a 2024. Análise de mapeamento computacional para dados de publicação bibliométrica usando o aplicativo VOSviewer.

Resultado: Os resultados da pesquisa mostram que os artigos utilizados como referência somaram 129 artigos discutindo educação do caráter, educação infantil e empatia. Os resultados da análise com a ajuda do VOSviewer mostram que a educação dos personagens está intimamente relacionada à psicologia positiva e às emoções, e a educação das crianças está intimamente relacionada à compaixão, intervenção e força dos personagens. Com base na visualização de densidade, a pesquisa sobre empatia está sempre se desenvolvendo e ainda está sendo pesquisada pelos pesquisadores.

RESUMEN

Objetivo: Esta investigación tiene como objetivo revisar varios métodos de educación del carácter que impactan el desarrollo intelectual, mental y del carácter sostenible de los niños.

Método: El método de investigación es un estudio bibliométrico basado en una revisión bibliográfica en forma de artículos tomados de publicaciones en revistas publicadas e indexadas por SCOPUS con las palabras clave "Educación del carácter", "Empatía" y "Educación de los niños" en el período 2021 a 2024. Análisis de mapeo computacional para datos de publicación bibliométrica utilizando la aplicación VOSviewer.

Resultado: Los resultados de la investigación muestran que los artículos utilizados como referencias totalizaron 129 artículos discutiendo educación de personajes, educación infantil y empatía. Los resultados del análisis con la ayuda de VOSviewer muestran que la educación del personaje está estrechamente relacionada con la psicología positiva y las emociones, y la educación de los niños está estrechamente relacionada con la compasión, la intervención y la fuerza del personaje. Basado en la visualización de la densidad, la investigación sobre la empatía siempre se está desarrollando y todavía está siendo investigada por los investigadores.

Palabras clave: Bibliometría, Educación Infantil, Educación de Carácter, VOSviewer.

INTRODUCTION

Every child is born in circumstances, nature, and character. The development of children's character is influenced by the pattern of parental care, formal education, and environmental friendship (Haslip & Donaldson, 2021b; Havighurst et al., 2022). Parent in a way no realised has embedded bad character in the child through pattern-dominated parenting with anger and violence, less love darling, as well as no give an example and exemplary (Alnajdawi, 2023). With increased age, the character child will become more coloured by friendship and environment (Perbawasari et al., 2023). Children who grow up in a bad environment and are friends with people of character no goodwill own bad character, which always encourages them to do badness (Albaw et al., 2022). More than that, in the digital era of development, character child very influenced by various spectacle pornoaction and game sadism available on mobile clever because as many as 68% of children 2 years old already can use and access it on mobile clever (Havighurst et al., 2022; Lesková et al., 2023). One form of character child consequence from a number of the above factors is the mushrooming phenomenon of hatred and bullying, whether it happens directly or via social media, and violence involves the child as perpetrator and victim (Potard et al., 2021). Formal education
institutions are places to educate knowledge, skills, and attitudes, and acting in demand must take a role in the character of education.

Character education is something designed to approach systematically to introduce, teaching, and internalising values appropriate virtue with heart, conscience, ethics, and morals, such as responsibility, fairness, honesty, caring, empathy, etc. (Curren et al., 2022; Hayudi et al., 2023). Education characters children in time park child done with make teachers real models to demonstrate interaction, mutual social respect, help, and care for others (Vuorinen et al., 2021). Education character children at level education base and intermediate can adopt system boarding school where students taught confidence to Allah SWT, who is between his nature are all-seeing and great reply all charity deed human, so students educated for always feel supervised by Allah (muroqobah) who made it God-fearing and have good manners with practice daily life at the Islamic boarding school for always behave honestly and no take other people's things, behave simple and low heart, respect people elder, love people younger, caring and each other help between students (Alirahman et al., 2023; Furqan et al., 2024). One form of education character-based boarding school is education integral character of ecofeminism based on the Al-Qur'an, which balances between character masculine (Jalaliyah/Greatness), i.e. related characters with sense and logic like active, progressive, visionary, has a sense of desire know (curiosity), etc; with feminine character (Jamaliyah/Beauty), namely related characters with heart and taste like patient, empathetic, obedient, nurturing and others (Febriani et al., 2023).

