

Pt01

The Landscape of Waldorf Kindergarten Research: A Bibliometric Analysis

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Keywords

Waldorf Kindergarten; Early Childhood Education; Bibliometric Analysis

Abstract

Waldorf education, founded by Rudolf Steiner, emphasizes a holistic approach to child development, integrating intellectual, artistic, and practical skills (Oberski, 2006; Mavrelou & Daradoumis, 2020). This is particularly evident in Waldorf kindergartens, which focus on nurturing children's creativity and imagination through play and artistic activities. Despite the growing interest in alternative educational approaches, there is a lack of comprehensive review of Waldorf kindergarten research, creating a gap in understanding the current state and trends in this field.

The purpose of this study is to provide a systematic overview of the research landscape in Waldorf kindergarten education through bibliometric analysis. The research questions are: 1) What are the main research trends and themes in Waldorf kindergarten education? 2) Which institutions or countries have been the most prolific in publishing research on Waldorf kindergarten education? 3) What are the most frequently cited works in the field of Waldorf kindergarten education, and what themes do they address?

This study employed bibliometric analysis methodology. A comprehensive literature search was conducted using Web of Science, limited to English academic research papers indexed as SSCI and SCI, with no time limit. A comprehensive literature search using Web of Science yielded 185 results, which were screened to a final sample of 38 papers. The research data was processed using Biblioshiny, a web app powered by the Bibliometrix R package. The analysis utilized various techniques, including citation analysis, co-citation analysis, and keyword co-occurrence analysis. These methods identified influential authors, institutions, and publications, while mapping the intellectual structure and thematic evolution of the field. The study focused on identifying prolific authors and countries, generating word clouds, and constructing thematic maps. The results of this analysis provide valuable insights into the current state and future directions of research in this important educational approach.

The analysis revealed that research on Waldorf kindergarten education spanned from 1997 to 2024, with an annual growth rate of 5.27%. A total of 107 authors contributed to this field. Trending topics included Montessori education and children's development. Karolinska Institutet emerged as the leading contributor to this research area. Geographically, the United Kingdom produced the highest number of publications, followed by the United States. However, literature from Switzerland received the most citations, indicating its significant impact on the field. The study also identified key themes and research clusters, providing a comprehensive overview of the intellectual landscape in Waldorf kindergarten education research.

The findings highlight the growing interest in Waldorf kindergarten education research, as evidenced by the steady annual growth rate. The prominence of Montessori education as a trending topic suggests a comparative focus within the field. The leading role of Karolinska Institutet indicates a strong Scandinavian influence in this area of study. While the UK and USA dominate in terms of

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research output, the high citation rate of Swiss literature points to its substantial impact on the field. This geographical distribution of research and impact underscores the international nature of Waldorf education studies and the potential for cross-cultural insights in early childhood education approaches.

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Pt02

Bridging Tradition and Modernity: Chinese Parents' Perceptions of Comprehensive Sexuality Education (CSE) for Young Children

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Keywords

Comprehensive Sexuality Education (CSE), Early Childhood Education, Parents' Perceptions

Abstract

Introduction

Comprehensive Sexuality Education (CSE) is a curriculum-based process that aims to empower children and young people by providing them with knowledge, skills, attitudes, and values related to sexuality, enabling them to realize their health, well-being, and dignity, develop respectful relationships, make informed choices, and understand and ensure the protection of their rights throughout their lives (WHO, 2023). CSE is crucial for promoting healthy sexual behaviors and relationships among children and adolescents (WHO, 2023). However, implementing CSE in China faces significant challenges due to cultural norms, societal attitudes, and limited resources (Chi et al., 2013). Understanding Chinese parents' perceptions of CSE is essential for developing effective educational programs that address their concerns and align with their values (Zhang & Yuan, 2023).

This study aims to explore how Chinese parents navigate the tension between traditional beliefs and modern educational practices in their perceptions of CSE for young children. By employing thematic and narrative analysis, the research will provide insights into the complex interplay of cultural, social, and personal factors that shape parental attitudes towards CSE.

Methods

The qualitative study involved 15 mothers and 3 fathers of 18 kindergarten children from Zhejiang Province, China. Individual online semi-structured interviews were conducted in Chinese, recorded, transcribed, and translated into English. Thematic and narrative analyses were employed to analyze the data, identifying key themes and exploring how parents position themselves regarding CSE.

Results

The thematic analysis revealed several key themes regarding Chinese parents' perceptions of CSE for young children. Parents generally acknowledged the perceived necessity of CSE, recognizing its importance for their children's development and well-being. However, concerns and misconceptions about the appropriateness and potential negative impacts of CSE content were also prevalent, stemming from traditional cultural beliefs and societal attitudes. Parents expressed clear expectations from educators, emphasizing the need for sensitivity, cultural awareness, and comprehensive training to deliver CSE effectively. Cultural influences emerged as a significant factor, with parents navigating the tension between traditional values and modern educational practices. These themes highlight the complex interplay of personal, cultural, and societal factors that shape

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parental perceptions of CSE, underscoring the importance of addressing concerns and misconceptions while respecting cultural contexts in the implementation of CSE programs.

Applying Bamberg's (1997) narrative analysis framework, this study uncovered the multilevel roles parents assume in the context of children's CSE. Level 1 positions parents as Educators and Protectors, emphasizing their roles in guiding and safeguarding their children's understanding of sexuality. Level 2 depicts them as Storytellers, Negotiators, and Influencers, revealing the active part they play in shaping narratives around CSE, balancing traditional and modern values, and influencing their children's perspectives. Level 3 identifies parents as Cultural Custodians and Critics, highlighting their function in preserving cultural norms while critically evaluating the adequacy of CSE in light of these values. These levels illustrate the dynamic and complex roles parents navigate as they engage with CSE for their children.

