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# Using Vygotsky's sociocultural theory to explore ethnic cultural representation in Taiwanese preschool children's play

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**Introduction:** This research aims to understand how preschool children in Taiwan, where ethnic integration is common, incorporate their unique ethnic and cultural backgrounds into their play activities to express and integrate their cultural identities. Using Vygotsky's sociocultural theory as a theoretical lens, the study examines and analyzes these attributes.

**Methods:** This study employed purposive sampling to select a public preschool in Taoyuan City, Taiwan, and adopted a qualitative research approach. The play behavior of 27 Taiwanese children was observed over a two-month period, during which nine interviews were conducted with preschool teachers. Teachers' reflections on instruction and children's portfolios were also collected to provide supplementary insights into elements that could not be fully clarified through observation and interviews.

**Results:** The analysis was grounded in Vygotsky's sociocultural theory, and the data were coded to systematically organize and condense the information. The findings revealed the following: (i) Children express their cultural traits through folk festival ceremonies during play activities; (ii) Engaging in play activities related to folk festival ceremonies is essential for these children, as it deepens their understanding of the cultural contexts within their respective ethnic communities. Moreover, the children demonstrate the ability to integrate their knowledge and skills related to the cultural characteristics of their ethnic groups.

**Discussion:** The play activities of Taiwanese preschool children exhibit a dynamic nature and undergo modifications over time across different ethnic, cultural, and contextual settings, as exemplified by the variety of materials, shapes, flavors, and terms associated with rice dumplings reported by children. Thus, recognizing and addressing cultural diversity within early childhood education settings is essential for promoting meaningful engagement and facilitating children's successful adaptation to socially diverse environments.

## KEYWORDS

cultural representation traits, early childhood education, ethnicity, Taiwanese children's play, Vygotsky's sociocultural theory

## Introduction

The relationship between ethnicity and social culture has consistently been a prominent subject of academic discussion, with research indicating that they are inseparable (Cooper, 2011; McLean and Syed, 2015; Syed, 2012; Way and Rogers, 2015). This section examines the influence of ethnic backgrounds on the development and learning of children. Play activities

are deeply rooted in historical, social, and cultural contexts, significantly shaping various aspects of children's lives, including their personality, cognitive styles, values, communication patterns, expressions, customs, and rituals (Strauss and Cross, 2005).

Cultural integration among diverse ethnic groups profoundly affects individuals in multiple domains such as politics, economics, and well-being (Jana et al., 2018). Furthermore, interactions among schools, families, and communities are closely tied to the knowledge, skills, and preferences of different ethnic groups (Ostroff, 2012; Serrano-Villar and Calzada, 2016). Among various institutions, schools are widely recognized as environments where children from diverse ethnic backgrounds can cultivate cultural adaptation (Suarez-Orozco, 2009). Ethnicity and culture are intrinsically linked, and children exposed to culturally diverse learning settings often experience dual cultural integration and adaptation, as demonstrated in studies involving different ethnic groups (Dinh et al., 2013).

Diverse learning environments provide children with opportunities for reciprocal knowledge exchange, enabling them to share and compare values, norms, and ideologies that may be similar yet subtly distinct (Goodnow, 2010). Consequently, the establishment and effective use of contextual learning environments can foster children's emotional, behavioral, and cognitive development (Brekhus, 2003) while enhancing our understanding of the cultural customs practiced by children from various ethnic backgrounds within specific cultural settings. For example, what forms of interactive experiences, peer relationships, and mutual understanding processes are evident among children in Taiwan? What aspects of these observations are particularly noteworthy? When children reach a consensus, to what extent are they influenced by ethnic culture?

This research further posits that the context of children's play is of paramount importance. It seeks to uncover the shared characteristics and cultural connections among different ethnic groups while also exploring how each group defines its identity. Additionally, the study aims to elucidate the mechanisms of mutual influence and interaction (Lerner and Benson, 2013; Overton, 2013; Rogoff, 2003; Shweder et al., 2007). To achieve these objectives, Vygotsky (1978) sociocultural theory serves as the conceptual framework for analyzing the ethnic cultural characteristics of children in Taiwan.

This research aims to understand how preschool children in Taiwan, where ethnic integration is common, incorporate their unique ethnic and cultural backgrounds into their play activities to express and integrate their cultural identities. Using Vygotsky's sociocultural theory as a theoretical lens, the study examines and analyzes these attributes. The following research questions guide the investigation: (i) What types of play activities among preschool children in Taiwan reflect the cultural traits of their ethnicity? (ii) What is the significance of the cultural attributes demonstrated by preschool children in Taiwan through their participation in play activities?

## Literature review

### Vygotsky's sociocultural theory

Vygotsky (1978) sociocultural theory builds upon Piaget's cognitive psychology, incorporating key concepts such as mediation, internalization, the zone of proximal development, and scaffolding. Vygotsky argues that cognition cannot be fully understood through

individual efforts alone but requires an examination of social and cultural factors, including language, interaction, and behavior. In essence, the outcomes of an individual's cognitive development are shaped by their social relationships and interactions, which are gradually assimilated and internalized. These connections and interactions, embedded within the domain of social relationships, play a pivotal role in influencing the psychological development of children.

In this context, the Paiwan community represents a historically and culturally significant case. Through social interactions with their parents, as well as with other members of their tribe and community, Paiwan children progressively acquire psychological attributes, linguistic symbols, communication styles, and other skills unique to their ethnic culture. Sociocultural theory thus underscores that individuals' cognitive structures are shaped and influenced by the dynamic interplay between their personal experiences and the sociocultural environment.

This interplay results in a continuous interaction between the individual and their surrounding context. Language, as a cognitive tool, enables individuals to engage in critical thinking, explanation, and consensus-building processes. Furthermore, language serves as a medium for fostering intercultural understanding, facilitating the appreciation of cultural nuances and meanings across diverse ethnic communities. Understanding human behavior necessitates situating it within broader historical, social, and cultural contexts. In the analysis of children's play, the verbal and behavioral expressions observed during their interactions play a crucial role in preserving and transmitting the essence of ethnic culture.

From ancient times to the present, children have undergone developmental processes within their respective cultural contexts, including acquiring foundational knowledge and skills. Across different cultural settings, children's play reflects unique customs and traditions worldwide. This observation highlights the complex relationship between play and culture—a connection that is not easily contextualized (Fleer, 2010; Lillard, 2011; Roopnarine et al., 2015). This relationship is particularly evident in young children's play (Birkeland, 2019; Gaskins et al., 2006), within play environments and through the use of playthings (Brostolin and Oliveira, 2013; Meirelles, 2012; Nascimento and Zoia, 2014), and across diverse types of play activities (Brooker et al., 2014; Kook, 2011; Tamis-LeMonda et al., 2013; Yim et al., 2011).

Vygotsky (1967) posits that play consists of two essential and interconnected elements: the imaginary scenario and the inherent rules governing the imaginative framework. Pretend play aligns with the concept of engaging in an imaginary scenario, albeit within specific predetermined guidelines. For example, when children engage in role-playing activities such as pretending to work or cook like their parents, it is essential to understand the symbolic meanings behind the words and actions of their peers who assume the roles of parents.