Education character embeds values of universal virtues such as transcendence, wisdom, justice, courage, moderation, and humanity can also be done through art and music that teaches about the purity of soul, beauty of nature, and harmony in life (Váradi, 2022; Vazquez-Marín et al., 2022). Besides that, education character more effective if done learning directly to environment social with the background behind religion, ethnicity, and diverse culture so that students can study for each other respect, interact in a way harmonious in the middle differences, as well each other cooperate and collaborate in do kind and realise civilisation (Goodman, 2021) or learning directly in a way ecology to environment natural so that student can study for treat naturally with good like nurse plants, love animals, as well avoid behaviour that can damage natural like throw away rubbish carelessly, cutting down a tree not in accordance rules, etc (Jacobs et al., 2023; Pirchio et al., 2021). Education character and developments in the digital era can also be related to managing social media content that contains values, morals, and good ethics (Sugiaryo, 2023). Study this aims to review various
education methods that sustainably impact the character development of intellectual, mental, and character children.

2 METHODS

This literature review is from various research studies (Fadhil et al., 2023). Research data is in the form of articles taken from publications in journals published and indexed by SCOPUS. The data search process uses the website https://www.scopus.com/search/form.uri?display=basic#basic. This research was carried out in several stages, including data searching, analysis of bibliometric data for articles that had been collected using the Microsoft Excel program, and computational mapping analysis for bibliometric publication data using the VOSviewer application (Allam & Sharifi, 2022; Furstenau et al., 2021). Search for articles using the terms "Character Education", "Empathy", and "Children's Education" according to the needs of the publication theme. The articles used are articles published in the range 2021 - 2024. Data collection was carried out in January 2024. Articles that had been collected and met the analysis criteria were then exported in research information system file format (.ris). The VOSviewer application also visualises and evaluates trends using bibliometric mapping. The VOSviewer application is used to create three types of publication variations, namely a network visualisation form, a density visualisation form, and an overlay visualisation form according to the existing network between items (Karakus et al., 2021; Kartimi et al., 2022). The keywords are adjusted at least 3 times when creating a bibliometric map.

3 RESULTS AND DISCUSSION

3.1 PUBLICATION DATA RESULTS

Articles used as a reference in the study total 129 articles discussing education character, children's education, and empathy. Based on the title, keywords, and discussion in 129 article references, 8 articles were made as the main references because of the discussion approach and in accordance with the themes discussed. The article is as follows:
### Table 1

**Article as reference main**

<table>
<thead>
<tr>
<th>No</th>
<th>Writer</th>
<th>Title</th>
<th>Year</th>
<th>Cited</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Culliford</td>
<td>Emotional Intelligence of Future Physicians Who Tend to Hide Professional Mistakes Adolescent School Bullying and Life Skills: Personality Characteristics of Empathy Profiles – Practical Implications for Education of Medicine Students</td>
<td>2021</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>Lazurenko &amp; Smila</td>
<td>A Systematic Review of the Recent Literature</td>
<td>2021</td>
<td>64</td>
</tr>
<tr>
<td>4</td>
<td>Potard et al.</td>
<td>Moral Character Education after COVID-19: An Interview</td>
<td>2022</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Bętkowska-Korpała et al.</td>
<td>Sustainable Development of Character Education in Physical Education: Bibliometric Analysis Using Vosviewer</td>
<td>2022</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>(Curren et al., 2022)</td>
<td>The Development of Islamic Religious Education and Character Materials Online Based in Elementary Schools</td>
<td>2023</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: researcher's analysis

### 3.2 DEVELOPMENT STUDY ON FIELD CHARACTER EDUCATION, CHILDREN EDUCATION, AND EMPATHY

Based on the articles used as a reference, the main in table 1 is known development-related research character education, children education, and empathy based on a year like seen in the table following:
Table 2