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<https://doi.org/10.3389/fpsyg.2023.1096516>

Introduction

Comprehensive Sexuality Education (CSE) is a curriculum-based process that empowers children and young people with knowledge, skills, attitudes, and values related to sexuality, enabling them to realize their health, well-being, and dignity (WHO, 2023). While crucial for promoting healthy sexual behaviors, implementing CSE in China faces challenges due to cultural norms, societal attitudes, and limited resources (Chi et al., 2013). Understanding Chinese parents' perceptions of CSE is essential for developing effective educational programs that address their concerns and align with their values (Zhang & Yuan, 2023). This study explores how Chinese parents navigate the tension between traditional beliefs and modern educational practices in their perceptions of CSE for young children. By employing thematic and narrative analysis, the research provides insights into the complex interplay of cultural, social, and personal factors shaping parental attitudes towards CSE. Methods The qualitative study involved 15 mothers and 3 fathers of 18 kindergarten children from Zhejiang Province, China. Individual online semi-structured interviews were conducted in Chinese, recorded, transcribed, and translated into English. Thematic and narrative analyses were employed to analyze the data, identifying key themes and exploring how parents position themselves regarding CSE. Results Thematic analysis revealed several key themes regarding Chinese parents' perceptions of CSE for

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young children. Parents acknowledged the perceived necessity of CSE while expressing concerns and misconceptions about its appropriateness and potential negative impacts. They emphasized clear expectations from educators, including sensitivity, cultural awareness, and comprehensive training. Cultural influences emerged as a significant factor, with parents navigating the tension between traditional values and modern educational practices. Applying Bamberg's (1997) narrative analysis framework, the study uncovered multilevel roles parents assume in the context of children's CSE. Level 1 positions parents as Educators and Protectors, guiding and safeguarding their children's understanding of sexuality. Level 2 depicts them as Storytellers, Negotiators, and Influencers, shaping narratives around CSE and balancing traditional and modern values. Level 3 identifies parents as Cultural Custodians and Critics, preserving cultural norms while critically evaluating CSE's adequacy. These levels illustrate the dynamic and complex roles parents navigate as they engage with CSE for their children.

Pt03

"Are Friends Important?": A Case Study of Chinese Children's Perspectives on Friendship

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Keywords

Friendship Perspective; Early Childhood Education; Social Development

Abstract

This study investigates the significance of friendship from the perspective of 4-5-year-old Chinese children, a critical demographic for understanding early socialization and emotional development. The rationale is anchored in the premise that friendships are instrumental in shaping children's self-concept and self-esteem, as well as their acceptance of social intimacy (Bowker & Weingarten, 2022; Kouvava et al., 2022). The objective is to elucidate the attributes of friendship that young Chinese children value, addressing the question: What characteristics of friendship do 4-5-year-old Chinese children perceive as important? This inquiry is vital for educators to develop educational strategies that resonate with children's developmental stages.

Utilizing a qualitative approach, the study involved semi-structured interviews and observations with 40 K2 children from Linhai City, China. The analysis, through thematic coding, explored six dimensions: the concept of friendship, intimacy, stability, support, conflict, and importance. The findings indicate that K2 children have a concrete understanding of friendship, associating it with positive emotions, unconditional trust, the need for stability, and mutual support. They also prefer positive conflict resolution strategies.

The study's insights are significant: children's views on friendship are tangible and externally focused, highlighting the importance of positive emotions, trust, and stability. These findings are valuable for early childhood educators, suggesting that they should respect children's perspectives on friendship, deepen their understanding, guide them to form correct concepts, provide life-based education, and monitor children's friendship status to foster a supportive environment. Moreover, the research contributes to the growing body of literature on early childhood social development in the Chinese context. It highlights the need for culturally sensitive approaches to understanding and nurturing friendships among young children.

In conclusion, this research advances the theoretical understanding of Chinese young children's views on friendship and offers practical guidance for enhancing preschool friendship education. It suggests that future research should consider broader cultural contexts and that educators can use these findings to develop more effective strategies that promote healthy social interactions. Future studies could explore how these perceptions of friendship evolve as children

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progress through different developmental stages. Additionally, comparative studies across different cultural contexts could provide valuable insights into the universal and culture-specific aspects of children's friendship perceptions. The implications of this research extend beyond the classroom, potentially informing parenting practices and community-based programs aimed at fostering positive social relationships among young children. By understanding how children view and value friendships, we can create more supportive and nurturing environments that promote healthy social and emotional development from an early age.

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Pt04

Illustrating Feelings: Picture Books as Effective Tools for Fostering Emotional Expression in Children with Special Educational Needs

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Keywords

Picture Book, Emotional Expression, Special Educational Needs

Abstract

- **Rationale for the study**

This study examines the application of picture book pedagogy by pre-service early childhood educators to enhance emotional expression in kindergarten children with special educational needs (SEN). While working with SEN children, early childhood educators play a crucial role in effectively fostering emotional and social development, but they also encounter considerable challenges (Curriculum Development Council, 2017).

- **Purpose(s) and research question(s) of the study**

This study aims to explore the process of picture book teaching employed by pre-service teachers and assess the effectiveness of teaching strategies in enhancing emotional expression in SEN children, enabling them to better articulate their feelings in daily life.

- **Brief description**

The study focused on three female pre-service early childhood educators enrolled in a Bachelor's programme in Early Childhood Education at a university in Hong Kong. During their internship activities, these educators led four sessions of weekly learning activity on emotional management for five SEN children. Data were collected from May to November

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2024 through video recordings and class observations. Playback of these recordings and review of the field notes taken during observations allowed for a comprehensive analysis of teaching techniques and evaluation of their impact on enhancing children's emotional expression. All collected data were anonymized to ensure confidentiality and protect participants' privacy.

- **Summary**

- Through observations, teachers noted significant improvements in children's ability to recognize and articulate their feelings, as well as enhanced participation in discussions about emotions. Many children demonstrated increased confidence in expressing their emotions, utilizing the strategies learned.