The rules governing these hypothetical scenarios are particularly relevant as young children strive to comprehend the principles underlying their parents' real-world behavior. From this perspective, children engaging in collective play not only participate in imaginative scenarios but also learn the foundational principles that guide these interactions. However, the rules governing such scenarios vary across social and cultural contexts, contributing to the gradual cultivation of self-discipline in children. Previous research indicates that self-regulated behavior, particularly self-control during play, is influenced by various factors (Bodrova and Leong, 2003; Ursache et al., 2012).

## Children's ethnic backgrounds, play activities, and cultural influences

Prior research has demonstrated that the learning styles of specific ethnic groups are shaped by their upbringing and cultural environments (Cheah et al., 2013). These factors indirectly influence individuals' judgments, values, and attitudes toward various aspects of life. In recent years, researchers have increasingly emphasized the importance of examining the socialization processes of children from diverse ethnic backgrounds (Hughes et al., 2006). Teachers play a pivotal role in fostering interethnic friendships among children (Evans et al., 2012). Such studies have explored the factors that influence the formation of values and beliefs. It is plausible to consider that as human civilizations evolve over time and across geographical locations, social and cultural contexts undergo varying degrees of transformation. Consequently, individuals are subtly influenced by both traditional and contemporary cultural environments (Flynn et al., 2013). These influences prompt individuals to adapt and modify their play behaviors, skills, and strategies, ultimately leading to the emergence of novel and innovative forms of play and playthings.

Understanding the play processes of young children is enhanced by considering the role of ethnic cultural reproduction (Trompenaars and Hampden-Turner, 2021). Research further suggests that children's identity construction during this process is closely intertwined with their social environments and abilities (Kenny and McEachern, 2009; Mead et al., 2015). Moreover, the cultural beliefs and values transmitted by ethnic groups profoundly influence individuals' interpersonal relationships and daily activities (Nazarinia and Rollins, 2019). The collaborative creation of games among children from diverse ethnic backgrounds within educational settings not only provides valuable opportunities for cognitive, linguistic, and social development (Caughy and Owen, 2015) but also sheds light on the guidance techniques and priorities employed by parents from different ethnic backgrounds during such interactions (Banerjee et al., 2011; Caughy et al., 2011).

The formation of ethnic identity is characterized by dynamic qualities (Aspinall and Miri, 2013; Burke and Grace, 2010) that are influenced by factors such as age, context, and geographical location (Doyle and Kao, 2007; Lee and Bean, 2010). Researchers have found that accents, language use, and communication styles exhibited by children from different ethnic backgrounds during play (Cekaite and Evaldsson, 2019; Ioannidou, 2017; Paugh, 2014; Rampton, 2018) influence not only their play behaviors and performance but also their ethnic identity and peer relationships (Barron, 2011; Friesen et al., 2012).

Adult attitudes toward young children's play also significantly impact the cultural phenomena observed in play behaviors (Ahn, 2015; Chak, 2010; Jung, 2016; Lin et al., 2016; Nah and Waller, 2015). For instance, Bayeck (2018) conducted a comprehensive literature review to examine the utilization of board games among various African ethnic groups, analyzing the ethnic and sociocultural aspects of such play. This study highlighted substantial variations in the objectives of play between African children and adults and those in Western societies. In African social structures, board games play a crucial role in knowledge acquisition and the preservation of cultural heritage. These games are deeply connected to daily experiences, functioning as contexts that foster life skills and values. Participation in these activities cultivates attributes such as perseverance, unity,

harmony, leadership, language socialization, communication, negotiation, and even mathematical skills. These qualities are evident across various forms of board games, as noted by Mutema (2013), Nkopodi and Mosimege (2009), and Tatira (2014).

Ethnic co-learning serves as a mechanism for fostering mutual cultural understanding among diverse ethnic groups. This objective can be achieved through active engagement in activities that adhere to specific norms and practices (Tsai and Chentsova-Dutton, 2002). Understanding the underlying factors that influence the behaviors of young children's peers from various ethnic backgrounds—such as acceptance, rejection, negotiation, competition, and adaptation to role-playing and plot content during games—requires examining their ethnic heritage and social cognition within a cultural framework (Mistry and Dutta, 2015; Vygotsky, 1978).

## Methods

### Research field and participants

Previous research has indicated that the play activities of children from various ethnic groups are shaped by the cultural nuances inherent in their respective communities. These differences manifest in knowledge, skills, behaviors, and forms of expression, among other aspects. Furthermore, such symbols hold significant historical, social, and cultural importance for the ethnic groups under investigation. Qualitative approaches, grounded in the principle of studying organic phenomena within specific frameworks, enable researchers to gain deeper insights into the perspectives, cognitive processes, and behavioral manifestations of the individuals being studied. Therefore, a qualitative methodology is deemed more suitable than a quantitative one for comprehensively understanding the characteristics of ethnic cultural representation in the play activities of Taiwanese preschool children within the context of this research.

The research involved observing and interviewing participants to replicate and document ethnic and cultural characteristics. Children participating in this study were informed of their right to choose whether to participate and were assured they could alter their decision at any time, either temporarily or permanently (Flewitt, 2005). This approach ensured respect for the children's autonomy by allowing them time to reflect and express their thoughts in their own words. Additionally, the study honored children's moments of silence, disengagement, or hesitation, demonstrating full respect for their choices (Bourke and Loveridge, 2014; Flewitt, 2019; Parsons et al., 2016).

A public preschool located in the Daxi District of Taoyuan City, Taiwan, was selected as the study site. Participants were chosen using purposive sampling from a cohort of Taiwanese preschool children. The selection criteria included children from diverse familial backgrounds, comprising 11 Taiwanese, 9 Hakka, and 7 indigenous children. Participant recruitment was conducted based on the roster of officially registered public preschools published by the Ministry of Education in Taiwan.

Research conducted by the Taiwan Council of Indigenous Peoples highlights that the Daxi District in Taoyuan City provides preschool education to the Amis and certain Atayal indigenous communities. According to population statistics released by the Civil Affairs Bureau of the Taoyuan City Government, the indigenous population in the

Daxi District is proportionally higher compared to other districts. The region is home to a diverse range of ethnic groups, including Taiwanese dialect speakers, Hakka communities, individuals from other provinces, and recently settled residents. All these ethnic groups possess a rich historical heritage, reflected in their pursuit of knowledge and their efforts to cultivate harmonious relationships within and across various ethnic communities.

## Design and data collection

Determining the optimal duration for conducting on-site observations in this study required careful consideration and consultation with preschool teachers. Systematic observation adheres to several principles, including avoiding attention-grabbing techniques, maintaining objectivity, focusing on specific children, behaviors, situations, concerns, or stated goals, observing both verbal and non-verbal behavior, and refraining from making judgments, conclusions, or explanations until the observation is fully completed.

