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RELATIONSHIP BETWEEN INDIGENOUS GAMES AND CULTURALLY SITUATED INTELLIGENT BEHAVIOURS AMONG CHILDREN OF THE KOM COMMUNITY IN THE NORTH WEST REGION OF CAMEROON

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Abstract

Africa has rich repertoire of indigenous practices that support social innovation and sustainable development. Our paper aimed at examining the relationship between one of the practices: Relationship between indigenous games on the development of culturally situated intelligent behaviours among children of the Kom community. The study was underpinned by Gardner's Theory of Multiple Intelligences; Tchombe's Mediated Mutual Reciprocity; Vygotsky's Sociocultural Theory of Cognitive Development; Nsamenang's Social Ontogenetic Theory and Lewin's Social Field Theory. Methodologically, an embedded mixed methods correlational research design was used for the study. A sample of 207 parents and 65 children were chosen for the study with the use of questionnaires, focus group discussion guide and observation check list for data collection. The quantitative findings of the study revealed that there is a statistically significant, positive and strong relationship between indigenous games and intelligent behaviours (r-value= 0.517**, p-value = 0.001< 0.05). Qualitatively, games such as "Anyang" a local game played by children with the use of small pebbles or seeds on bored holes on the ground and "Chacha" (Hop scotch) enhances teamwork, patience, decision-making and problem solving. Promoting children's engagement in indigenous games is essential in nurturing intelligent behaviours. There is need for parents to regulate screen time and create room for children to engage in indigenous games. Incorporating and supporting the use of these games in schools by teachers and school administrators during co-curricular activities will valorize the essence.

Keywords:

Indigenous games, culture, intelligent behaviours.

Résumé

L'Afrique possède un riche patrimoine de pratiques endogènes qui contribuent à l'innovation sociale et au développement durable. Cette étude avait pour objectif d'examiner la relation entre les jeux traditionnels et le développement des comportements intelligents culturellement situés chez les enfants de la communauté Kom, dans la région du Nord-Ouest du Cameroun. Elle s'appuie sur plusieurs fondements théoriques, notamment la théorie des intelligences multiples de Gardner, la théorie de la réciprocité mutuelle médiatisée de Tchombe, la théorie socioculturelle du développement cognitif de Vygotsky, la théorie de l'ontogenèse sociale de

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Nsamenang et la théorie du champ social de Lewin. Sur le plan méthodologique, l'étude a adopté un devis de recherche corrélationnel à méthodes mixtes intégrées. Un échantillon de 207 parents et de 65 enfants a été retenu. Les données ont été recueillies au moyen de questionnaires, de guides de discussion de groupe et de grilles d'observation. Les résultats quantitatifs révèlent l'existence d'une corrélation positive, relativement forte et statistiquement significative entre la participation aux jeux traditionnels et les comportements intelligents des enfants (r = 0,517 ; p = 0,001 < 0,05). Sur le plan qualitatif, les résultats montrent que des jeux traditionnels tels que l'« Anyang », pratiqué à l'aide de petits cailloux ou de graines disposés dans des trous creusés dans le sol, et le « Chacha » (jeu de marelle) favorisent le travail d'équipe, la patience, la prise de décision et la résolution de problèmes. Ces résultats soulignent l'importance de promouvoir la participation des enfants aux jeux traditionnels comme moyen de développer leurs compétences cognitives, sociales et pratiques. L'étude recommande aux parents de réglementer le temps d'exposition des enfants aux écrans et de leur offrir davantage d'occasions de participer aux jeux traditionnels. Elle préconise également l'intégration et la valorisation de ces jeux dans les établissements scolaires, notamment à travers les activités périscolaires organisées et encadrées par les enseignants et les responsables d'établissements, afin de préserver leur valeur éducative et culturelle.

Mots-clés : *Jeux traditionnels, culture, comportements intelligents.*

Introduction

Africa has rich and diverse forms of heritage, indigenous knowledge, and practices that support social innovation and sustainable development (Makalesi, 2020). This justifies the current wave of interest in indigenous knowledge, learning and adaptability. Within cultures in Africa, there exists a link between indigenous knowledge socialisation tools and intelligent behaviours of children (Gök, 2020). Indigenous knowledge in Africa was culturally, artistically, religiously and recreationally integrated with the social life of the ethnic group. Learning of skills, social, cultural values and norms were not separated from their life. Socialisation was utilitarian; preparing members to engage in a particular type of life activity (Nsamenang 2005). This was designed to develop culture-fit intelligence in the young children captured from folklore, games, rites of passage and traditional play songs. Tchombe & Lukong (2016) posit the invaluable contribution of indigenous knowledge in the development of intelligent behaviours. They are cultural tools and modes of socialisation in the transmission of cultural intelligence. For instance, with the use of proverbs, the child is expected to be sociable, honest, courageous, humble and exhibit perseverance at all times. A child is educated in the codes of conduct, patterns of moral behaviour, and laws of the society. In this dimension, folklore, games, rites of passage and traditional songs are tools of indigenous knowledge that enrich and influence the development of intelligent behaviours.

Intelligent behaviour has been defined from different cultural standpoints. For instance, Serpell (1993, 1994) states that in western cultures, people tend to view intelligent behaviours as a means for individuals to devise categories and to engage in rational debate, while in Eastern cultures, people see it as a way for members of a community to recognize contradiction and complexity and to play their social roles successfully. In the same vein, when rural parents in Africa talk about the intelligent behaviours of children, they refer to social responsibility. In these light intelligent behaviours can be understood in the light of multiple and practical intelligence that embody both cognitive and social skills necessary for survival in the community. In most traditional settings, children's learning is by doing and is on-going with increasing level of complexity as they develop. With

this, the child engages in observing, imitating, collaborating, cooperating, repeating, dancing to a rhythm, and acquiring new concepts through listening to songs and to proverbs. As we begin to experience the world from birth, learning takes place by interacting with the environment through crawling to walking, collecting sounds to putting together language, and interacting with others. This implies that the contextualization of learning enables children learn by participating in family and community activities that are age related (Tchombe, 2011). This therefore implies that different cultures in the world have different perception of intelligent behaviours and adopts different methods of socialising children into acquiring these behaviours.

There is increasing awareness of the loss and erosion of indigenous knowledge through the process of colonization. This increases the need to demand the inclusion of indigenous educational methods and contents into formal education in order to produce indigenous values and disseminate for practice (May & Aikman, 2003). Tchombe, (2019) states that colonized countries in Africa must have suffered deprivation because colonial objectives and philosophies served only colonial missions. The ridged colonial education curriculum structures disregarded the flexible nature of indigenous African systems. On this account, Africa's rich indigenous inheritance was not given the chance to describe contemporary African reality pertaining to its changing social scenario and share the rich African values and practices with rest of the world (Mazrui, 1986). In this regard, the primary goal of this study is to investigate the relationship between indigenous games and culturally situated intelligent behaviours among children of the Kom community in the North West Region of Cameroon. The study aims at discussing the implications for integrating indigenous knowledge in school curricula for the development of academic, social, moral and practical skills in children.