Findings reveal that selecting appropriate picture books is essential for enhancing emotional understanding among SEN children. Books that focus on emotional management themes (such as recognition, expression, and regulation) are particularly effective. Engaging narratives and wordless books significantly improve comprehension, helping children connect emotionally with the material. Incorporating content related to children's live experiences deepens their emotional understanding, enabling them to recognize and manage their feelings in relatable contexts.

Furthermore, the study identifies several effective teaching strategies employed by pre-service early childhood educators. These include using visual and physical cues to enhance understanding, facilitating discussions on emotional topics to encourage sharing and learning emotional regulation techniques, and utilizing visualizing tools like the "Emotion Management Thermometer" to help children manage their emotions and improve coping skills.

The addition of hands on activities aimed at categorizing emotions and creating masks further foster self-awareness among children. Targeted interventions addressing fears not only alleviate anxiety but also empower children to confront challenges, thereby enhancing their overall emotional expression.

In conclusion, this study contributes valuable insights into effective teaching strategies for pre-service early childhood educators working with SEN children. By emphasizing the importance of picture book pedagogy, the study underscores the potential of literature to facilitate emotional expression and support the developmental needs of these children. Future research should expand on these findings to develop comprehensive training programs for educators, ensuring that they are well equipped to address the emotional and social needs of all children in their care.

- **References**

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Pt05

Attention Matters: The Application of Electronic and Physical Teaching Tools to Enhance Multisensory Learning in Children with Special Educational Needs

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Keywords

Multisensory Learning, Attention, Special Educational Needs

Abstract

- **Rationale for the study**

This study explores the integration of electronic and physical teaching materials to enhance attention in children with special educational needs (SEN). Educators face significant challenges in maintaining the focus of SEN children, as traditional teaching methods may not fully engage them. With the increasing prevalence of technology in education, it is crucial to investigate how combining digital resources with hands-on materials can create a more stimulating learning environment. This approach aligns with contemporary educational strategies that emphasize multisensory learning, which can be particularly beneficial for SEN children.

- **Purpose(s) and research question(s) of the study**

This study aims to explore the integration of electronic and physical teaching materials used by early childhood educators and assess the effectiveness of their teaching strategies in enhancing attention in SEN children, encouraging them to actively participate in learning activities.

- **Brief description**

The study focused on one male and one female pre-service early childhood educators enrolled in a Bachelor's programme in Early Childhood Education at a university in Hong Kong. During their internship activities, these educators led four sessions of weekly learning activity on attention training for five SEN children. Data were collected from May to November 2024 through video recordings and class observations. Playback of these recordings and review of

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field notes taken during observations allowed for a comprehensive analysis of teaching techniques and their impact on enhancing children's attention. All collected data were anonymized to ensure confidentiality and protect participants' privacy.

- **Summary**

Findings reveal that the use of PowerPoint is useful in enhancing attention in SEN children with through visual stimulation and interactive activities. By incorporating multimedia elements, educators can create engaging lessons for diverse learning styles (Curriculum Development Council, 2017). PowerPoint also allows for clear timetables and structured lesson outlines. The integration of technology fosters active participation, improving children's motivation and concentration, transforming them into active learners (University of Minnesota, 2024).

Furthermore, the study identifies the use of sound effects in technological teaching to enhance SEN children's attention by stimulating their sense of hearing. Incorporating sound effects into PowerPoint makes lessons more engaging, interactive, improving children's comprehension and memory. Aligning sound effects with children's interests can further capture their attention and increase focus during lessons (School-based Support (Kindergarten) Section, 2020). This multi-sensory approach fosters a more attractive learning experience that promotes overall development.

The study indicates that tactile experiences enhance children's interactions and improve learning outcomes (Wang & Zhang, n.d.). Through story-related artistic creations and boardgame activities, combining tactile experiences with technology helps children focus, express creativity, and develop problem-solving skills. (Lu, 2020).

In conclusion, this study provides valuable insights into effective teaching practices for educators working with SEN children. By demonstrating the benefits of integrating electronic and physical teaching materials, it advocates for a balanced approach that enhances attention and supports the educational development of all children. Early childhood educators are encouraged to appropriately integrate IT equipment to assist learning and teaching, bringing interactive and engaging activities and experiences that cater to children's diverse needs (Curriculum Development Council, 2017). Future research should continue to explore innovative methods to optimize this integration and better serve the diverse needs of SEN children.

- **References**

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Pt06

Visual Cues as Tools for Enhancing Social Skills in Children with Special Educational Needs

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Keywords

Visual Cues, Social Skills, Special Educational Needs

Abstract

- **Rationale for the study**

This study examines the application of visual cues pedagogy by pre-service early childhood educators to enhance social skills in kindergarten children with special educational needs (SEN). Social skills are essential for the overall development of young children (Curriculum Development Council, 2017). For SEN children, acquiring these skills can be particularly challenging, such as communication difficulties and social understanding.

- **Purpose(s) and research question(s) of the study**

This study aims to explore the process of using visual cues employed by pre-service early childhood educators and assess the effectiveness of these strategies in enhancing social skills in SEN children, enabling them to better utilize social skills in daily life.

- **Brief description**

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The study focused on four female pre-service early childhood educators enrolled in a Bachelor's programme in Early Childhood Education at a university in Hong Kong. During their internship activities, these educators led four sessions of weekly learning activity on social skills group for five SEN children. Data were collected from May to November 2024 through video recordings and class observations. Playback of these recordings and review of field notes taken during observations allowed for a comprehensive analysis of teaching techniques and their impact on enhancing children's emotional expression. All collected data were anonymized to ensure confidentiality and protect participants' privacy.