The observations of children were conducted prior to the “Dragon Boat Festival,” during which the preschool implemented thematic teaching activities related to this cultural event. In response to children’s interests and needs, teachers provided a variety of festival-related play materials within the dramatic area, thereby facilitating contextually relevant and culturally meaningful play experiences. Children were observed for a minimum of 30 mins, during which their play activities in the dramatic area were closely monitored. Additionally, as part of the observation process, each preschool organized weekly sessions where two cameras and two recording pens were strategically positioned within the dramatic area to facilitate data collection. The study was designed to examine play behaviors among children. To ensure a comprehensive portrayal of the ethnic cultural characteristics reflected in children’s play, the research methodology incorporated a predetermined set of video and voice recording devices that were utilized throughout the study. Prior to this, multimedia tools such as picture books and animated videos enhanced with sound and light effects were employed to engage the children and disseminate information. This approach aimed to encourage children to share their experiences more openly during the study and to achieve meaningful informed consent from young participants (Dockett et al., 2013; Kumpunen et al., 2012; Mayne et al., 2016; Ruiz-Casares and Thompson, 2016).

The use of these devices was explicitly disclosed in the informed consent forms provided to the participants. Preschool teachers were asked to assist with the placement of the devices. To address potential concerns, it is recommended to maintain open and transparent communication with children regarding the functionality of the devices, emphasizing their dual capabilities as video and voice recorders. Providing participants with clear and precise instructions is crucial to underscore the importance of handling the devices with care and avoiding any potential harm. Furthermore, participants must thoroughly understand the devices’ intended purposes to minimize curiosity about their functionalities.

The investigation was conducted over a six-month period to establish a strong connection with the research context. Before observing the children, the researcher visited the preschool to build rapport with both teachers and children. During the subsequent 3 months, a series of interviews were conducted with teachers and

children from two public preschools to gain a deeper understanding of teachers’ perspectives on ethnic play, ethnic culture, and ethnic society for children. The interview protocol used in this study was developed based on previous research addressing early childhood play, ethnicity, and culture (Göncü and Gaskins, 2012; Lancy, 2014; Samuelsson, 2020; Sanders et al., 2019; Yim et al., 2011). This literature provided the conceptual foundation and informed the selection of relevant interview questions aimed at eliciting meaningful insights into children’s culturally situated play experiences. Semi-structured group interviews were held with children aged 3 to 6 years. Following the conclusion of a theatrical performance, participants were invited to gather and discuss the play’s progression. They were given specific instructions to reflect on the purpose of a toy and consider its symbolic representation. Participants were asked questions such as: “Why do you adopt these roles and engage in pretend play, portraying yourself as something you are not?” and “Have you previously encountered or observed this phenomenon?” Each interview session lasted at least 10 min to ensure clarity, foster understanding, and allow a thorough exploration of the observed phenomena among the participants.

## Data analysis guide

In qualitative research, data are gathered and analyzed simultaneously. When observing participants, conducting interviews, collecting documents, and employing other on-site inquiry methods, researchers consistently review records of on-site observations, interview transcripts, and other relevant documents. This study employed classification as the primary method for organizing data, relying on the establishment of categories. Categorization and classification necessitate the use of registration, which involves the application of specific meaningful words, phrases, sentences, or paragraphs. Each code was assigned a label. In essence, the codes were derived from an examination of recurring phenomena identified in the primary sources and subsequently allocated specific designations.

This research primarily utilized observation and interviews to examine the role of children’s play in preserving and transmitting ethnic culture. Additionally, the study integrated Vygotsky (1978) social and cultural theory as a theoretical framework to substantiate and contextualize the findings. The core principles explored in this study pertain to the historical, societal, and cultural aspects of the children’s ethnic group. The analysis focused on the following considerations:

- (i) Through engaging in play, children can acquire knowledge, gain experience, develop skills, and adopt behaviors that align with the cultural context of their ethnic group. This includes activities such as simulating hunting behaviors and wearing traditional Hakka floral garments. Children also develop communication methods and participate in plots and scenarios that reflect their cultural heritage.
- (ii) Various factors influence children’s awareness, comprehension, appreciation, and practical behaviors during play. This study explored potential correlations between these factors and the children’s ethnic backgrounds. For example, children from diverse ethnic backgrounds engage in discussions about the procedural aspects of hunting feral boars.



To ensure a systematic, thorough, and comprehensive analysis of the data, the researcher adopted a rigorous three-step process:

- (i) Document Analysis: The systematic and iterative examination of written documents and recorded observations. Maintaining consistent awareness of current research and attentiveness to observational data are essential in analyzing the inherent characteristics of children's play. A constant focus on core principles such as mediation, internalization, the zone of proximal development, and scaffolding—as articulated in [Vygotsky's \(1978\)](#) social and cultural theory—was crucial throughout this process.
- (ii) Oral and Non-verbal Data Analysis: The study analyzed oral and non-verbal data without differentiation. Oral data included information obtained through interviews, while non-verbal data stemmed from observational content. All materials underwent an open coding process to facilitate sorting and organization. The texts were meticulously analyzed, with each word carefully examined and subsequently assigned to conceptual categories. Symbols within the data exemplified brevity and conciseness, with a focus on simplicity. The language employed by participants served as a dynamic reference system, using vivid imagery to preserve and convey intended meanings.
- (iii) Segmentation and Categorization: After thoroughly examining the literature, observation records, and open-coded data, noteworthy sentences and paragraphs were identified. These segments were categorized based on concepts, events, strategies, or characteristics to faithfully represent the content of the interviews. The primary objective was to establish a structured classification of the data, enabling a detailed understanding of the dynamics between children and teachers as observed in the interviews. Additionally, the effective dissemination of findings was achieved by integrating illustrative examples from observations. The Cronbach's  $\alpha$  coefficient for inter-rater consistency in our study was 0.84.

The research is grounded in an analysis informed by [Vygotsky \(1978\)](#) social and cultural theoretical frameworks. These frameworks explore the intricate interplay between ethnic history, society, and culture, providing deeper insights into the dynamics observed in children's play.

## Declarations

The authors declare no competing interests. This research did not receive any external funding or grants. The authors have no financial or proprietary interests in any materials discussed in this article. Prior to conducting the research, the purpose, methods, and expectations of the study were explained to the participants. They were invited to sign a research agreement form on-site. The participants' legal guardian provided written informed consent to participate in this study. Participants were informed that all questions would be addressed on-site and that they could withdraw from the study at any time, ensuring the protection of the responsibilities, rights, and obligations of both parties.

## Results

### Play activities reflecting cultural traits

This study revealed that children from various ethnic groups incorporate folk festival ceremonies into their play activities. However, the manner in which children from different ethnic groups performed these ceremonies varied according to the cultural contexts of their respective ethnic groups. The following discussion focuses on the incorporation of the Dragon Boat Festival, a traditional folk festival, into the pretend play of preschool children.

The Dragon Boat Festival holds significant cultural importance in Taiwan, with each ethnic group commemorating it in ways that reflect their unique cultural traditions. Based on the researcher's observations, four children participated in play within the dramatic area: one Taiwanese child, one Hakka child, and two indigenous children. During their play, the children simulated the process of preparing rice dumplings, each utilizing different materials, shapes, flavors, and terms. The Taiwanese child expressed a preference for rice dumplings wrapped in rice dumpling leaves, while the Hakka child preferred the use of moon peach leaves. In contrast, the indigenous children explained that their rice dumplings are not triangular but rather rectangular millet rice dumplings.