Development study about character education, children education, and empathy for 10 years final.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Publications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>30</td>
</tr>
<tr>
<td>2015</td>
<td>29</td>
</tr>
<tr>
<td>2016</td>
<td>33</td>
</tr>
<tr>
<td>2017</td>
<td>29</td>
</tr>
<tr>
<td>2018</td>
<td>27</td>
</tr>
<tr>
<td>2019</td>
<td>29</td>
</tr>
<tr>
<td>2020</td>
<td>25</td>
</tr>
<tr>
<td>2021</td>
<td>33</td>
</tr>
<tr>
<td>2022</td>
<td>37</td>
</tr>
<tr>
<td>2023</td>
<td>52</td>
</tr>
<tr>
<td>2024</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: excel analysis

If development every year for study about character education, children education, and empathy on table 2 above visualized in a way graph, then can see like picture following:

Figure 1
Development study related to character education, children education, and empathy

Based on the table and picture above, it can concluded that every year happen enhancement attention researchers to theme study on character education, children education, and empathy as part of theme very research is important in the field of education because related to quality generation future successors determines the fate of the earth and its inhabitants at that
time will come. This matter shows that study about the third theme still in accordance for discussed on period moment this and so on.

3.3 VISUALIZATION THEME CHARACTER EDUCATION, CHILDREN EDUCATION, AND EMPATHY WITH THE USE OF VOSVIEWERS

Visualization about theme study character education, children education, and empathy analyzed with help application VOSviewers. Analysis with VOSviewers this is based on 129 articles that reference character education, children education, and empathy. Based on the keywords entered on the application, VOSviewers obtained that split data mapping into 19 clusters of 159 keywords, namely:

1. Cluster 1 has 14 items and is marked color red. Group this consists of the age of acquisition, character, critical cultural disability, culture, discursive psychology, education, health, local community, morals, psychology, self-improvement, spirituality, spiritually grounded character, and wisdom (e.g., Vanney et al., 2023).

2. Cluster 2 has 13 items and its own color green consisting of compassion, early childhood education, egoism, inclusion, kindness, mental contrasting, mindfulness, self-compassion training, self-efficacy, situationism, skepticism, skepticism about character, social psychology, and virtue ethics (e.g., Taylor, 2022).

3. Cluster 3 has 13 items and is colored blue, consisting of arts education, character education, character strengths, competence, early adolescence, early childhood education, integration, positive education, positive psychology, skills, social-emotional learning, and values in action (e.g., Qin et al., 2022).

4. Cluster 4 has 12 colored yellow, consisting of ambiguity tolerance, the big five, calling, decision-making, educational environment, medical students, moral motivation, perfectionism, personality, school-to-work transition, validation, and vocational identity (e.g., Aronson et al., 2022).

5. Cluster 5 has 12 colored purple, consisting of bullying, development, emotion, epistemic virtues, executive function, intellectual humanity, interdisciplinarity, interpersonal, intellectual virtues, moral disengagement, open-mindedness, social cognition, and virtue epistemology (e.g., Potard et al., 2021).

6. Cluster 6 has 11 colored blue, consisting of acute stressors, adverse childhood experience, chaplaincy, chronic stressors, college, mental health, parental care,
resilience, self-care, self-compassion, and subclinical depressive symptoms (e.g., Freitas et al., 2021).

7. Cluster 7 consists of 11 orange items on autism, caregiving, cognitive bias, cognitive empathy, emotional resilience, motivation, personality traits, perspective-taking, psychological distress, social interaction, and strategic empathy (e.g., Watson et al., 2022).

8. Cluster 8 has 10 colored items purple-pink consisting of the doctor-patient relationships, emotional contagion, emotional processing, health equity, humanities, medical education, psychiatry, reflection, self-integration, and value-added education (e.g., Wu et al., 2023).

9. Cluster 9 has 9 colored items purple young: assessment, behavioral sciences, child, clinical empathy, critical pedagogy, critical thinking, education methodology, patient-provider interaction, and standardized patients (e.g., Brodahl et al., 2022).


11. Cluster 11 consists of 8 colored items green-yellow, consisting of burnout, child abuse, empathic erosion, factors, psychological training, secondary trauma, stoic training, and work motivation.

12. Cluster 12 has 6 colored items, blue-purple consisting of adolescents, depression, healthy lifestyles, school-based intervention, social and emotional skills, and well-being.

13. Cluster 13 has 6 colored items yellow-gray, consisting of emotion coaching, emotion socialization, intervention, parenting, prevention, and toddlers.