- **Summary**

Findings reveal that the R.O.V.E.R. teaching strategy employed by pre-service early childhood educators effectively enhances the social skills of SEN children through visual prompts. This approach includes role playing to allow children to engage in social interactions while educators observe and adjust their methods as needed. Visual prompting tools are utilized to provide clear guidance, while encouraging self-expression helps children articulate their thoughts and feelings. Additionally, a reward program is implemented to reinforce positive behaviors, creating a comprehensive framework that supports the development of essential social skills in these children.

The study indicate that social skills training conducted through visual prompts can effectively enhance the social abilities of SEN children, helping them become more confident and proactive in social interactions. The teaching strategies employed by pre-service early childhood educators can improve the social skills of these children, boosting their self-esteem and social adaptability, thereby promoting their overall development.

Furthermore, the use of visual prompts can strengthen their emotional regulation skills. This not only helps them behave more appropriately in social interactions but also reduces behavioral issues stemming from emotional dysregulation, enabling them to better cope with social challenges. Additionally, it allows them to understand classroom rules more effectively, thereby decreasing anxiety and behavioral problems caused by uncertainty, resulting in a significant reduction in such issues.

In conclusion, this study contributes valuable insights into effective teaching strategies for pre-service early childhood educators working with SEN children. By emphasizing the importance of visual cues pedagogy, the study underscores the potential of visual prompts to effectively support the learning and social skills of these children. Future research should expand on these findings to develop comprehensive training programs for educators, ensuring that they are well equipped to address the social and behavioral needs of all children in their care.

- **References**

Curriculum Development Council (2017). *Kindergarten Education Curriculum Guide*. Hong Kong. https://www.edb.gov.hk/attachment/en/curriculum-development/major-level-of-edu/preprimary/ENG_KGECG_2017.pdf

Pt07

Exploring the influence of fathers' and mothers' literacy involvement on children's listening comprehension in early years

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Keywords

shared reading, parent-child interaction, listening development

Abstract

This study investigates the impacts of fathers' and mothers' literacy involvement on preschool children's listening comprehension. Adopted the perspective of Bronfenbrenner's ecological systems theory, family as the primary and most immediate context influencing child development. Within this framework, the home activities (such as shared reading) and direct parent-child interactions play a pivotal role in shaping children's language and cognitive skills, as parents' behaviors, language patterns, and engagement strategies provide foundational support for early learning. Despite established research has shown that parental literacy involvement significantly links to children's language development, fewer studies have investigated the interaction quality in relation to children's language comprehension development. Therefore, using a longitudinal study design, this study examined the effects of interaction quality, indicated by parental sensitivity and cognitive stimulation level in questions, in relation to children's listening comprehension. The study recruited 71 parents and their K1 children to participate twice (9 months apart) from local kindergartens in Hong Kong. The parent-child interaction was video-taped and audio-taped recorded. The parental utterance was analyzed for the parental language input (i.e. lexical diversity and language complexity), parental sensitive and the decontextualized talk. Children were assessed with the sentence-level listening comprehension and story listening comprehension. The results showed that the decontextualized talk and parental sensitivity (both measured Time 1) are both significantly predictors to children's listening comprehension at Time 2, over the effect of frequency of shared reading, the quality of parental language input, questions, parents' education and household income. This finding underscores the significance of the interaction quality in shared reading to support children's listening comprehension development.

Pt08

Cognitive Linguistics in the Classroom: Comparative Analysis of Pedagogical Openness Among Early Childhood Educators in Local vs. International Kindergartens in Hong Kong

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Keywords

ESL teaching, pedagogical innovation, educator perceptions

Abstract

This study investigates the openness to new pedagogical approaches among pre-service and in-service early childhood educators in ESL contexts within Hong Kong. It specifically focuses on the cognitive linguistic conceptualization of syntax, a novel approach emphasizing the meaningfulness of grammar, contrasting traditional methods that separate semantics from syntax. The research explores educators' perceptions of count and mass nouns through the lens of cognitive linguistics, which introduces the concepts of boundedness and unboundedness. A survey distributed to educators from local and international kindergartens assessed their views on innovative teaching materials, such as animations and real objects, designed according to this approach. Findings reveal that pre-service educators are generally more open to using the new pedagogies in teaching than their in-service counterparts ($n=296$, $p<0.05$), with international kindergarten teachers having stronger interest and confidence in implementing the new pedagogies than their local counterparts ($p<0.01$). These results highlight the need to enhance teaching support for local in-service teachers to maintain their enthusiasm and confidence. The study underscores the importance of providing targeted support from schools and the government to encourage the adoption of innovative teaching practices, thereby improving ESL teaching effectiveness in diverse educational contexts.

Pt09

The effect of parental autonomy support on children's oral language skills development

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Keywords

oral language skill, pretend play, parental sensitivity

Abstract

The research mainly explores the effects of parent-child interaction on children's oral language skills (i.e. receptive vocabulary and expressive vocabulary) during pretend play. Vygotsky's (1978) sociocultural theory emphasizes that language skills develop through social interactions. The research investigates how factors such as parental sensitivity, adult-directiveness during pretend play influence children's language skills development longitudinally. Sixty-one parent-child dyads participated in a nine-month longitudinal study, during which video-taped observations of their pretend play interactions were analyzed. Observations were coded using established coding schemes, including the 3-Bag Scale and the Parent-Child Dyad Interaction Coding Scheme, to assess interaction quality and parent-child dynamics. Children's expressive and receptive vocabularies were also assessed before and after 9 months. The findings reveal that adult directiveness during pretend play is significantly negatively associated with children's oral language skills at Time 2. Moreover, parental sensitivity and the complexity of children's utterances during pretend play emerged as significant mediators, accounting for variance in vocabulary growth. These results underscore the importance of sensitive and responsive parental interactions, as well as opportunities for child-led language use, in supporting early vocabulary development.