After describing the ingredients used to prepare rice dumplings, the four children engaged in a pretend activity of packing rice dumplings and sharing their preferred flavors. For instance, the Taiwanese child preferred sweet dumplings, mentioning their grandmother's recipe, which includes glutinous rice. The Hakka child expressed a preference for savory rice dumplings, enhanced with vegetables. Meanwhile, the indigenous children noted that their millet rice dumplings are not made with glutinous rice but instead use millet and salty pork. Rice dumplings, as a culinary delicacy imbued with significant cultural value, take diverse forms across different ethnic groups. For instance, regarding material selection, both Taiwanese and indigenous groups favor bamboo leaves, whereas the Hakka group prefers *Alpinia zerumbet* leaves. In terms of shape, Taiwanese and Hakka communities typically prepare triangular dumplings, while indigenous communities make rectangular ones. The flavors also vary, with options ranging from sweet to savory. Additionally, the terms "glutinous rice" and "millet" are linked to distinct ethnic and cultural identities. For example, millet rice dumplings are highly valued among indigenous communities but are less common in Taiwanese and Hakka traditions. The four children discussed their cultural experiences, including the materials, shapes, flavors, and names of rice dumplings, and incorporated these elements into their pretend play. This finding supports the notion that children's play activities are deeply influenced by cultural contexts ([Chen, 2023](#)). Furthermore, the cultural environment in which young children are situated provides opportunities for learning and development. Participating in folk festivals and rituals allows children to incorporate and enact these cultural experiences through imaginative scenarios in pretend play. As described in [Table 1](#).

### Play activities and cultural integration

This study revealed that play activities within the cultural frameworks of diverse ethnic groups not only provide children with

TABLE 1 Summary of ethnic cultural representation in Taiwanese preschool children’s play.

Folk festival ceremonies	Cultural identity and knowledge sharing	Ethnic cultural representation in play activities (packing rice dumplings)	
Dragon Boat Festival	rice dumplings dragon boats standing an egg noon water ancestor worship	Taiwanese children	<ul style="list-style-type: none"><li>• there is glutinous rice in it</li><li>• rice dumpling in bamboo leaves</li><li>• rice dumplings are triangular</li></ul>
		Hakka children	<ul style="list-style-type: none"><li>• there is glutinous rice in it</li><li>• rice dumpling in <i>Alpinia zerumbet</i> leaves</li><li>• rice dumplings are triangular</li></ul>
		Indigenous children	<ul style="list-style-type: none"><li>• there is millet rice in it</li><li>• rice dumpling in bamboo leaves</li><li>• rice dumplings are rectangular</li></ul>

exposure to the knowledge and experiences inherent in their own cultural contexts but also enhance their understanding of the cultural significance of traditional festival rituals from other groups. The following practical examples illustrate this phenomenon.

The findings indicate that participating in play activities within various cultural contexts allows children to gain knowledge and experiences related to their own cultural backgrounds while deepening their comprehension of the importance of traditional festivals and rituals in other cultures. For instance, discussing the “Dragon Boat Festival” with preschool children highlighted their familiarity with folk customs such as “rice dumplings,” “dragon boats,” “standing an egg,” “noon water,” and “ancestor worship.”

Folk festival ceremonies serve a culturally unifying function for all ethnic groups in Taiwan. However, each ethnic group celebrates the Dragon Boat Festival through unique customs. For example, during pretend play, the act of “packing rice dumplings” by Taiwanese, Hakka, and indigenous children is primarily conveyed through spoken language. These verbal expressions reveal differences in cultural backgrounds, as evidenced by phrases such as “Grandma said there is glutinous rice in it,” “Rice dumpling wrapped in bamboo leaves,” “Rice dumpling in *Alpinia zerumbet* leaves,” “Millet rice dumplings are rectangular,” and “Rice dumplings are triangular.”

The intricate make-believe scenarios of Taiwanese children, involving the preparation of rice dumplings during the Dragon Boat Festival, reflect the Chinese societal and cultural principles that emphasize respect for heaven, earth, spirits, and deities, along with the custom of expressing gratitude through food offerings.

Before engaging in pretend play activities, the children first discussed their understanding of rice dumplings. These imaginative scenarios provide valuable insights into their ethnic and cultural backgrounds. For instance, Taiwanese and Hakka children generally show no curiosity about millet rice dumplings, whereas indigenous children do. During these discussions, indigenous children highlighted their cultural tradition of preparing rectangular millet rice dumplings, thus contributing to the preservation of indigenous culinary practices.

Interviews with preschool teachers revealed that children from various ethnic groups were equally represented in classroom settings. The teachers noted that play activities often included narratives reflecting each child’s distinct cultural background. For example, during the Dragon Boat Festival, while packing rice dumplings in pretend play, the concepts of ethnicity and culture were naturally integrated. Teachers also observed that children expressed pride in the rice dumplings associated with their own culture, describing them as

delicious and fragrant. Moreover, children refrained from criticizing other varieties of rice dumplings, demonstrating their recognition and respect for cultural differences.

These observations suggest that children’s play activities provide a meaningful opportunity to engage with and apply their cultural backgrounds. By using their shared cultural heritage as a foundation, children expand their pretend play to incorporate rice dumplings with symbolic significance, reinforcing their connections to their ethnic communities and cultures. Beyond practical engagement, these activities foster children’s understanding and appreciation of the similarities and differences in the materials, shapes, flavors, names, and terminology of rice dumplings within their own cultural contexts and in comparison to other cultures. As described in [Table 1](#).

## Discussion

Preschool settings often represent children’s initial exposure to peers from diverse cultural, racial, and ethnic backgrounds ([Lee, 2016](#)). Previous research highlights the critical importance of incorporating children’s perspectives when designing curricula and pedagogical practices, as doing so enhances the effectiveness and relevance of their learning experiences ([García and Otheguy, 2020](#); [Pramling et al., 2019](#)). Thus, recognizing and addressing cultural diversity within early childhood education settings is essential for promoting meaningful engagement and facilitating children’s successful adaptation to socially diverse environments.

In the realm of children’s play and culture, researchers examine not only how children use play to exhibit behaviors and developmental phenomena rooted in their cultural heritage but also analyze the dynamic interplay among multiple influential factors, such as cultural contexts. The formation of individuals’ values and beliefs has been extensively studied ([Piazza et al., 2020](#); [Tomasello, 2021](#); [Toub et al., 2018](#); [Zosh et al., 2018](#)). According to the [Göncü and Gaskins \(2012\)](#) pointed that play serves as a form of cultural expression, with its developmental importance being closely tied to the structure of the community in which it exists. Their pretend play were not merely about creating or recreating imaginary worlds; rather, children act as interpretive participants ([Shweder, 1990](#)). Children engage in play as a way of exploring and expressing meaning. In some cultures, pretend play serves as a means for sharing mythology, while in others, it involves imagining possible worlds or exploring alternative interpretations of reality. In different cultural contexts, children might entertain themselves by creating absurd

scenarios or by navigating relationships through playful teasing. From this viewpoint, play is understood by children as a shared cultural activity in itself, rather than merely a tool for understanding culture. They engage in pretend play because it holds significance or value in their immediate environment (Pufall and Pufall, 2008).