BACKGROUND

Measures of intelligence in Africa, have found that people in non-Western cultures often have ideas about intelligence that differ from those that have shaped Western intelligence tests. Commenting on cross-cultural differences in intelligent behaviours, Serpell (1993, 1994, 2000) states that in western cultures, people tend to view intelligence as a means for individuals to devise categories and to engage in rational debate, while in Eastern cultures, people see it as a way for members of a community to recognize contradiction and complexity and to play their social roles successfully. In the same vein, when rural parents in Africa talk about the intelligence of children, they refer to social responsibility.

Within the African context, the role of culture in shaping intelligent behaviour has equally been stressed by the African Union in its June 2006 Draft Plan of Action for the Second Decade of Education for Africa (2006 – 2015). In a conference held in Addis Ababa – Ethopia (2006), the Ministers of Education of the African Union, stressed the need to re-establish the linkage between education and culture in Africa. According to the Ministers of Education, culture is the way of life of individuals and societies, providing a system of knowledge and values that serve as an effective foundation for learning processes and social interactions. Re-establishing the linkage between education and culture releases synergies that

can widen the range of options for individuals and societies to meet the challenges of the 21st century and participate effectively in the global economy. There is therefore the need to re-emphasize the role played by culture in shaping what constitutes intelligent behaviour within African cultures and Cameroon in particular.

In Cameroon, the importance of indigenous knowledge was echoed by the 1995 National Education Forum in Cameroon. According to the forum documents (MINEDUC, 1994; MINEDUC, 1995), the neglect of local and national cultural values especially as concerns languages, was named as one of the reasons, inter alia, that justified the holding of the 1995 National Educational Forum. The Forum focused on the definition of the place of national languages and cultures in the education system. As a follow up to the 1995 National Education Forum, Law No 98/004 of 14th April 1998 states in section 5 (1), (3) and (8) that the objectives of education shall be to train citizens who are firmly rooted in their cultures, but open to the world, and respectful of the general interest and common will; promote national languages and provide physical, sports, artistic and cultural training for the child.

By implication of the 1998 law, indigenous knowledge is supposed to be included in the curriculum of schools. Though not explicitly written as indigenous knowledge, this is evident in the 2018 curriculum for the English subsystem of education, whereby arts and cultural identify have occupied domains 3 and 4 of the curriculum. This entails that a child is expected to communicate in the two official languages (English and French) and the use of at least one national language. The child is expected to practice social and citizenship values (morality, good governance and budgetary transparency); create arts objects; draw imaginative and creative literary images expressing feelings and emotions; use voice, body and/or inanimate objects to convey feelings and emotions; manifest moral rectitude and appropriate life styles (Ministry of Basic Education, 2018). Despite that fact that these are well spelled out in the curriculum, the implementation in schools remains problematic due to the fact that the teachers themselves are not well grounded in the specific contents of indigenous knowledge and the specific intelligent behaviours that arise from them. Hence, learners may engage in arts performance, games, songs in school, but the question remains whether these activities are sensitive to the cultural background from where the children come from.

Kom, which is in Boyo Division of the North-West Region of Cameroon, is one of the largest ethnic groups in the North-West grasslands. Oral tradition holds that the Kom people migrated from Babessi in the North-West of Cameroon to their present location. Kom has a very rich cultural heritage and the people have very great respect for cultural institutions. The language spoken is “Itaŋikom” (The language of Kom). Kom has a very rich cultural heritage and the people have a very great respect for cultural institutions. The birth of a new child is welcomed by all with joy and happiness. Considering the child as a project in progress, parents and elders expect the child to grow and acquire culturally acceptable knowledge through the process of socialisation (Nsamenang, 2005). Socialization is therefore the process whereby through interaction with others, the individual learns expectations, habits, skills, values and beliefs that are necessary

requirements for effective functioning in a particular society or cultural setting. Within the Kom culture, the 6 to 11 years old fall within the developmental period of social entrée (Nsamenang, 2005). In the early years of this developmental stage, the child is expected to recognize social roles, acknowledge self in connectedness and develop a high sense of peer interaction and work. In later years, the child is expected to demonstrate the ability to recognize and adjust to changes, perform domestic chores and participate in rite of passage if any.

Nkwi (1976) postulates that the Kom child's intelligent behaviour is influenced by the child's experience of cultural values, traditions, art, language and beliefs. Through his or her social interaction with others such as parents, siblings, peers and significant elders, the child acquires intelligent skills like the ability to adapt to the local environment, ability to make sound moral judgements, ability to sustain interpersonal relationships and the performance of daily routines as well as entrepreneurial skills. Within the Kom traditional setting, it is therefore common to find children between ages 6 and 11, making play objects like toys, cars and house furniture like chairs and brooms out of local bamboos. Children seek to discover the healing mystery behind some plants. They play and interact with peers and older siblings and perform house chores like cleaning, fetching wood, water and catering for domestic animals (Nkwi, 1976). Children accompany parents to the farms where they learn basic farming skills. In sum, children between ages 6 and 11 are expected to understand, interpret and apply practical intelligence, which is indispensable for their survival in the cultural and social environment. Nkwi (1976) evinces that youths were trained to prepare them for family, agricultural and cultural activities. The trainings included hunting, herding, farming, pot making and basket weaving, thus grounding them towards vocational development. These trainings were necessary for making them worthy members of the society, learning survival skills for being self-dependent in their own environment.

The Kom child learns by listening to elders, observing, imitating or emulating them. Children accompany parents to the farms where they learn basic farming skills. These behaviours were culturally transmitted to children through oral language ("Itaŋikom") out of which the child is expected to draw out cognitive, social and vocational development (Nkwi, 1976). Among the Kom people in the past, children learned different social and intellectual skills from the folktales, folksongs, proverbs, riddles and metaphors through parents or adults who told them by the fireside in the night. It inculcated a sense of togetherness/unity, understanding the rights and obligations of each individual in the Kom society and belonging to the culture. Kom indigenous knowledge therefore is harnessed through interactive learning, collaborative, cooperative, observational, craft, imitation, moral conduct, discipline, experiencing and participatory learning in the home and community. Kom parents use these practical skills to measure intelligent skills in children which are different from western conceptions of intelligence. Such cultural differences do not go fundamentally against common norms on intelligence but reveal that intelligence should be defined according to the culture of each social group. Different cultures call for different expressions of intelligent thinking. The onus to understand the social cognition and intelligent

behaviour of Kom children lies in capturing shared routines and participatory learning, rather than in completing school-based instruments (Nkwi, 1976).

CONCEPTUAL CONSIDERATIONS

Indigenous games

Indigenous games are recreational activities that originated from a particular cultural group, community or people (Nyota and Mapara, 2008). These games are different from mainstream sports, which are regulated by international federations, and have fixed rules. Conversely, indigenous games do not have internationally regulated rules for implementation; local organisers determine these according to the customs of the local participants. This creates many different versions of the same game. Indigenous games are a very important part of a people's heritage and culture. They preserve age- old traditions and stories of the people. Indigenous games have an origin, which is the story behind the invention of the particular activity or game. When participating in indigenous games, one can begin to understand the social construct of a particular culture and history of the people who invented and continue to invent and participate in indigenous games (Nyota and Mapara, 2008).