Pt10

Exploring Discrepancy Between Parent and Child Perceptions of Parental Influence on Child Sports: A Multi-perspective Qualitative Analysis

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Keywords

parental influence, physical activity, parent-child disagreement

Abstract

- **Rationale for the study**

Discrepancies between parent and child perceptions of parental influence are well-documented in the literature (Hou et al., 2020). However, there is a paucity of research focusing on identifying these differences, as most studies have predominantly examined the concordance between parent and child perceptions within the context of child physical activity (Poulain et al., 2020; Rebholz et al., 2014).

- **Purpose(s) and research question(s) of the study**

The present study sought to investigate the dyadic relationship between parents' and children's perceptions of parental influence through multi-perspective semi-structured interviews (Eisikovits & Koren, 2010; Vogl et al., 2019), guided by the Social Influence in Sport Model (SISM; Chan et al., 2019; Chan et al., 2012), particularly in the context of children's climbing activities and lessons.

- **Brief description**

To achieve this, multi-perspective semi-structured interviews (Eisikovits & Koren, 2010) were conducted with eight families, consisting of eight children aged 7 to 12 years (75% female) who had engaged in at least two years of climbing training with an average training of 5.4 hours per week, along with eight parents aged 36 to 44 years (75% mothers) who served as the primary caregivers. This methodological approach aimed to elicit insights into the respective perceptions of parental influence held by both parents and children.

- **Summary**

A dyadic analysis of the interview data, examining both individual and relational levels within the family unit (Vogl et al., 2019), revealed that nonverbal expressions of encouragement from parents—such as laughter, hugs, and thumbs-up gestures (Charlina et al., 2024)—following their children's successful completion of challenging climbing tasks fostered a heightened sense of closeness between parents and children. Notably, many parents were unaware of the positive impact of their nonverbal communication.

Furthermore, children expressed dissatisfaction with the excessive guidance provided by their parents during climbing activities (Stein & Raedeke, 1999), articulating feelings of frustration

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regarding the lack of autonomy in their attempts to navigate climbing challenges. Interestingly, parents often expressed surprise upon learning about the extent of their instructional behaviors and were largely unaware of their children's aversion to such guidance. These findings emphasize the necessity for enhanced awareness and consideration of children's perspectives in the formulation of parental support strategies within the realm of climbing activities.

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Pt11

Exploring Kindergarten Teachers' Awareness and Needs for Education for Sustainable Development: A Foundation for Developing Garden Activity Programs for Young Children

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Keywords

Education for Sustainable Development (ESD), Kindergarten Teacher Awareness, Garden Activity Program

Abstract

- **Rationale for the study**

Education for Sustainable Development (ESD) is pivotal in cultivating children's comprehension of sustainability from a young age (Collins & Garrity, 2023). Acknowledging the significant opportunity presented during early childhood (Samuelsson, 2011), this research seeks to examine how preschool education can effectively integrate sustainability principles. Since the inaugural international conference on the role of early childhood education in promoting sustainable development held in Sweden in 2005, there has been a concerted effort by organizations such as the Organisation Mondiale pour l'Éducation Préscolaire (OMEP) to advance ESD on a global scale (UNESCO, 2005; 2014; 2022). Countries including Germany, Sweden, Australia, Canada, and the United Kingdom have incorporated ESD into their national curricula, reinforcing the notion that early educational experiences can instill sustainable values and behaviours (National Platform on Education for Sustainable Development, 2020; UNECE, 2022). Therefore, this study aims to explore kindergarten teachers' awareness and requirements regarding ESD in order to develop a preschool garden activity program that fosters sustainability principles among young learners.

- **Purpose(s) and research question(s) of the study**

This research seeks to understand kindergarten teachers' perspectives on ESD and its application in education. The main research questions are:

1. What is the level of awareness and the specific needs of kindergarten teachers concerning ESD?
2. What is the current status of ESD implementation among educators?
3. What requirements exist for preschool garden activity programs informed by ESD?
4. How can interviews with educators clarify objectives for ESD-based garden activity programs?

- **Brief description of methodology including that used for data analysis**

To explore these questions, a survey was conducted among public and private kindergarten teachers from July 16, 2022, until the end of that month. Out of 97 valid responses, the demographic analysis indicated that 26.8% graduated from junior colleges, 53.6% held university degrees, and 19.6% obtained graduate degrees. Most respondents (45.4%) were in the 20-25 age range, and 48.5% reported having 3-5 years of teaching experience.

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The survey was designed based on literature about teachers' perceptions of ESD, with adaptations to ensure validity through expert review. Data analysis utilized SPSS 22.0 to calculate frequencies and percentages, enhancing the findings' credibility regarding teachers' engagement with ESD

- **Summary** of findings, conclusion, and implications (for ongoing research studies – expected outcomes and anticipated contribution of the research)

Preliminary findings suggest that over 80% of kindergarten educators recognize the significance of ESD, although 76.3% report that ESD practices are often limited to special events. This highlights the need for more integrated approaches. Many teachers support the idea of a garden activity program, recognizing its potential for fostering environmental awareness. In-depth interviews indicated that traditional garden activities often differ from those based on ESD principles. The latter emphasizes child-led, process-oriented initiatives that promote sustainability and resource conservation. The study anticipates establishing a framework for implementing ESD activities that align with educational sustainability goals.

Overall, this research aims to provide practical guidelines for creating ESD-oriented garden activity programs, fostering teacher training, and supporting curricula that integrate sustainability practices. The findings will reinforce the connection between sustainability and early education, ultimately impacting children's sustainable behaviors. By focusing on connecting children with nature, these programs can contribute significantly to developing environmentally conscious future generations. Enhanced teacher training and resources are necessary to facilitate the adoption of these initiatives in early childhood education.