Findings indicate that the play activities observed during folk festival ceremonies can reflect the cultural characteristics of Taiwanese preschool children. Furthermore, these activities assist children in understanding the cultural contexts of their ethnic groups and integrating knowledge of the cultural traits of other ethnic groups.

Broadly speaking, human play is extensive and ubiquitous (Whitebread and Basilio, 2013). However, it is influenced by various cultural factors, leading to diverse and complex manifestations (Farver, 1999; Gaskins, 1999). Moreover, play is widely acknowledged as a critical component of young children's educational development (Ontario Ministry of Education, 2016; Pellegrini and Bjorklund, 2004; Wisneski and Reifel, 2012). Play is also an innate behavioral response that not only serves intentional purposes but also promotes a state of relaxation. Previous research suggests that joy and pleasure, along with the thematic and performative elements of play, are shaped by individuals' life experiences, environmental events, and cultural practices (Corsaro, 2018; Vygotsky, 1978). Engaging in the creation of imaginary worlds through play allows children to develop, test, and compare different thoughts, attitudes, and behaviors that they may later apply in real-life situations. Simultaneously, play exposes them to cultural roles, norms, and values (Frost, 2012; Wong and Logan, 2016). Regardless of the culture in which they are raised, all children naturally become part of the dynamics of play (Whitebread et al., 2012). The differences in how play is manifested can be attributed to the varying cultural or subcultural perceptions of childhood and, consequently, the significance placed on play (Lancy, 2014). These diverse interpretations of play reflect distinct ways of understanding the relationship between humans and their environment.

The play activities of Taiwanese preschool children exhibit a dynamic nature and undergo modifications over time across different ethnic, cultural, and contextual settings, as exemplified by the variety of materials, shapes, flavors, and terms associated with rice dumplings reported by children. These findings align with those of Gauvain and Munroe (2019), who highlight that change can simultaneously influence the cognitive, linguistic, and social interaction domains of young children. This conclusion is supported by prior research conducted by Broekhuizen et al. (2014), Clark (2011), and Farver and Shin (1997). Additionally, the concept of change is significant in the context of cultural reproduction and serves as a catalyst for innovation, as emphasized by Boyette (2016), Pellegrini and Pellegrini (2012), and Samuelsson (2020). The application of change can also function as a powerful assessment tool for evaluating the progress and development of children within distinct cultural frameworks, as underscored by Ginsburg (2007), Lester and Russell (2010), and Newton and Jenvey (2011).

Furthermore, understanding the relationship between these behaviors and broader contexts, such as family and community, offers valuable insights into the developmental trajectories of various ethnic groups within their respective cultural settings (Kiang and Luu, 2013; Nicotera, 2007). Numerous factors shape the educational experience, including knowledge construction, skill demonstration, peer relationships, teacher–student interaction, identity formation, and a sense of belonging.

## Conclusion

The findings of this study indicate that Taiwanese children's cultural backgrounds are reflected in their play activities associated with folk festival ceremonies. These activities not only provide preschool children with opportunities to engage in ethnic traditions but also enhance their understanding of the similarities and differences in the observance of folk festivals across diverse cultural settings through verbal interactions. Furthermore, examining the relationship between these behaviors and broader contexts, such as the children's communities, offers valuable insights into the developmental trajectories of various ethnic groups within their specific cultural environments (Kiang and Luu, 2013; Nicotera, 2007). Future research will explore the play activities of children from diverse ethnic and cultural backgrounds to investigate the factors influencing their educational experiences. These factors include knowledge acquisition, skill development, peer relationships, teacher–student interactions, identity formation, and the cultivation of a sense of belonging.

Drawing upon Vygotsky (1978) sociocultural theory, play materials can be conceptualized as cultural artifacts that mediate children's adaptation to their social and cultural environments. Within preschool contexts, these play materials not only facilitate cognitive and motor development but also support meaningful social interactions among peers (Bateman and Church, 2017). Specifically, culturally relevant toys utilized during peer play serve as conversational tools, bridging children's preschool experiences with their home cultural backgrounds (Hennig and Kirova, 2012). Such cultural continuity can foster deeper engagement among peers, particularly within specific ethno-cultural groups, by promoting shared understanding and collaboration. Consequently, these play materials often extend beyond their original intended use, becoming essential mediational tools that strengthen social interactions and enrich communication among preschool-aged learners (Bateman and Church, 2017).

## Data availability statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## Ethics statement

Ethical review and approval were not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' or their legal guardians/next of kin where minors were involved.

## Author contributions

B-CC: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project

administration, Resources, Software, Supervision, Validation, Visualization, Writing – original draft, Writing – review & editing.

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## Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