The importance of play in general in the development of intellectual abilities has been emphasized in developmental psychology. Play is more than what children do to pass the time. Instead, play serves an important purpose, helping children to develop socially, cognitively and physically (Power, 2000). According to Piaget (1962) play is derived from the child's working out of two fundamental characteristics of his mode of experience and development. These are accommodation and assimilation- the attempts to integrate new experiences into the relatively limited number of motor and cognitive skills available at each age. In Accommodation, the child attempts to imitate and interact physically with the environment. In Assimilation, the child attempts to integrate externally derived precepts or motor actions in a limited amount of schemata. For Piaget, children especially at the preoperational and concrete operational stages grow cognitively by observing sequences of play. Piaget considered that children primarily learn through imitation and play as they build up symbolic images through internalized activity.

The pioneering social constructivist developmental psychologist, Vygotsky (1978) thought that, in the preschool years, play is the leading source of development. Through play children learn and practice many basic social skills. They develop a sense of self, learn to interact with other children, how to make friends, how to lie and how to role play. Bronfenbrenner's (1979) ecological model provides an important framework for considering play as part of a child's development in the midst of various social systems, with the family occupying a central role.

Between the ages of 6 and 12, the child engages in physical play like being able to walk and run, to jump, kick, catch, and skip. Large-muscle skills take over and lay the foundation for even more sophisticated activities, including bicycle riding, roller-skating, wrestling, swinging, swimming, and other sports. Physical play

gives a child the chance to practice previously learned motor skills and to develop new ones as he repeatedly challenges himself and gradually pushes back the limits of the ability and endurance.

Play can be categorized into two: Functional play that involves simple, repetitive activities typical of early childhood and constructive play in which children manipulate objects to produce or build something typical of middle childhood (Feldman, 2003). Furthermore, the social aspects of play reveal that children engage in parallel play in which they, at early childhood play with similar toys, in a similar manner, but do not interact with each other. At this stage, children also engage in onlooker play where they simply watch others play by looking silently or making comments of encouragement, but do not actually participate themselves. As children grow older into middle childhood, they engage into more sophisticated associative play where two or more children actually interact with one another by sharing or borrowing toys or material, although they do not do the same thing. Later on in life children engage in cooperative play in which children genuinely interact with one another, taking turns, playing games, or devising contests (Feldman, 2003).

By participation in social games and play the child is able to develop intelligent behaviours that are both cognitive (numbering, imagination, problem solving, language, understanding, comprehension, attention, etc.) and social (child's ability to give and receive help from peers, keep friends and playmates, manage conflict, learn future gender roles, manage success and failure, live and work together with others, participate in community tasks, celebrate with others and feel for others in times of worry and distress). In African cultures, as the child grows, his/her social world is not as limited as the child's from the western culture. His/her general learning is beyond the immediate family circle. At this age period too, particularly if weaning has been instituted, the environment of a child is much less mother-centered. He is brought into the group in the area of play. By the time he is fully weaned, somewhere between two and two and a half years, the African child spends a great deal more time with his or her siblings and/or other children in the total family compound. In this way he is exposed to areas of socialisation and complex social interaction at an early age (Nsamenang, 2005).

Nyota and Mapara (2008) highlight two important ways by which the African child interacts with peers and siblings. This is done through African traditional games and play songs. Berger (2000) has remarked: If a child's learning is not aroused by his or her parents, it may be aroused – and powerfully – when the child begins to compare his or her skills with those of other children of the same age. Berger (2000) emphasizes the fact that older African elder children who have mastered the skill or graduated from apprenticeship so to speak normally give the apprentice child guidance. The critical element of these games is guided participation. The older child who has mastered the skill and the learner child interact in order to accomplish a task. As they do so, the mentor is both sensitive and responsive to the needs of the learner. Through these traditional games and play songs, children learn how to handle interpersonal relationships and develop more social and cognitive competences.

Indigenous games are essential in indigenous children's education and can be used successfully to develop some skills and knowledge during teaching and learning (Mweli, 2018) because knowledge is gained from the culture (habitus) in which an individual lives (Huang, 2019). Indigenous games impact on a number of socio-economic issues in the lives of people, such as African identity, cultural diversity, education and training, accessibility to resources, international relations and economic growth, Molefe, (2010). Despite the fact that the use of indigenous games does have a positive impact on a learner's performance, very little research has been conducted in this area. The incorporation of indigenous knowledge in teaching and learning would motivate learners, benefit learners and enhance comprehension.

Incorporating indigenous games requires physical activity, social skills, creativity, imagination and most importantly, traditional children's games stimulate growth, both physically and intellectually. There are several benefits in using traditional indigenous games to boost education, such as bringing together indigenous and non-indigenous people and providing essential training in social interaction. Indigenous games play an important role in various communities. Despite research indicating that these games can be used to advance and create a connection between classroom activities and the real life contexts. According to Da Silva (FAO, 2015), learners that live in rural areas use the wealth of their cultural and indigenous knowledge to understand the world around them. The incorporation of indigenous games into the school curriculum in order to educate African children. For example, ubuntu philosophy and cultural beliefs (Nxumalo & Mncube, 2018). The integration of indigenous games into learners' learning activities makes learning relevant to learners' cultural knowledge and worldviews. Furthermore, the incorporation of indigenous games in the school curriculum stimulates critical thinking, creativity, and the promotion of collective values and co-construction of knowledge in learners (Nxumalo & Mncube, 2019).

Furthermore, indigenous games enforce discipline among children through the rules that characterize them, and teaching and learning call for mutual respect. The games allow a learner and fellow learners, and teachers to work together. Thus, this teaching and learning approach promotes social interaction. Collaboration, pleasure, exercising, and educational and environmental aspects are embedded in indigenous games because logic, songs, wit, intuition, and observance are all employed by players. Vygotsky (1978) considered social interaction to be a central part of all human learning activities which must be understood in their cultural settings (Taber, 2020). Learners in a group share ideas and wisdom and, as a result, spontaneous learning occurs through their social interaction.

Intelligent behaviour

Numerous definitions of and hypotheses about intelligent behaviour have been proposed even before the twentieth century, with no consensus yet reached by scholars. Within the discipline of psychology, various approaches to human intelligent behaviour have been adopted. In the past the psychometric approach has been especially familiar to the general public, dominated by the Intelligence Quotient (IQ) and General Intelligence Factor (g). Spearman (1904) is generally

credited with defining general intelligence. Based on the results of a series of studies collected in Hampshire and England, Spearman concluded that there was a common function (or group of functions) across intellectual activities including what he called intelligence (that is school rank, which Spearman thought of as "present efficiency" in school courses; the difference between school rank and age, which was conceptualized as "native capacity;" teacher ratings; and peer ratings provided by the two oldest students, which was termed "common sense") and sensory discriminations (that is, discrimination of pitch, brightness, and weight). This common function became known as "g" or general intelligence.