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Pt12

Researching the Relationship Between Teachers' Understanding of Math Errors, Failure Mindset, and Math Teaching Self-efficacy

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Keywords

Math Errors, Failure Mindset, Math Teaching Self-efficacy

Abstract

- **Rationale for the study**

The rationale for this study lies in the critical role that teachers' understanding of math errors and their mindset towards failure play in shaping their teaching efficacy in mathematics. Understanding math errors is not merely about identifying mistakes; it involves comprehending the underlying misconceptions and gaps in knowledge that lead to these errors. This understanding is essential for teachers to provide effective feedback and instruction that addresses the specific needs of their students. Moreover, teachers' mindset towards failure significantly influences their approach to teaching and learning. A failure mindset can lead to a lack of confidence and a reluctance to take risks, which can hinder the development of innovative teaching strategies and the ability to engage students effectively.

By exploring how teachers' understanding of math errors and their failure mindset impact their math teaching self-efficacy, this study aims to contribute to the existing body of knowledge on teacher effectiveness and professional development. The findings can inform training programs and interventions designed to enhance teachers' confidence and skills in mathematics instruction, ultimately leading to improved student outcomes in math achievement. This study is particularly relevant in the context of ongoing efforts to improve STEM education and address the challenges associated with mathematical literacy in the modern workforce.

- **Purpose(s) and research question(s) of the study**

The primary purpose of this study is to investigate the interplay between teachers' understanding of math errors, failure mindset, and math teaching self-efficacy. The research questions are:

(1) How does teacher error analysis influence teachers' self-efficacy?

(2) What is the relationship between teachers' failure mindset, math teaching self-efficacy, and math teaching performance?

(3) Can a professional development programme aimed at promoting teachers' positive failure mindset enhance their self-efficacy and improve the quality of their math teaching behaviors?

- **Brief description**

To address these questions, a mixed-methods approach will be employed. A survey will be administered to collect quantitative data on teachers' understanding of math errors, failure mindset, and math teaching self-efficacy. Additionally, qualitative data were gathered through interviews to gain deeper insights into teachers' perspectives and experiences. Data analysis involved descriptive statistics, correlation analyses, and thematic coding to identify patterns and relationships among the variables.

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Following the data collection phase, comprehensive analyses will be conducted using descriptive statistics, correlation analyses, and thematic coding to uncover patterns, relationships, and underlying themes among the variables. These analyses will not only elucidate the current state of teachers' understanding and mindsets but also identify potential areas for improvement.

- **Summary**

The findings of this study indicate that teachers' understanding of math errors significantly impacts their teaching strategies and children's learning outcomes. Teachers with a positive mindset towards failure were more likely to view errors as opportunities for learning and improvement, leading to more effective instructional practices. Moreover, teachers with higher math teaching self-efficacy showed greater confidence in their ability to teach math, positively influencing their teaching methods and children's engagement in math. By doing so, educators can create a more supportive and engaging learning environment that promotes children's mathematical proficiency and confidence.

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Pt13

Enhancing Toddlers' Science Learning Through an Inquiry-Based Science Table

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Keywords

Early Science Education, Inquiry-Based Science Table, Infants and Toddlers

Abstract

It is critical to support children's science learning starting from infancy. However, there is little research investigating introducing science to children under three years old. The current study addressed this gap by examining the effectiveness of setting up an Inquiry-Based Science Table (IBST) in a toddler classroom. A classroom in Hong Kong with 18 toddlers and two teachers was selected as the implementation site. A qualitative approach was used to collect data. Toddlers' interaction with the IBST was observed and recorded using the Science Behaviour Checklist. Two class teachers were invited for semi-structured interviews about their views on science teaching and the effectiveness of the IBST. The results indicated that the frequency, variety and complexity of toddlers' science behaviours increased after the IBST was placed. The adult's mediating role in supporting toddlers' science learning was highlighted, while concerns and challenges of implementing science teaching to toddlers were also presented and discussed. The study suggested that more rigorous research with larger sample sizes should be conducted to investigate effective science instruction for children under three and professional training on science teaching should be provided to teachers working with infants and toddlers.

Pt14

Quality in Hong Kong Kindergarten Classrooms: Preliminary findings in Patterns of Teacher-Child interactions

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Keywords

Classroom Observations, Teacher-Child Interactions, Latent Profile Analysis

Abstract

Rationale for the study

The Education Bureau's proposed Curriculum Guide (Hong Kong Curriculum Development Council, 2017) emphasises the importance of quality kindergarten education for fostering whole-person development in children during their critical early years. However, there is limited information regarding the current quality of kindergartens. Research has shown that teacher-child interactions are strongly associated with children's developmental outcomes (Hamre et al., 2014; Mashburn, 2008; Pakarinen et al., 2017; Salminen et al., 2021), indicating that these interactions could serve as a key measure of process quality in early childhood settings.

Purpose(s) and research question(s) of the study

The study aims to identify the membership characteristics of a kindergarten classroom as defined by the CLASS framework to understand the current quality of processes within Hong Kong kindergartens.

Research question:

What are the patterns of teacher-child interactions in Hong Kong kindergarten classrooms?

Brief description

A total of 109 kindergarten classrooms were videotaped across 43 kindergartens in various Hong Kong districts, involving 192 kindergarten teachers (93.2% female; $M_{age}=31.47$ years ($SD=9.295$)). Given that local educational contexts typically feature more than one teacher per classroom, observations were scored at the classroom level to provide a holistic understanding of classroom quality rather than focusing solely on individual teacher's interactions with children.

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Two certified raters observed and coded according to the Classroom Assessment Scoring System (CLASS) framework (Pianta et al., 2008), assessing ten dimensions of teacher-child interactions on a 7-point Likert scale ranging from '1' (low quality) to '7' (high quality). These dimensions form an index of interaction quality in the classroom. For example, *Positive Climate* reflects the emotional connection and respect between teachers and children, as well as among peers. Other dimensions include *Negative Climate*, *Teacher Sensitivity*, *Regard for Student Perspectives*, *Behaviour Management*, *Productivity*, *Instructional Learning Formats*, *Concept Development*, *Quality of Feedback* and *Language Modelling*. A three-step latent profile analysis examined patterns of interaction to identify classroom quality based on the CLASS framework.