15. Cluster 15 has 5 colored items, blue-purple consisting of children, classroom dynamics, context, individual abilities, and interdisciplinary research (e.g., Kurz et al., 2021).

16. Cluster 16 has 4 colored items yellow-orange, consisting of advocacy, co-production, health and social care integration, and teamwork.

17. Cluster 17 has 4 colored items purple-pink, consisting of clinical interview, communication, patient’s emotions, and professionalism.
18. Cluster 18 has 3 colored items purple-pink, consisting of *cyberbullying, elementary school students, and special educational needs* (e.g., Touloupis & Athanasiades, 2022).

19. Cluster 19 has 3 colored items purple-blue, consisting of *classmates, emotions, and learning*.

Linkages between items in every group should be marked with existing connecting lines between related items (Furstenau et al., 2021; Hayudi et al., 2023). The group's color differs depending on the discussion discussed in the previous research. Size group differences depend on many theme research that has been done, increasingly big size cluster, then the more lots research that discusses the theme of the group (García-Carpintero Blas et al., 2023; Matevosyan, 2015; Willetts et al., 2022). Results analysis with VOSviewers can produce three picture visualizations: network visualization, overlay visualization, and density visualization. As for results visualization from the study, this is what it consists of on character education, education of the child, and empathy is as follows:

**Figure 2**

*Character Education*

![Character Education](image)

*Source: VOSviewer analysis*

The results visualization above shows a connection between education character and another discussion. The picture above describes education's character's connection with *cognitive empathy, perspective taking, personality, critical thinking, character, positive psychology, character education, emotions, and professional development*. Education purposeful character for form personality and good character must start since child aged early
through example real and the example of the adults around him who show various character and commendable morals with create a good environment, comfortable and harmonious with various full interaction understanding, love, care, mutually helpful, etc; so that in a way automatic can embed and internalize various good character and positive in a way psychology specifically love darling, kindness and concern social so that child can control emotion and prioritize empathy for interact with other people (Freitas et al., 2021; Havighurst et al., 2022; Roerig et al., 2023; Vuorinen et al., 2021). Besides that, education and successful character form personality, and good character, like honesty, discipline, enthusiasm, study, dedication, ethos, work, etc., are very influential to success and professionalism in the world. Work because one side always pushes to keep going, repair self, explore various potency self, and increase quality self as well as when simultaneously can behave empathy and care as well as capable cooperate and collaborate with colleague work (Haslip & Donaldson, 2021; Villacís et al., 2023).

**Figure 3**

*Children Education*

Visualization about the children education above shows that education of the child related to cognitive empathy, perspective taking, psychology, mental health, burnout, resilience, personality, intervention, compassion, character strengths, early childhood education, positive psychology, character, education, and assessment. Formation of personality and various good character in the self child must involve intervention in various instrument education such as
parents, formal and informal education, friendship and environment, as well as strengthening character from spiritual aspects and emotional. Deep spiritual teachings of various religious ancestries, Prophet Abraham, like Jews, Christians, and Muslims do not only aim to connect man in a way transcendental to God but also spread love and love darling good in heart and thought nor when speak and do the deed (Ford et al., 2023; Vuorinen et al., 2021).