A number of critics have challenged the relevance of psychometric intelligence in the context of everyday life. Gardner's Theory of Multiple Intelligences (1983, 1999), is based on studies not only of normal children and adults but also by studies of gifted individuals (including so-called "savants"), of persons who have suffered brain damage, and of individuals from diverse cultures. This led Gardner (1983) to break intelligent behaviours down into at least eight different components: logical, linguistic, spatial, musical, kinaesthetic, interpersonal, intrapersonal and naturalist intelligences (Gardner, 1999). This gives rise to intelligent behaviours that the current research is out to investigate from indigenous socialisation or tools.

Sternberg (1985) proposed the triarchic theory of intelligence to provide a more comprehensive description of intelligent behaviour than traditional differential or cognitive theories of human ability. The triarchic theory describes three fundamental aspects of intellectual behaviour: Analytic intelligence comprises the mental processes through which intelligence is expressed, Creative intelligence is necessary when an individual is confronted with a challenge that is nearly, but not entirely, novel or when an individual is engaged in automatizing the performance of a task and Practical intelligence which is bound in a sociocultural milieu and involves adaptation to, selection of, and shaping of the environment to maximize fit in the context. The Triarchic Theory does not argue against the validity of a general intelligence factor; instead, the theory posits that general intelligence is part of analytic intelligence, and only by considering all three aspects of intelligence can the full range of intelligent functioning be fully understood.

Intelligent behaviour is developed gradually in the child as the levels of intelligence increase. As the child develops, it understands the emotions of parents and siblings and starts responding to them. Its behaviours become more selective and purposeful. It can understand the reactions of people and learns to discriminate them. The child increases the curiosity to know the environment. Gradually the child learns to imitate the parents. By the third year, it learns to discriminate right and wrong. By four years the child learns to use language and speak in sentences. Gradually, the child can understand people, their emotions and feelings, learns fundamental skills in reading, writing and calculations. He develops critical thinking, attitudes towards social groups (Adolph & Hoch, 2019). In this way, the intelligent behaviours are developed gradually in the child as the level of intelligence increases. Intelligent behaviours are integral to a successful life. This learning is situated in the social world, which allows children to selectively learn from other people and engage in the process of cultural

transmission. Thus, the use of indigenous folklore, games, rites of passage and traditional songs influence the development of these behaviours.

The African cultural content of intelligent behaviour in children

Illumined by Gardner's Theory of Multiple Intelligences and Sternberg's Triarchic Theory of Intelligence (2001) and based on studies carried out by Serpell (1994) in Zambia and Grigorenko (2001), we shall review four major components of intelligent behaviour within cultures in Africa. These include: the child's acquisition of moral values, ability to perform daily routines, ability to sustain interpersonal relationships and ability to adapt to the local environment. The term 'behaviour' is used in this study to emphasise practices, and actions of people, both as individuals and in groups appropriate in the community. Intelligent behaviour is understood in the light of multiple and practical intelligence that embody both cognitive and social skills necessary for survival in the community. The themes include: moral values, daily routines, interpersonal skills and adaptation to the local environment.

Morals values

Moral development can be defined as a change in people's sense of justice and of what is right and wrong, and in their behaviour related to moral issues (Feldman, 2003). This involves how people reason, behave and feel when confronted with moral problems. It can therefore be inferred that moral development is not limited to one particular domain; rather it embodies tenets of the cognitive, behavioural and emotive theories of human development. (Santrock, 2004). In African Society, like other societies in the world, ethical principles are of two types: positive and negative. The positive values include justice, gratitude, honesty, loyalty, truthfulness, tolerance, responsibility, hard work, cooperation, generosity, kindness, fidelity to one's duty (Ayantayo, 1999). The society expects its members to apply these values to all social relations. Conversely, negative values, which are just direct opposites of positive values, consist of actions and ways of behaviour which are considered wrong and which people should abstain from. They include idleness, laziness, injustice, selfishness, greed, avarice, intolerance, stealing, exploitation, oppression, hatred, falsehood, dishonesty, irresponsibility and many other social vices (Brandt, 1961).

Daily routines

A child's participation in family life through the performance of daily routines is of capital importance to African parents and elders. In the light of Sternberg (1985) the child's ability to perform daily routines can be considered practical intelligence, which involves the ability to grasp, understand and deal with everyday tasks. Yatta (2007) highlights two main categories of daily routines: household chores and farming duties. Household chores include the child's ability to perform activities such as cleaning duties, running of errands, fetching of objects like wood and water for the family and cooking. Children are socialized into these intelligent behaviours through observation and imitation of parents and older siblings. Farming is another aspect of intelligent behaviour. According

to Yatta (2007) from an early age, children accompany adults to the farms where they participate by observing and emulating what adults did. From about age six, children can be seen with tiny blunt utensils digging the soil, planting seeds, chasing birds away from crops, and harvesting. Over the years, boys are expected to know how to clear while girls are socialized into hoeing and weeding. Through interaction with parents and elders, children acquire necessary knowledge about the land, the soil, different seasonal crops, and trees that were imbued with spirits and therefore not cuttable. It is important that children, especially girls learn how to take care of their families and how to balance household chores with those of farming.

Interpersonal skills

This involves the child's ability to make and sustain healthy relationship with peers and other members of the community through the exhibition of pro-social intelligent behaviour. Commenting on interpersonal relationships as an aspect of intelligent behaviour, Gardner (1983) considers interpersonal relationships as the ability to communicate and engage in effective social relationships with others. Within the African context, Nyota and Mapara (2008) reveal that through games and play songs with peers, children socialize themselves into acceptable interpersonal relationships. These include the child's ability to: give and receive help from peers, keep friends and playmates, manage conflict, learn future gender roles, manage success and failure, live and work together with others, participate in community tasks, celebrate with others and feel for others in times of worry and distress.

Adaptation to the local Environment

The ability of a child to adapt to his/her environment has been considered by Gardner (1999) in his Theory of Multiple Intelligences. As one of the components of intelligence, Gardner considers naturalistic intelligence as ability to identify patterns in nature and to determine how individual objects or beings fit into them (Gardner, 1999). It is important that within the African context, the child is able to know how to make use of the natural environment around him or her. This is the contextual and practical aspect of intelligence and reflects how the child relates to the external world about him or her. Sternberg (1985) states that adaptation to, shaping of, and selection of real-world environments is relevant to one's life. Nature intelligence is highly valued amongst cultures of Africa. In this regard, a child growing up in typical African indigenous context is required to be able to: identify medicinal plants, do basic plant concoctions that cure basic illnesses, produce play objects and house furniture like chairs and brooms out of natural (bamboos) and waste material, identify cultural symbols and objects like trees, rivers, insects, plants, animals that are of spiritual value and even identify poisonous plants (Sternberg, 2001; Yatta, 2007; Nyota & Mapara, 2008).