Summary

Although previous studies suggested a four- to five-profile solution (Hu et al., 2016; LoCasale-Crouch et al., 2007; Salminen et al., 2012), our preliminary findings indicate that a three-profile solution is most satisfactory ($AIC = 1233.924$ $BIC = 1336.195$; $Entropy = 0.955$). The membership classification identified 21.8% of Hong Kong classrooms exhibited lower-quality interactions ($n=24$), 72.6% demonstrated moderate-quality ($n=79$), and 5.6% showed higher-quality ($n=6$). All groups followed a similar trend in interaction quality across dimensions, with the moderate-quality group notably sharing characteristics with both lower- and higher-quality profiles. Specifically, while the moderate-quality group provided emotional and academic supportive interactions comparable with the higher-quality group, they shared weaknesses in instructional interactions with the lower-quality group. This suggests that while fostering a nurturing classroom climate may be more feasible for teachers, providing effective instructional support could be more challenging.

While our study presents preliminary findings of characteristics in the quality of kindergarten classrooms, future studies should employ a larger sample and identify if other teacher characteristics may also impact these profiles.

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Pt15

Enhancing the 4 C' of learning skills in SEN Young Children Through Drama

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Keywords

Drama, 4 C's of learning skills, SEN education

Abstract

- **Rationale for the study**

The 21st-century learning skills, commonly referred to as the 4 C's—critical thinking, creative thinking, communicating, and collaborating—are essential for holistic development, especially for children with special educational needs (SEN). The Hong Kong Education Bureau highlights these competencies as generic skills that schools must cultivate alongside subject knowledge. For SEN children, mastering the 4 C's is crucial for their academic success and overall well-being.

Although numerous studies have demonstrated the effectiveness of drama in developing these skills, there is a notable lack of research focusing on student-led devising theatre within early childhood education. This gap may stem from teachers' limited understanding of drama, with many believing it is only suitable for higher-ability students, which restricts opportunities for lower-ability students, including those with SEN.

- **Purpose(s) and research question(s) of the study**

This research aims to explore the impact of creative drama and devised theater on the development of the 4 C's in SEN young children, providing insights for the education sector.

- **Brief description of methodology including that used for data analysis**

The study employs a qualitative methodology, focusing on ten children aged 5 to 7 with diverse special educational needs, including ADHD and autism. It consists of eight workshops, each lasting 1.5 hours, aimed at observing transformations in the children's 4 C's skills. Prior to the workshops, researchers interviewed social workers and parents to assess the children's learning abilities. The initial sessions included icebreaker games and basic drama training to evaluate their starting skills. The drama

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component features creative drama and devised theater, with researchers recording performances for analysis. Video recordings of performances are used to evaluate both observational data and stage presence.

- **Summary of findings, conclusion, and implications**

The research team found that creative drama and devised theater significantly enhance the 4 C's learning skills—creativity, communication, critical thinking, and collaboration—in SEN young children.

In terms of creativity, workshops incorporated creative drama like two-person dialogues and situational improvisation, enabling children to weave their life experiences into storytelling. This led to effective problem-solving demonstrations, as students proposed and acted out solutions for their characters. Communication skills showed remarkable improvement; students progressed from initially hesitating to express themselves to confidently reading their lines during rehearsals, indicating growth in their expressive abilities. Critical thinking was fostered as children articulated their opinions during interactive sessions, clearly stating their viewpoints and resisting peer pressure. Collaboration skills flourished, with students successfully working together to create still images and complete performances, demonstrating enhanced teamwork and responsiveness to guidance.

In conclusion, this study illustrates that integrating creative drama and devised theater into educational practices can alleviate learning barriers for SEN children while promoting essential skills. The positive outcomes suggest that these methods not only facilitate academic development but also enhance social interactions and confidence, advocating for the inclusion of creative approaches in early childhood education for children with special educational needs.

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Pt16

Bridging the Gap: The Role of Creative Teaching in Chinese Language for K3 to Primary 1 Transitions

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Keywords

Chinese teaching, Creative teaching, Language learning

Abstract

Rationale for the study

According to the guidelines for the Chinese Language Curriculum (Primary One to Primary Six) published by the Hong Kong Education Bureau (2023), the primary Chinese language curriculum should strengthen connections between different stages of learning, progressing from simple to complex content in a layered manner. In addressing the curriculum for the transition from kindergarten to primary school, primary teachers must be aware of the language learning approaches used in early childhood education, which often involve diverse activities linked to relevant themes in young children's life experiences. Thus, it is essential for primary language teachers to provide varied Chinese language learning activities that relate to students' life experiences, facilitating a smoother transition as they enter primary school and helping them adapt more effectively to the curriculum.

- **Purpose(s) and research question(s) of the study**

The research questions guiding this study are:

1. Can creative teaching enhance young children's motivation to learn Chinese language?

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2. Can creative teaching effectively bridge the gap between early childhood education and primary education?

- **Brief description of methodology including that used for data analysis**

The research team utilized creative teaching methods such as role-playing, interactive games, and activities tailored to young children's life experiences to develop a series of language workshops. Participants included five children from the Lam Woo Foundation Child Development Centre, with varying special educational needs. Each workshop was led by 1-2 researchers, while other team members observed and recorded the children's learning performance. At the course's conclusion, the researchers analyzed their observations to assess changes in the children's attitudes toward learning the Chinese language and the impact of creative teaching on their transition from early childhood to primary education.

- **Summary of findings, conclusion, and implications**

Through the four one-hour creative language classes, the research team found that creative teaching effectively enhanced young children's motivation to learn Chinese language. The use of creative activities resulted in high levels of student participation, with every child completing tasks and actively expressing their opinions. The integration of creative teaching with children's life experiences stimulated their imagination and creativity, particularly during role-playing activities.