Very spiritual teachings are influential to the formation of personality and good character so that must become the focus for various instrument education, especially parents and formal education. Parent and formal education is possible to adopt a system boarding school where students taught confidence to Allah SWT, who is between his nature is all-seeing and great reply all charity deed human, so students educated for always feel supervised by Allah (muroqobah) who made it God-fearing and have good manners with practice daily life at the Islamic boarding school for always behave honestly and no take other people’s things, behave simple and low heart, respect people elder, love people younger, caring and each other help between students (Ali rahman et al., 2023; Furqan et al., 2024). One form education character-based boarding school is education integral character of ecofeminism based on the Al-Qur'an, which balances between character masculine (Jalaliyah/Greatness) i.e., related characters with sense and logic like active, progressive, visionary, has a sense of desire know (curiosity), etc; with feminine character (Jamaliyah/Beauty), namely related characters with heart and taste like patient, empathetic, obedient, nurturing, full love darling and others (Febriani et al., 2023).
Results data analysis shows that empathy-related to social cognitive, mental health, burnout, resilience, personality, psychology, empathy cognitive, perspective taking, intervention, compassion, character strengths, early childhood education, character education, positive psychology, education, character, and critical thinking (Carrard et al., 2022). Education of the character of a successful child through intervention and strengthening character through various instruments will produce intelligence, emotions, specifically love, and empathy when interacting socially. Empathy is defined as a cognitive trait (cognitive empathy) and characteristic affective (affective empathy) (Haslip & Donaldson, 2021). Cognitive empathy is the theory of mind that helps understand and recognize other people's beliefs and intentions (perspectives) regarding a situation. Affective empathy concerns a person's ability to recognize people's emotions about a situation, experience and share emotions with others and respond positively to a person's emotional state (Touloupis & Athanasiades, 2022). Empathy is sourced from softness and a full heart of love, so we can feel trouble and other people's suffering. Because of that, the child who succeeded implanted love for darling and empathy; no will say hurtful words to his friends, like speech hatred and bullying, in a way directly or online (cyberbullying), and no will do possible actions in hurtful ways such as violence, fighting, and brawls (Potard et al., 2021 Touloupis & Athanasiades, 2022).
Figure 5

*The relationship between character education, children’s education, and empathy*

The visualization results above show a connection between character education, children’s education, and empathy. The interconnectedness of these three discussions is marked by a line between items that connect the three (Cygler et al., 2021; Furstenau et al., 2021; Goodman, 2021; Hayudi et al., 2023). Children’s character education can be carried out through activity-based learning directly in social environments with diverse religious, ethnic and cultural backgrounds so that children can learn to respect each other, interact harmoniously amidst differences, and cooperate and collaborate in doing good (Goodman, 2021). Apart from that, children’s character education can also be done by carrying out ecology-based learning by immersing themselves in the natural environment directly by interacting with various flora and fauna, such as plant care activities, including working together to hoe the soil, plant seeds, get rid of various plant pests, water, fertilize plant, as well as animal care activities such as not hurting animals, giving animals food and water, herding animals into nature to look for food, and playing with animals. Ecologically based character education can foster compassion, empathy and concern for the environment and nature (Jacobs et al., 2023; Pirchio et al., 2021; Wauthier et al., 2023).
The analysis above shows the development of research on character education in children from 2021 to 2023 (Brendan Young et al., 2023; Carrard et al., 2022; Vuorinen et al., 2021). In 2021, research on children’s character focused on psychological early childhood education to determine several indicators of psychological health, such as children's emotions and affection (e.g., Kroshus et al., 2021). In 2022, research on children's character will experience an expansion of themes besides traditional themes, such as intervention and character strengthening by various educational instruments to strengthen several positive psychological indicators such as self-correction, compassion, empathy, social recognition, and so on (e.g., Qin et al., 2022). Some new research themes include mental health, resilience, medical education, relationships between doctors and patients, clinical empathy, and so on. In 2023, research themes related to children's character education will be moral motivation to improve the character of teenagers, as well as assessment and advocacy against character crimes against children, such as bullying and violence against children (e.g., Roerig et al., 2023).
Density analysis results

Density analysis shows how much research has been done on the theme discussed. The yellow color shows that research on this theme has been widely discussed, including character education for children to instill several positive psychological indicators, especially empathy (e.g., Lazurenko & Smila, 2021). Apart from that, several research themes regarding character education in the medical field include medical education, mental health, resilience, and the relationship between doctors and patients (e.g., Cygler et al., 2021). Meanwhile, more research is needed on green themes, including emotional training, advocacy, and professional development. Observing the results of this density analysis can also be used to look for novelty in research that will be carried out (Hayudi et al., 2023; Munir, 2023; Sugiaryo, 2023).
4 CONCLUSION

129 articles discussed character education, children's education, and empathy. Based on the intensity of research in each year of publication, more and more researchers discuss children's character education every year. The results of the analysis with the help of VOSviewer show that character education is closely related to positive psychology and emotions, and children's education is closely related to compassion, intervention, and character strength. Based on density visualization, research on empathy is always developing and is still being researched by researchers.

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