THEORETICAL CONSIDERATIONS

Theoretically, the study was guided by five theoretical perspectives. Firstly, Gardner's (1983) theory of multiple intelligences which suggests that traditional

psychometric views of intelligence are too limited. Gardner first outlined his theory in his 1983 book Frames of Mind: The Theory of Multiple Intelligences, where he suggested that all people have different kinds of intelligences. Gardner proposed that there are eight intelligences. Gardner's (1983, 1999) Theory of Multiple Intelligences led him to break intelligence down into at least eight different components: logical, linguistic, spatial, musical, kinaesthetic, interpersonal, intrapersonal and naturalist intelligences (Gardner,1999). He argues that psychometric tests address only linguistic, logical and some aspects of spatial intelligence. Gardner's theory brings out six multiple types of intelligences that are captured within the dependent variable of this study, intelligent behaviours that are often neglected by schools. The types of intelligences are not typically psychometric. The dependent variable of the current study deals with Africentric content of intelligent behaviour. This embodies moral and interpersonal values (intrapersonal and interpersonal intelligence); performance of daily routines (bodily kinaesthetic intelligence) and adaptation to the local environment (naturalistic intelligence, verbal-linguistic and musical intelligence).

The second theory is Tchombe (2019), Theory of Mediated Mutual Reciprocity (MMR) which posits a non-hierarchical mutual interdependence between the old and young in a reciprocal relationship where each both are equal co-constructors of knowledge. Mediated Mutual Reciprocal Theory explains the process in interaction which provokes depth in promoting the psychosocial wellbeing of old people. MMR sees the interaction between the old and younger generation from a positive point of view, where each remain invaluable contributors to the growth and development of each other (Tchombe, 2019). This theory is relevant to current study because it generates the processes and medium by which the independent variable (Indigenous Knowledge) can be used to influence the dependent variable (intelligent behaviours). The relationship between indigenous knowledge and the development of intelligent behaviours can only be realised through a complex interrelationship between parents and children as well as their peers. Through the mediated mutual reciprocity, elders and children socialise by using the dimensions of indigenous knowledge such as folklore, indigenous games and play songs as well as rites of passage. This process generates a dialectical relationship whereby learners, teachers, peers, even sibling and parents influence each other's intelligent behaviours in significant ways as moral values, interpersonal skills, performance of daily routines and environmental adaptation.

The third theory is the Social Constructivist Theory by Vygotsky (1978), which states that children's cognitive development must be understood not only as taking place with social support interaction with others, but also as involving the development of skill with socio-cultural development tools that mediate intellectual activity. Vygotsky's (1978) sociocultural theory of cognitive development, has led to increased interest in the relationship between culture and intelligence. According to him intelligence is always displayed in a cultural context. The acts that constitute intelligent behaviour vary from one culture to another. Vygotsky's conception of children as cognitive apprentices is of great

relevance to the present study, since the child learns primarily through socialization, direct observation and imitation of parents, siblings, peers and significant elders. Peer interaction is of top-notch importance as children engage in various dimensions of indigenous knowledge through folklore, indigenous games and play songs and rites of passage. Scaffolding is therefore an important concept to this study as children acquire and develop intelligent behaviours by receiving help from agents of socialisation coming not only from the interaction from parents, siblings, family members but also from the Kom community in the transmission of indigenous knowledge. Culture, according to Vygotsky consistently affects cognitive development by affecting human intelligent behaviour which in this study consist moral values, interpersonal skills, daily routines and adaptation to the local environment as constructs of intelligent behaviours.

Furthermore, we have Nsamenang's (2005), Social Ontogenetic Theory, which visualizes phases of human cyclical ontogenesis of systematic socialization of responsible intelligence in participatory curricula that assign stage-appropriate developmental tasks. Knowledge is not separated into discrete disciplines, but all strands of it are interwoven into a common tapestry, which is learned by children at different developmental stages, who participate in the cultural and economic life of the family and society. According to Nsamenang (1992), West African ontogeny recognizes three basic dimensions of personhood. First there is a spiritual self-hood beginning at conception and ending with naming; the social self-hood extends from naming until death (which is more acceptable in old age); and the ancestral self-hood that follows biological death (Nsamenang, 1992). The Social Ontogenetic Theory is relevant to the present study because it provides the necessary socialization tools (indigenous knowledge) and the contents of intelligent behaviour of the African child. The theory outlines key features of the independent variables of this study like rites of passage, indigenous games, folklore and traditional play songs and how these influence intelligent behaviours of the Kom children, whereby they are expected to recognize, cognize and rehearse social roles, like performance of daily routines and adaptation to the local environment. In this light, Kom children are expected to attend initiation rites of passage and ceremonies. Nsamenang brings out three distinctive patterns that are relevant to the use of indigenous knowledge in the socialisation process. These include: observation and imitation of parents and significant others (rites of passage); Attention to the themes of prototypic stories (folklore) and; co-participation in major activities, especially within the peer culture (indigenous games and play songs).

Finally, The Field Theory of Lewin (1947) postulated that the field in which a person's behaviour takes place is an intricate set of symbolic interactions and forces which, depending on their valence (strength), can either reinforce or change their behaviour. The notion of 'field' refers to: all aspects of individuals in relationship with their surroundings and conditions that apparently influence the particular behaviours and development of individuals at a particular point in time. In essence, the theory provides a framework for the examination of the complex interplay between individuals and their social environments, which fundamentally precipitate our understanding of how indigenous knowledge

socialization tools influence the development of intelligent behaviours in children of the Kom community.

METHODOLOGY

Research Design

The research design that was adopted in this work is embedded mixed method correlational design with the use of both qualitative and quantitative methods of data collection. The qualitative data play a supportive role within a predominantly quantitative correlational study. The Embedded Design was chosen because one data set, in this case the qualitative data provides a supportive, secondary role in a study based primarily on the other data type which is the quantitative data (Creswell, Plano Clark, et al., 2003). This design is appropriate for the present study because the researchers collected and analysed both quantitative and qualitative data, integrated the findings and draw inferences using both approaches. The quantitative component provides the principal basis for examining the statistical relationships between indigenous knowledge socialisation tools and the development of intelligent behaviours among children, while the qualitative component provides contextual explanations of the respondents' opinions, experiences and interpretations of indigenous knowledge socialisation practices that may not be adequately captured through quantitative data alone.

Study Area

The study was carried out in Kom, in the North West Region of Cameroon also known as Bikom. Kom is the second largest fondom after the Nso in the North West grassfields of Cameroon. It covers four subdivisions, Bum, Fundong, Njinikom and Belo. Three are predominantly Kom-inhabited subdivisions: Fundong, Njinikom and Belo, all located in Boyo Division named after the highest mountain in the division. They are known in the North West Region of Cameroon for the production of masks, furniture, farm tools and utensils. About 5000 people are educated in Eurocentric tradition. Kom shares eastern boundaries with the kingdoms of Oku and Nso and the Southern frontiers with Kedjom Keku (Big Babanki) and the Ndop plain. Bafut occupies the western border while to the north is found Bum and Mmen. The language spoken is *Itaŋikom.* There are 26 villages in Fundong, 16 in Njinikom valley, and 27 villages in Belo valley. Each village has a leader called "Bonteh" or village head (Nsom, 2016). Three out of these four Sub Divisions in Boyo Division are inhabited predominantly by Kom people and they are the largest ethnic group in the North West region.