In addition, the learning environment in kindergarten is relatively relaxed and free, allowing for more spontaneous learning. In contrast, the primary school learning environment emphasizes rules, requiring designated seating and classroom management. Therefore, when implementing creative teaching, it is also important for young children to follow instructions and execute tasks. According to the researchers' records, most students were engaged and motivated to complete tasks in order to receive rewards, making them willing to cooperate and follow directions. This cooperation enabled the smooth completion of classroom activities and achieved a certain level of learning effectiveness.

Overall, this study demonstrates that combining creative teaching with life experiences can significantly enhance young children's motivation to learn the Chinese language and facilitate a positive transition from early childhood to primary education. It also provides valuable insights for improving teaching strategies related to K3 to Primary 1 transitions. Ultimately, this study aims to contribute to ongoing research in early childhood education by offering a framework for implementing creative teaching methods that support language acquisition and successful transitions for young children.

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Pt17

The Effects of Task Features on Children's Performance in the Number Ordering Task

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Keywords

number ordering, adjacency, number size

Abstract

- **Rationale for the study**

Children's number ordering skills are critical predictors of mathematical proficiency, including arithmetic performance (Lyons & Beilock, 2011; Lyons et al., 2014), mental arithmetic (Lyons & Ansari, 2015), mathematical reasoning (Lyons & Beilock, 2011; Morsanyi et al., 2017), and arithmetic fluency (Vogel et al., 2017). Despite their importance, the factors influencing these skills remain unclear. The counting sequence, inherently linked to numerical order, suggests better performance with adjacent numbers due to familiarity with sequential counting (Gilmore & Batchelor, 2021; Sella & Lucangeli, 2020). Early exposure to single-digit numbers may also affect performance when ordering numbers within the range of 1 to 10 compared to larger numbers (Hutchison et al., 2022). While these studies provide valuable insights, they have not thoroughly examined how specific task features, such as number adjacency and size, impact number ordering skills. Understanding these features is crucial for understanding mathematical learning and development and designing effective educational interventions.

- **Purpose(s) and research question(s) of the study**

This study investigates how specific task features—namely number adjacency and number size—affect children's performance on the number ordering task.

The research questions are:

1. *Does children's performance on the number ordering task differ when numbers are adjacent versus non-adjacent?*
2. *Does children's performance on the number ordering task differ when numbers are between 1 and 10 versus numbers larger than 10?*
3. *How does the interaction between adjacency and number size influence children's performance on the number ordering task?*

- **Brief description**

The current sample is part of a larger project (Author, 2022) including 104 US kindergartners (46 boys and 58 girls) with a mean age of 5.9 years (SD = 0.34). Children saw triplets of numbers and arranged them in ascending order. The task consisted of trials involving triplets of numbers that were either adjacent or non-adjacent to one another and fell within 1 to 10 (small) or beyond this range (large). Response on each item was scored as correct (1) or incorrect (0). The task reliability is Kuder-Richardson Formula 20 = 0.93, indicating excellent reliability.

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- **Summary**

We conducted a series of multilevel logistic regression analyses that revealed no significant main effects of adjacency ($\beta = -0.481, p = 0.379$) or number size ($\beta = -0.338, p = 0.53$) on task performance. However, a significant interaction effect between adjacency and number size was observed ($\beta = 2.024, p = 0.035$). The interaction effect highlights that the difficulty in ordering numbers is not solely determined by the size of the numbers or their adjacency but by the combination of both factors. Children demonstrated higher accuracy when arranging small, adjacent numbers (i.e., within the range of 1 to 10). Conversely, performance was notably lower for non-adjacent small, adjacent large, and non-adjacent large numbers.

These findings underscore the influences of number adjacency and size on children's number ordering skills. They suggest that the design of educational tasks aimed at assessing and enhancing children's number ordering skills should carefully consider these factors to ensure that the tasks are both challenging and appropriate for the developmental stage of the participants. Specifically, tasks involving non-adjacent and larger numbers should be introduced gradually, with additional support, to enhance children's number ordering skills.

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Pt18

Perceived Quality and Significance of ECCE in Pakistan: A Review of Available Evidence From the Point of View of Practitioners, Parents and Children

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Keywords

children with special educational needs, COVID, early years, online learning

Abstract [DOI: 10.1111/1471-3802.12719](https://doi.org/10.1111/1471-3802.12719)

Children with special educational needs (CSEN) in the early years have been identified as vulnerable to the pandemic restrictions. This study explored the lived experiences of educators teaching CSEN online in Hong Kong during the COVID- 19 school closures. Semi- structured interviews with 21 educators revealed that educators perceived the prolonged school closures and online learning as adversely affecting CSEN's development. In educators' observations, during school closures and upon returning to school, CSEN's academic learning was less affected compared to CSEN's social skills. Still, educators found that some autistic children coped better than CSEN with other types of needs (e.g. with attention- deficit hyperactivity disorder) in academic learning due to fewer classroom distractions and less social pressure. The insights from the educators provide key areas of focus for CSEN in the early years to recover from the aftermath of the pandemic and for future unforeseen school closures.

Key Points

- The analysis sheds light on educators' views on both the challenges experienced by CSEN during the COVID- 19 school closures and some positive effects of online learning.
- Educators experienced a lack of social opportunities for CSEN and viewed this as particularly problematic, as they observed deteriorated school readiness, socio- emotional and socialisation skills and heightened anxiety in CSEN upon return to school.
- Educators perceived CSEN's social skills to have deteriorated due to observing an unusual increase in disputes during playground play in lower primary students at the resumption of school.
- Educators expressed challenges in determining appropriate ways to support CSEN as educators had difficulties attributing the perceived issues to genuine impairments versus temporary issues caused by the absence of onsite schooling.

Pt19

The impact of COVID restrictions on children with special educational needs in the early years: Evidence from educators' perspectives in Hong Kong

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