## References

- Ahn, J. (2015). Finding a child's self: globalization and the hybridized landscape of Korean early childhood education. *Anthropol. Educ. Q.* 46, 224–243. doi: 10.1111/aeq.12104
- Aspinall, P., and Miri, S. (2013). *Mixed Race Identities*. London, England: Palgrave.
- Banerjee, M., Harrell, Z. A. T., and Johnson, D. J. (2011). Racial/Ethnic socialization and parental involvement in education as predictors of cognitive ability and achievement in African American children. *J. Youth Adolesc.* 11, 1–28. doi: 10.1007/s10964-010-9559-9
- Barron, I. (2011). The shadows of difference: ethnicity and young children's friendships. *Race Ethn. Educ.* 14, 655–673. doi: 10.1080/13613324.2010.547848
- Bateman, A., and Church, A. (2017). Children's use of objects in an early years playground. *Eur. Early Child. Educ. Res. J.* 25, 55–71. doi: 10.1080/1350293X.2016.1266221
- Bayeck, R. Y. (2018). A review of five African board games: is there any educational potential? *Camb. J. Educ.* 48, 533–552. doi: 10.1080/0305764X.2017.1371671
- Birkeland, A. (2019). Temporal settings in kindergarten: a lens to trace historical and current cultural formation ideals? *European Early Childhood Res. J.* 27, 53–67. doi: 10.1080/1350293X.2018.1556534
- Bodrova, E., and Leong, D. J. (2003). "Learning and Development of Preschool Children from the Vygotskian Perspective" in *Vygotsky's Educational Theory in Cultural Context*, eds. A. Kozulin, B. Gindis, V. S. Ageyev and S. M. Miller (New York, NY: Cambridge University Press), 156–176.
- Bourke, R., and Loveridge, J. (2014). Exploring informed consent and dissent through children's participation in educational research. *Int. J. Res. Method Educ.* 37, 151–165. doi: 10.1080/1743727X.2013.817551
- Boyette, A. H. (2016). "Children's Play and the Integration of Social and Individual Learning: a Cultural Niche Construction Perspective" in *Replacement of Neanderthals by Modern Humans Series. Social Learning and Innovation in Contemporary Hunter-Gatherers: Evolutionary and Ethnographic Perspectives*, eds. H. Terashima and B. S. Hewlett (Tokyo: Springer), 159–169.
- Brekhus, W. H. (2003). *Peacocks, Chameleons, Centaurs: Gay Suburbia and the Grammar of Social Identity*. Chicago, IL: University of Chicago Press.
- Broekhuizen, K., Scholten, A. M., and De Vries, S. I. (2014). The value of (pre) school playgrounds for children's physical activity level: a systematic review. *Int. J. Behav. Nutr. Phys. Act.* 11, 1–28. doi: 10.1186/1479-5868-11-59
- Brooker, L., Blaise, M., and Edwards, S. (2014). *Sage Handbook of Play and Learning in Early Childhood*. Los Angeles, CA: Sage.
- Brostolin, M. R., and Oliveira, E. A. C. (2013). Os sentidos do aprender a ser indígena e o viver a infância da criança Terena. *Educação em foco* 16, 143–162. doi: 10.24934/eef.v16i22.329
- Burke, R., and Grace, K. (2010). "Stability and Change in the Racial Identities of Multiracial Adolescents" in *Multiracial Americans and Social Class*, ed. K. Korgen (New York, NY: Routledge), 39–50.
- Caughy, M. O. B., Nettles, S. M., and Lima, J. (2011). Profiles of racial socialization among African American parents: correlates, context, and outcome. *J. Child Fam. Stud.* 20, 491–502. doi: 10.1007/s10826-010-9416-1
- Caughy, M. O. B., and Owen, M. T. (2015). Cultural socialization and school readiness of African American and Latino preschoolers. *Cult. Divers. Ethn. Minor. Psychol.* 21, 391–399. doi: 10.1037/a0037928
- Cekaite, A., and Evaldsson, A. C. (2019). Stance and footing in multilingual play: rescaling practices and heritage language use in a Swedish preschool. *J. Pragmat.* 144, 127–140. doi: 10.1016/j.pragma.2017.11.011
- Chak, A. (2010). Adult response to children's exploratory behaviours: an exploratory study. *Early Child Dev. Care* 180, 633–646. doi: 10.1080/03004430802181965
- Cheah, C. S., Leung, C. Y., and Zhou, N. (2013). Understanding "tiger parenting" through the perceptions of Chinese immigrant mothers: can Chinese and US parenting coexist? *Asian Am. J. Psychol.* 4, 30–40. doi: 10.1037/a0031217
- Chen, B.-C. (2023). Using science mapping to review research on preschool children play and culture. *J. Liberal Arts Soc. Sci.* 19, 371–399.
- Clark, A. (2011). *Supersizing the mind: Embodiment, action, and cognitive extension*. Oxford: Oxford University Press.
- Cooper, C. R. (2011). *Bridging Multiple Worlds: Cultures, Identities, and Pathways to College*. New York, NY: Oxford University Press.
- Corsaro, W. A. (2018). *The Sociology of Childhood*. Thousand Oaks, CA: Sage.
- Dinh, K. T., Weinstein, T. L., Tein, J. Y., and Roosa, M. W. (2013). A mediation model of the relationship of cultural variables to internalizing and externalizing problem behavior among Cambodian American youth. *Asian Am. J. Psychol.* 4, 176–184. doi: 10.1037/a0030165
- Dockett, S., Perry, B., and Kearney, E. (2013). Promoting children's informed assent in research participation. *Int. J. Qual. Stud. Educ.* 26, 802–828. doi: 10.1080/09518398.2012.666289
- Doyle, J. M., and Kao, G. (2007). Are racial identities of multiracials stable? Changing self-identification among single and multiple race individuals. *Soc. Psychol. Q.* 70, 405–423. doi: 10.1177/019027250707000409
- Evans, A. B., Banerjee, M., Meyer, R., Aldana, A., Foust, M., and Rowley, S. (2012). Racial socialization as a mechanism for positive development among African American youth. *Child Dev. Perspect.* 6, 251–257. doi: 10.1111/j.1750-8606.2011.00226.x
- Farver, J. A. M. (1999). "Activity Setting Analysis: a Model for Examining the Role of Culture in Development" in *Children's Engagement in the World: Sociocultural Perspectives*, ed. A. Goncu (Cambridge, MA: Cambridge University Press), 99–127.
- Farver, J. A. M., and Shin, Y. L. (1997). Social pretend play in Korean-and Anglo-American preschoolers. *Child Dev.* 68, 544–556.
- Fleer, M. (2010). *Early Learning and Development: Cultural-Historical Concepts in Play*. Cambridge, MA: Cambridge University Press.
- Flewitt, R. (2005). Conducting research with young children: some ethical considerations. *Early Child Dev. Care* 175, 553–565. doi: 10.1080/03004430500131338
- Flewitt, R. (2019). "Ethics and Researching Young Children's Digital Literacy Practices" in *The Routledge Handbook of Digital Literacies in Early Childhood*, eds. O. Erstad, R. Flewitt, B. Kummerling-Meibauer and I. S. Pereira (London: Routledge), 64–78.
- Flynn, E. G., Laland, K. N., Kendal, R. L., and Kendal, J. R. (2013). Target article with commentaries: developmental niche construction. *Dev. Sci.* 16, 296–313. doi: 10.1111/desc.12030
- Friesen, J., Arifovic, J., Wright, S. C., Ludwig, A., Giamo, L., and Baray, G. (2012). Ethnic identity and discrimination among children. *J. Econ. Psychol.* 33, 1156–1169. doi: 10.1016/j.joep.2012.08.003
- Frost, J. L. (2012). The changing culture of play. *Int. J. Play* 1, 117–130. doi: 10.1080/21594937.2012.698461
- García, O., and Otheguy, R. (2020). Plurilingualism and translanguaging: commonalities and divergences. *Int. J. Biling. Educ. Biling.* 23, 17–35. doi: 10.1080/13670050.2019.1598932