In the Kom context, intelligent behaviours are understood to extend beyond academic performance to include moral values, interpersonal skills, environmental adaptation and performance of daily routines. These modes of socialisation are transmitted with the child's interaction with parents, elders, siblings and communal celebrations through scaffolding, the child's participation in games, songs and rites of passage. It takes the form of apprenticeship, a form of informal process, where children and or younger members of each household mostly learned from older members of their tribe, household, and community. It

takes the cultural processes of guided participation, direct instruction, role modelling or imitation, observation and questioning. Kom parents use these practical skills to measure intelligent behaviours in children which are different from western conceptions of intelligence. Such cultural differences do not go fundamentally against common norms on intelligence, but reveal that intelligence should be defined according to the culture of each social group. Different cultures call for different expressions of intelligent thinking. The onus to understand the social cognition and intelligent behaviour of Kom children lies in capturing shared routines and participatory learning, rather than in completing school-based instruments. Indigenous knowledge in the form of folklore, indigenous games and songs, as well as rites of passage play an important role in the acquisition of intelligent behaviours.

Target Population

The target population comprised children aged 6-12 years living in the Kom community and the parents or guardians who could provide information about their participation on indigenous knowledge socialisation practices and culturally situated intelligent behaviours. The study was concerned with children's engagement in four indigenous knowledge socialisation tools: Folklore, indigenous games, rites of passage and traditional play songs. It also examined behaviours relating to moral values, interpersonal skills, performance of daily routines and adaptation to the local environment. Parents, guardians/elders were included because they could provide information about children's everyday conduct, cultural learning and participation in community practices. The study focused on those who were knowledgeable about Kom indigenous knowledge and children permanently resident in the Kom fondom. Children were included because they could provide information about their own engagement with the indigenous knowledge socialisation tools investigated in the study. The target population is not equivalent to the total population of Fundong, Njinikom and Belo, because not every resident belonged to the specific age group or respondent category relevant to the study.

Sample of the Study

The sample of the study consisted of 207 parents and 65 children and siblings of the parents in order to investigate the influence of indigenous knowledge in developing intelligent behaviours that are derived from the total population. Thus, calculated at 90% confidence level and 5.0 confidence interval (Krejcie & Morgan, 1970, and The Research Advisors, 2006). Hence from a total population 139,360, a sample of 272 respondents was chosen for the study.

Sampling Technique

A purposeful sampling technique was used to select participants based on their availability and relevance to the objectives of the study. The researcher deliberately sought parents/elders and children who could provide relevant information about Kom indigenous knowledge and children's intelligent behaviours. A snowball method was used to identify parents/elders and children who met the criteria for participation. The researcher initially contacted parents/elders who were knowledgeable about Kom indigenous knowledge and

practices, since the researcher comes from Kom. Based on mutual trust, the participants subsequently assisted in identifying other individuals who met the criteria. The purposive and snowball sampling was considered appropriate because indigenous knowledge is culturally specific and the researcher required participants who possessed actual knowledge and experience of the practices under investigation. More data were collected from rural areas because the researcher considered parents and children living in rural areas to be more deeply rooted in and conversant with Kom indigenous practices and culturally defined intelligent behaviours of children.

Instruments for Data Collection

The study employed three main instruments for data collection: questionnaires for parents and children, a focus group discussion guide for parents and an observation checklist for children. The questionnaires provided the principal quantitative data, while the focus group discussion guide and observation checklist provided qualitative and observational data that were embedded within the quantitative study.

Validity and reliability of Instruments

The validation of data collection instruments in this study was based on content validity which focused upon the extent to which the content of the instruments corresponded to the content of the theoretical concept they are designed to measure. Content validity was therefore mathematically appreciated using the Content Validity Index (CVI) whereby the instruments for data collection were checked by the supervisor, a statistician and an expert in cultural psychology. Their assessment was particularly important because the study investigated culturally embedded concepts of indigenous knowledge and intelligent behaviour. The expert review helped to determine whether the items were culturally appropriate and adequately represented to constructs under investigation. To come out with the statements that an instrument is judged valid, the inter-judge coefficient of validity was computed using the following formula: CVI = (№ of judges who declared item valid)/ (total № of judges). Content validity was established through judgement and the computation of Validity Index using the Kaiser Meyer-Olkin (KMO) Test and Bartlett's content validity index in the Statistical Package for Social Sciences (SPSS) version 25. The content-validity results 0f 0.79 was considered appropriate for the study.

Reliability was computed using Cronbach's Alpha reliability test whereby the Cronbach' Alpha reliability coefficient of 0.81 indicated a good consistency in the trend of preferences. A further consistency check was carried out using Guttman Split half procedure and the reliability coefficient. This supported Cronbach's Alpha therefore indicating a very strong relationship between the various variables and indicators of the study.

Ethical Considerations

Research involving human subjects usually requires the respect of certain ethical principles such as informed consent. Firstly, ethical and administrative approval

to conduct this study was obtained from the Faculty of Education of the University of Buea. The ethical issues related to this study focused on the research participants, the researcher and sources of secondary data. As far as the participants were concerned, the ethical issues to address to ensure the quality and validity of the data and the study at large consisted of explaining to the participants the significance and helpfulness of the study and justifying why it was important for them to participate in the study. In this line, the researcher made sure the participants were adequately aware of the type of information needed from them, why the information was being sought, what purpose it was put to, how they were expected to participate in the study, and how it directly or indirectly affected them without pressurizing them to consent.

On the part of the researcher, ethical considerations consisted avoiding bias, using appropriate research methods; using appropriate methods to validate the data collection instruments, doing correct reporting of findings without falsifying them. In conducting this study, the researcher took into consideration the following research ethical issues. The researcher achieved this, firstly by explaining the purpose of the research to the participants of the study and soliciting participants to participate in the study willfully. Written and/or verbal consent were gotten from the parents after self-presentation and a brief explanation of the purpose of the research. Participants were informed that those not interested are free to withdraw at any time from the study without any sanction or negative consequences on them. Before administering the questionnaires and interviews, confidentiality was achieved by assuring all the informants and participants that information gotten from them was anonymous, used solely for research purpose and will be treated confidentially. The participant's rights to confidentiality and privacy were respected at all times. Anonymity was achieved by ensuring that each participant's personal and private information such as respondent's name were not to be revealed during the data collection process. They were not expected to write their names. The letter contained the researcher's contact address and telephone number in case any respondent needed to reach him on issues related to the questionnaire.

FINDINGS

Presentation of intelligent behaviours of children

Findings on the intelligent behviours of children is presented according to the indicators of the study, namely, environmental adaptation, moral values, interpersonal skills and performance of daily routines.

Environmental Adaptation

Children's environmental adaptation was measured using three indicators, namely, craft work from bamboo plant, use of medicinal plants and cultural importance of objects.

Table 1
Craft Work from Bamboo Plant

	My child can use a bamboo plant to make the following items										
S/N	**ITEMS**	**SA**		**A**		**D**		**SD**		**n**	**Mean**
		(f)	**(%)**	**(f)**	**(%)**	**(f)**	**(%)**	**(f)**	**(%)**		
1	Broom	108	60.0	66	36.7	6	3.3	0	0.0	180	3.6
2	Chair	48	26.7	108	60.0	18	10.0	6	3.3	180	3.1
3	Cupboard	48	26.7	72	40.0	30	16.7	30	16.7	180	2.8
4	Baskets	18	10.0	78	43.3	54	30.0	30	16.7	180	2.5
5	Fish baskets	18	10.0	78	43.3	48	26.7	36	20.0	180	2.4
6	Toys	12	6.7	24	13.3	126	70.0	18	10.0	180	2.2
MRS		**252**	**23.3**	**426**	**39.4**	**282**	**26.1**	**120**	**11.2**		**2.7**
Collapsed Opinion			**Agree**				**Disagree**				
Collapsed Percentage			**62.7**				**37.3**				

The findings indicate that, out of total of 180, majority of the parents (62.7%) agreed that their children were able to make various items from bamboo plant as opposed to 37.3% of the parents who disagreed. The mean score shows an above average of 2.7 on a scale of 4

Table 2

Use of Medicinal Plants

S/N	**ITEMS**	**SA**		**A**		**D**		**SD**		**n**	**Mean**
		(f)	**(%)**	**(f)**	**(%)**	**(f)**	**(%)**	**(f)**	**(%)**		
1	My child can identify some plants that can be used to cure illnesses like wounds, stomach ache and fever.	84	46.7	84	46.7	12	6.7	0	0.0	180	3.4
2	My child knows how to prepare the plant to cure the various illnesses.	30	16.7	102	56.7	48	26.7	0	0.0	180	2.9
3	My child knows the kind of illness that each plant can cure.	18	10.0	102	56.7	60	33.3	0	0.0	180	2.8
MRS		**132**	**24.4**	**288**	**53.3**	**120**	**22.3**	**0**	**0.0**		**3.0**
Collapsed Opinion		**Agree**				**Disagree**					
Collapsed Percentage		**77.7**				**22.3**					

In relation to the use of medicinal plants, the findings indicate that, out of a total of 180, majority of the parents (77.7%) agreed that their children were able to identify and prepare medicinal plants for common illnesses like wounds, stomach ache and fever, as opposed to 22.3% of the parents who disagreed. The mean score shows an above average of 3.0 on a scale of 4.

Table 3

Cultural Importance of Objects

	My Child knows the cultural importance of the following objects										
S/N	**ITEMS**	**SA**		**A**		**D**		**SD**		**n**	**Mean**
		(f)	**(%)**	**(f)**	**(%)**	**(f)**	**(%)**	**(f)**	**(%)**		
1	Palm wine	72	40.0	48	26.7	60	33.3	0	0.0	180	3.1
2	Peace plant	54	30.0	54	30.0	72	40.0	0	0.0	180	2.9
3	Kola nuts	18	10.0	120	66.7	36	20.0	6	3.3	180	2.8
4	Calabash (F+bom fi wayn)	18	10.0	102	56.7	54	30.0	6	3.3	180	2.7
5	Goat	36	20.0	66	36.7	66	36.7	12	6.7	180	2.7
6	Fowl	6	3.3	48	26.7	126	70.0	0	0.0	180	2.3
MRS		**204**	**18.9**	**438**	**40.6**	**414**	**38.3**	**24**	**2.2**		**2.8**
Collapsed Opinion		**Agree**				**Disagree**					
Collapsed Percentage		**59.5**				**40.5**					

In relation to cultural importance of objects, the findings indicate that out of a total of 180, majority of the parents (59.5%) agreed that their children were able to know the cultural importance of objects like palm wine, peace plant, kola nuts, calabash, goat and fowl as opposed to 22.3% of the parents who disagreed. The mean score shows an above average of 2.8 on a scale of 4.

Moral Judgements

Children's intelligent behaviours in relation to moral judgements were measured by five items focusing on respect for elders, reciprocation, sharing and honesty.

Table 4

Children's Ability to Make Moral Judgements

S/N	**ITEMS**	**SA**		**A**		**D**		**SD**		**n**	**Mean**
		(f)	**(%)**	**(f)**	**(%)**	**(f)**	**(%)**	**(f)**	**(%)**		
1	My child does not call an elder by his/her name	66	36.7	108	60.0	6	3.3	0	0.0	180	3.3
2	My child usually receives a gift from an elder with two hands.	36	20.0	132	73.3	6	3.3	6	3.3	180	3.1
3	When someone gives my child an eatable item and begs for it, he/she would give the person in return.	54	30.0	96	53.3	30	16.7	0	0.0	180	3.1
4	My child shares his/her food or a fruit with a brother, sister or friend.	30	16.7	114	63.3	36	20.0	0	0.0	180	3.0

5	My child always speaks the truth when he/she does something that is wrong	30	16.7	108	60.0	36	20.0	6	3.3	180	2.9
MRS		**216**	**24.0**	**558**	**62.0**	**114**	**12.7**	**12**	**1.3**		**3.1**
Collapsed Opinion		**Agree**				**Disagree**					
Collapsed Percentage		**86.0**				**14.0**					

The findings indicate that out of a total of 180, majority of the parents (86.0%) agreed that their children were able to make sound moral judgements as opposed to 14.0% of the parents who disagreed. The mean score shows an above average of 3.1 on a scale of 4.

Interpersonal skills

Children's interpersonal skills was measured using five items relating to greetings, reporting upon reception gifts, acceptance of defeat, keeping friends and problem solving.

Table 5

Children's Exhibition of Interpersonal Skills

S/N	ITEMS	SA		A		D		SD		n	Mean
		(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)		
1	My child greets people	42	23.3	132	73.3	6	3.3	0	0.0	180	3.2
2	My child shows me gifts that he/she receives from visitors or strangers	48	26.7	114	63.3	18	10.0	0	0.0	180	3.2
3	My child is still happy with his/her friend even when he/she is defeated in a game.	42	23.3	72	40.0	66	36.7	0	0.0	180	2.9
4	My child solves problems with friends peacefully without any fighting	30	16.7	96	53.3	48	26.7	6	3.3	180	2.8
5	My child has been with his friends for a period of more than one year	30	16.7	54	30.0	90	50.0	6	3.3	180	2.6
MRS		**192**	**21.3**	**468**	**52.0**	**228**	**25.4**	**12**	**1.3**		**2.9**
Collapsed Opinion		**Agree**				**Disagree**					
Collapsed Percentage		**73.3**				**26.7**					

The findings indicate that out of a total of 180, majority of the parents (73.3%) agreed that their children were able to exhibit appropriate interpersonal skills as opposed to 26.7% of the parents who disagreed. The mean score shows an above average of 2.9 on a scale of 4.