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- Gaskins, S. (1999). "Children's Daily Lives in a Mayan Village: a Case Study of Culturally Constructed Roles and Activities" in *Children's Engagement in the World: Sociocultural Perspectives*. ed. A. Goncu (New York, NY: Cambridge University Press), 25–60.
- Gaskins, S., Haight, W., and Lancy, D. F. (2006). "The Cultural Construction of Play" in *Play and Development: Evolutionary, Sociocultural, and Functional Perspectives*. eds. A. Goncu and S. Gaskins (Mahwah, NJ: Lawrence Erlbaum), 179–202.
- Gauvain, M., and Munroe, R. L. (2019). Children's experience during cultural change. *Child Dev. Perspect.* 13, 65–70. doi: 10.1111/cdep.12318
- Ginsburg, K. R. (2007). The importance of play in promoting healthy child development and maintaining strong parent-child bonds. *Pediatrics* 119, 182–191. doi: 10.1542/peds.2006-2697
- Göncü, A., and Gaskins, S. (2012). *Play and Development: Evolutionary, Sociocultural, and Functional Perspectives*. Hoboken, NJ: Taylor and Francis.
- Goodnow, J. J. (2010). "Cultural Contexts: Ways of Specifying" in *Handbook of Cultural Developmental Science*. ed. M. Bornstein (Mahwah, NJ: Erlbaum), 3–20.
- Hennig, K., and Kirova, A. (2012). The role of cultural artefacts in play as tools to mediate learning in an intercultural preschool programme. *Contemp. Issues Early Child.* 13, 226–241. doi: 10.2304/ciec.2012.13.3.226
- Hughes, D., Rodriguez, J., Smith, E. P., Johnson, D. J., Stevenson, H. C., and Spicer, P. (2006). Parents' ethnic-racial socialization practices: a review of research and directions for future study. *Dev. Psychol.* 42, 747–770. doi: 10.1037/0012-1649.42.5.747
- Ioannidou, E. (2017). Performing registers and registering performance: young children's linguistic practices during play in the Greek Cypriot context. *Lang. Commun.* 56, 55–68. doi: 10.1016/j.langcom.2017.04.003
- Jana, V., Linda, J., Maja, K. S., and Harald, W. (2018). Feeling half-half? Exploring relational variation of Turkish-heritage young adults' cultural identity compatibility and conflict in Austria. *Identity* 18, 60–76. doi: 10.1080/15283488.2017.1410159
- Jung, E. (2016). "Play and Asian American Children" in *International Perspectives on Children's Play*. eds. J. L. Roopnarine, M. M. Patte, J. E. Johnson and D. Kuschner (New York, NY: McGraw Hill), 74–88.
- Kenny, M. C., and McEachern, A. (2009). Children's self-concept: a multicultural comparison. *Prof. Sch. Couns.* 12, 207–212. doi: 10.5330/PSC.n.2010-12.207
- Kiang, L., and Luu, J. (2013). Concordance in self and ascribed ethnic labels among Asian American adolescents. *Asian Am. J. Psychol.* 4, 93–99. doi: 10.1037/a0028041
- Kook, S. H. (2011). A study on the change of the children's play. *J. Children Museums* 2, 137–165.
- Kumpunen, S., Shipway, L., Taylor, R. M., Aldiss, S., and Gibson, F. (2012). Practical approaches to seeking assent from children. *Nurs. Res.* 19, 23–27. doi: 10.7748/nr2012.01.19.2.23.c8905
- Lancy, D. F. (2014). *The Anthropology of Childhood: Cherubs, Chattel, Changelings*. New York, NY: Cambridge University Press.
- Lee, L. (2016). "Young Children's Peer Relations with Cross-Ethnic Peers: Implications, Limitations, and Future Directions" in *The Culture of Child Care: Attachment, Peers, and Quality in Diverse Communities*. eds. K. Sanders and A. W. Guerra (New York, NY: Oxford University Press), 123–137.
- Lee, J., and Bean, F. (2010). *The Diversity Paradox: Immigration and the Color Line in Twenty-First Century America*. New York, NY: Russell Sage Foundation.
- Lerner, R. M., and Benson, J. B. (2013). "Introduction: Embodiment and Epigenesis: a View of the Issues" in *Advances in Child Development and Behavior: Embodiment and Epigenesis*. eds. R. M. Lerner and J. B. Benson (London, UK: Elsevier), 1–20.
- Lester, S., and Russell, W. (2010). Children's right to play: An examination of the importance of play in the lives of children worldwide. Working Paper No. 57. The Hague, The Netherlands: Bernard van Leer Foundation.
- Lillard, A. S. (2011). "Mother-Child Fantasy Play" in *The Oxford Handbook of the Development of Play*. ed. A. D. Pellegrini (Oxford: Oxford University Press), 284–295.
- Lin, L., Huang, C., and Wang, Q. (2016). "Parenting in Contemporary China: the Dynamics of Interdependence and Independence" in *Contemporary Parenting: A Global Perspective*. eds. N. Guerda, B. Anabel and L. Debbiesiu (New York, NY: Routledge), 59–80.
- Mayne, F., Howitt, C., and Rennie, L. (2016). Meaningful informed consent with young children: looking forward through an interactive narrative approach. *Early Child Dev. Care* 186, 673–687. doi: 10.1080/03004430.2015.1051975
- McLean, K. C., and Syed, M. (2015). Personal, master, and alternative narratives: an integrative framework for understanding identity development in context. *Hum. Dev.* 58, 318–349. doi: 10.1159/000445817
- Mead, G. H., Morris, C. W., Huebner, D. R., and Joas, H. (2015). *Mind, Self & Society: The definitive Edn*. Chicago, Ill: University of Chicago Press.
- Meirelles, R. (2012). *Giramundo e outros brinquedos e brincadeiras dos meninos do Brasil*. Sao Paulo: Terceiro Nome.
- Mistry, J., and Dutta, R. (2015). "Human Development and Culture: Conceptual and Methodological Issues" in *Theory and Method: Handbook of Child Psychology and Developmental Science*. eds. W. F. Overton and P. C. Molenaar (Hoboken, NJ: Wiley), 369–406.
- Mutema, F. (2013). Shona traditional children's games and songs as a form of indigenous knowledge: an endangered genre. *J. Human. Soc. Sci.* 15, 59–64. doi: 10.9790/0837-1535964
- Nah, K. O., and Waller, T. (2015). Outdoor play in preschools in England and South Korea: learning from polyvocal methods. *Early Child Dev. Care* 185, 2010–2025. doi: 10.1080/03004430.2015.1028397
- Nascimento, R., and Zoia, A. (2014). Crianças Munduruku: um breve olhar sobre o brincar e sua aprendizagem social e cultural. *Tellus* 14, 119–130.
- Nazarinia, R. R., and Rollins, A. (2019). *Biracial Families: Crossing Boundaries, Blending Cultures, and Challenging Racial Ideologies*. Cham, Switzerland: Springer.
- Newton, E., and Jenvey, V. (2011). Play and theory of mind: associations with social competence in young children. *Early Child Dev. Care* 181, 761–773. doi: 10.1080/03004430.2010.486898
- Nicotera, N. (2007). Measuring neighborhood: a conundrum for human services researchers and practitioners. *Am. J. Community Psychol.* 40, 26–51. doi: 10.1007/s10464-007-9124-1
- Nkopodi, N., and Mosimege, M. (2009). Incorporating the indigenous game of morabaraba in the learning of mathematics. *S. Afr. J. Educ.* 29, 377–392. doi: 10.15700/saje.v29n3a273
- Ontario Ministry of Education (2016). "The Kindergarten Program" in *Children's Games in Street and Playground*. eds. I. A. Opie and P. Opie (Oxford, UK: Oxford University Press).
- Ostrow, W. L. (2012). *Understanding how Young Children Learn: Bringing the Science of Child Development to the Classroom*. Alexandria, VA: ASCD.
- Overton, W. F. (2013). A new paradigm for developmental science: Relationism and relational-developmental systems. *Appl. Dev. Sci.* 17, 94–107. doi: 10.1080/10888691.2013.778717
- Parsons, S., Sherwood, G., and Abbott, C. (2016). Informed consent with children and young people in social research: is there scope for innovation? *Child. Soc.* 30, 132–145. doi: 10.1111/chso.12117
- Paugh, A. L. (2014). *Playing with Languages: Children and Change in a Caribbean Village*. New York, NY: Berghahn Books. doi: 10.1159/000170895
- Pellegrini, A. D., and Bjorklund, D. F. (2004). The ontogeny and phylogeny of children's object and fantasy play. *Hum. Nat.* 15, 23–43. doi: 10.1007/s12110-004-1002-z
- Pellegrini, A. D., and Pellegrini, A. F. A. (2012). "Play, Plasticity, and Ontogeny in Childhood" in *Evolution, Early Experience and Human Development: From Research to Practice to Policy*. eds. D. Narvaez, J. Panksepp, A. N. Schore and T. R. Gleason (New York, NY: Oxford University Press), 339–351.
- Piazza, E. A., Hasenfratz, L., Hasson, U., and Lew-Williams, C. (2020). Infant and adult brains are coupled to the dynamics of natural communication. *Psychol. Sci.* 31, 6–17. doi: 10.1177/0956797619878698
- Pramling, N., Wallerstedt, C., Lagerlöf, P., Björklund, C., Kultti, A., Palmér, H., et al. (2019). *Play-Responsive Teaching in Early Childhood Education*. Cham, Switzerland: Springer.
- Pufall, P. B., and Pufall, E. (2008). The relationship between play and culture. *Hum. Dev.* 51, 390–398.
- Rampton, B. (2018). *Crossing: Language and Ethnicity Among Adolescents*. New York, NY: Routledge.
- Rogoff, B. (2003). *The Cultural Nature of Human Development*. New York, NY: Oxford University Press.
- Roopnarine, J. L., Patte, M. M., Johnson, J. E., and Kuschner, D. (2015). *International Perspective on Children's Play*. London: McGraw Hill.
- Ruiz-Casares, M., and Thompson, J. (2016). Obtaining meaningful informed consent: preliminary results of a study to develop visual informed consent forms with children. *Children's Geographies* 14, 35–45. doi: 10.1080/14733285.2014.971713
- Samuelsson, R. (2020). Guiding preschool play for cultural learning: preschool design as cultural niche construction. *Front. Psychol.* 11, 1–14. doi: 10.3389/fpsyg.2020.545846
- Sanders, K. E., Molgaard, M., and Shigemasa, M. (2019). The relationship between culturally relevant materials, emotional climate, ethnic composition and peer play in preschools for children of color. *J. Multicultural Educ.* 13, 338–351. doi: 10.1108/JME-02-2019-0014
- Serrano-Villar, M., and Calzada, E. J. (2016). Ethnic identity: evidence of protective effects for young, Latino children. *J. Appl. Dev. Psychol.* 42, 21–30. doi: 10.1016/j.appdev.2015.11.002
- Shweder, R. A. (1990). "Cultural Psychology - What is it?" in *Cultural Psychology: Essays on Comparative Human Development*. eds. J. W. Sigler, R. A. Shweder and G. Herdt (New York, NY: Cambridge University Press), 1–46.
- Shweder, R. A., Goodnow, J. J., Hatano, G., LeVine, R. A., Markus, H. R., and Miller, P. J. (2007). "The Cultural Psychology of Development: one Mind, Many Mentalities" in *Handbook of Child Psychology: Theoretical Models of Human Development*. eds. R. M. Lerner and W. Damon (New York, NY: Wiley), 716–792.

- Strauss, L. C., and Cross, W. E. Jr. (2005). "Transacting Black Identity: a Two-Week Daily-Diary Study" in *Navigating the Future: Social Identity, Coping, and Life Tasks*. eds. G. Downey, J. S. Eccles and C. Chatman (New York, NY: Russell Sage), 67–95.
- Suarez-Orozco, C. (2009). *Children of Immigration*. Boston, MA: Harvard University Press.
- Syed, M. (2012). The past, present, and future of Eriksonian identity research: introduction to the special issue. *Identity* 12, 1–7. doi: 10.1080/15283488.2012.632362
- Tamis-LeMonda, C. S., Sze, I. N. L., Ng, F. F. Y., Kahana-Kalman, R., and Yoshikawa, H. (2013). Maternal teaching during play with four-year-olds: variation by ethnicity and family resources. *Merrill-Palmer Q.* 59, 361–398. doi: 10.1353/mpq.2013.0016
- Tatira, L. (2014). Traditional games of Shona children. *J. Pan African Stud.* 7, 156–175.
- Tomasello, M. (2021). *Becoming Human: A Theory of Ontogeny*. Cambridge, MA: Belknap Press of Harvard University Press.
- Toub, T. S., Hassinger-Das, B., Nesbitt, K. T., Ilgaz, H., Weisberg, D. S., Hirsh-Pasek, K., et al. (2018). The language of play: developing preschool vocabulary through play following shared book-reading. *Early Child. Res. Q.* 45, 1–7. doi: 10.1016/j.ecresq.2018.01.010
- Trompenaars, F., and Hampden-Turner, C. (2021). *Riding the Waves of Culture: Understanding Diversity in Global Business*. New York, NY: McGraw-Hill.
- Tsai, J. L., and Chentsova-Dutton, Y. (2002). "Models of Cultural Orientation: Differences Between American-Born and Overseas-Born Asians" in *Asian American Mental Health: Assessment Theories and Methods*. eds. K. Kurasaki, S. Okazaki and S. Sue (New York, NY: Springer), 95–106.
- Ursache, A., Blair, C., and Raver, C. C. (2012). The promotion of self-regulation as a means of enhancing school readiness and early achievement in children at risk for school failure. *Child Dev. Perspect.* 6, 122–128. doi: 10.1111/j.1750-8606.2011.00209.x
- Vygotsky, L. S. (1967). Play and its role in the mental development of the child. *Sov. Psychol.* 5, 6–18.
- Vygotsky, L. S. (1978). *Mind in Society*. Cambridge, MA: Harvard University Press.
- Way, N., and Rogers, O. (2015). "They say black men won't make it, but I know I'm gonna make it: ethnic and racial identity development in the context of cultural stereotypes" in *The Oxford Handbook of Identity Development*. eds. K. C. McLean and M. Syed (New York, NY: Oxford University Press), 269–285.
- Whitebread, D., and Basilio, M. (2013). "Play, Culture and Creativity" in *Cultures of Creativity*. eds. D. Gauntlett and B. Stjerne-Thomsen (Billund, Denmark: The LEGO Foundation), 77–82.
- Whitebread, D., Basilio, M., Kuvalja, M., and Verma, M. (2012). *The Importance of Play*. Brussels: Toy Industries of Europe.
- Wisneski, D. B., and Reifel, S. (2012). "The Place of Play in Early Childhood Curriculum" in *Curriculum in Early Childhood Education: Reexamined, Rediscovered, Renewed*. eds. N. File, J. J. Mueller and D. B. Wisneski (New York, NY: Routledge), 175–188.
- Wong, S., and Logan, H. (2016). "Play in Early Childhood Education: an Historical Perspective" in *Play: A Theory of Learning and Change*. ed. T. Brabazon (Cham, Switzerland: Springer), 7–26.
- Yim, H. Y. B., Lee, L. W. M., and Ebbeck, M. (2011). Confucianism and early childhood education: a study of young children's responses to traditional Chinese festival stories. *Early Child Dev. Care* 181, 287–303. doi: 10.1080/03004430903357837
- Zosh, J. M., Hirsh-Pasek, K., Hopkins, E. J., Jensen, H., Liu, C., Neale, D., et al. (2018). Accessing the inaccessible: redefining play as a spectrum. *Front. Psychol.* 9:1124. doi: 10.3389/fpsyg.2018.01124