Daily Routines

The performance of daily routines was measure using 12 indicators relating to children's ability to conduct house chores and farm duties.

Table 6

Children's Performance of Daily Routines

S/N	ITEMS	SA		A		D		SA		n	Mean
		(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)		
1	My child can sweep the house and its surroundings very clean.	80	46.7	88	46.7	12	6.7	0	0.0	180	3.4
2	My child can care for his/her younger brothers and sisters especially in my absence.	72	40.0	72	40.0	36	20.0	0	0.0	180	3.2
3	My child can care for some domestic animals like goats and fowls	72	40.0	72	40.0	31	17.2	5	2.8	180	3.2
4	My child usually helps in the planting of corn and beans	72	40.0	48	26.7	60	33.3	0	0.0	180	3.1
5	My child can clean the dishes after a meal.	24	13.3	132	73.3	24	13.3	0	0.0	180	3.0
6	My child can deliver messages as I would want him/her to do.	24	13.3	132	73.3	24	13.3	0	0.0	180	3.0
7	My child can fetch wood and water for the family.	12	6.7	156	86.7	12	6.7	0	0.0	180	3.0
8	My child usually helps in the harvesting of some crops like corn, beans.	48	26.7	84	46.7	48	26.7	0	0.0	180	3.0
9	My child helps in removing unwanted grass from the farm.	54	30.0	90	50.0	24	13.3	12	6.7	180	3.0
10	My child can clear the farm	34	18.9	98	54.4	36	20.0	12	6.7	180	2.9
11	My child can make ridges in the farm	48	26.7	72	40.0	60	33.3	0	0.0	180	2.9
12	My child can cook some common	36	20.0	73	40.0	71	40.0	0	0.0	180	2.8

	meals like corn fufu, potatoes and beans.										
MRS		**576**	**26.8**	**1117**	**51.4**	**438**	**20.3**	**29**	**1.5**		**3.0**
Collapsed opinion		**Agree**				**Disagree**					
Collapsed percentage		**78.2**				**21.8**					

The findings indicate that out of a total of 180, majority of the parents (78.2%) agreed that their children were able to perform various daily routines in relation to house chores and farm duties as opposed to 21.8% of the parents who disagreed. The mean score shows an above average of 3.0 on a scale of 4.

Presentation findings according to research question and hypothesis

Research Question: To what extent do indigenous games influence the development of intelligent behaviours in children of the Kom community?

Table7

Children's Knowledge of Indigenous Games

S/N	ITEMS	Always		Often		Sometimes		Never		n	Mean
		(f)	(%)	(f)	(%)	(f)	(%)	(f)	(%)		
1	I participate in cultural games with other children	55	100.0	0	0.0	0	0.0	0	0.0	55	4.0
2	I can identify some cultural games children play in my community	51	92.7	4	7.3	0	0.0	0	0.0	55	3.9
3	I master the rules involved in cultural games that we play as children	33	60.0	19	34.5	3	5.5	0	0.0	55	3.5
4	I know particular intelligent behaviours that are learned from cultural games	21	38.2	30	54.5	4	7.3	0	0.0	55	3.3
MRS		**160**	**72.7**	**53**	**24.1**	**7**	**3.2**	**0**	**0.0**		**3.7**
Collapsed Opinion		**Good**				**Poor**					
Collapsed Percentage		**96.8**				**3.2**					

The findings indicate that out of a total of 55, majority of the children (96.8%) had a good knowledge of indigenous games as opposed to 3.2% of the parents who disagreed. The mean score shows an above average of 3.7 on a scale of 4.

Hypothesis: There is no significant relationship between indigenous games and the development of intelligent behaviours in children of the Kom community.

Chi-Square test on indigenous games and intelligent behaviours.

Table 8

Observed and Expected Counts Between Indigenous Games and Intelligent Behaviours

			Manifestation of intelligent behaviour due to participation in indigenous games		Total
			Minimal	Strong	
Participation in indigenous games	Sometimes	Observed Count	17	7	24
		Expected Count	13.5	10.5	24.0
	Very often	Observed Count	6	11	17
		Expected Count	9.5	7.5	17.0
Total		Observed Count	23	18	41
		Expected Count	23.0	18.0	41.0

Table 9

Chi-Square Test of Association Between Indigenous Games and Intelligent Behaviours

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5.103[a]	1	.004		
Continuity Correction[b]	3.762	1	.002		
Likelihood Ratio	5.178	1	.003		
Fisher's Exact Test				.001	.006
Linear-by-Linear Association	4.979	1	.006		
N of Valid Cases	41				

A chi-square test of independence was conducted to examine the relationship between participation in indigenous games and the manifestation of intelligent behaviour among children aged 6–11 years. The results showed a statistically significant association between the two variables, χ^2 (1, N = 41) = 5.10, p = .004. Because some expected cell counts were below five, Fisher's Exact Test was

considered more reliable and also indicated a significant relationship, p = .002. The linear-by-linear association of , $\chi^2(1) = 4.98$, p = .006, was equally significant.

Pearson correlation test between indigenous games and intelligent behaviours

Table 10

Correlation Between Indigenous Games and Intelligent Behaviours

Variables	Correlations	Indigenous games	Intelligent Behaviours
Indigenous games	Pearson correlation	1.00	0.317**
	Sig. (2-tailed)	-	.000
	N	55	55
Intelligent Behaviours	Pearson correlation	0.317**	1.00
	Sig. (2-tailed)	.000	-
	N	55	55

***. Correlation is significant at the 0.01 level (2-tailed).*

Statistically, the findings confirmed the significant association found in the chi square by showing that there is a significant, positive and moderate between indigenous games and intelligent behviours (r-value= 0.317**, *p*-value= 0.001< 0.05). This shows that the more children increase their participation in indigenous games, the more likely there is an increase in their intelligent behaviours. The null hypothesis was therefore rejected and the alternative hypothesis accepted. The findings suggest that greater participation in traditional play songs is associated with higher levels of intelligent behaviours among children in the Kom community.

Qualitative Findings

Participants, P9 and P8 mentioned that games such as *"Anyang"* a local game played by children with the use of small pebbles or seeds on bored holes on the ground and *Chacha* (Hop scotch) which children often play at home and in school. According to parents, these games teach teamwork, patience, decision-making and strategy.

One participant, P5 put it: "*When children play Anyang, they calculate and plan their moves carefully, This builds logical thinking and foresight".* Thus, these games are seen not only as entertainment, but as practical tools for developing problem-solving skills. Table 29 shows some intelligent behaviours discussed by parents that emerged from indigenous games.

Table 11

Thematic Presentation of Indigenous Games and Intelligent Behaviours

S/N	Games	Description	Intelligent behaviours developed
1	Finjang	Children bore a pair of 6 holes on the ground and use the seeds of a tree called 'amba' to play. Two players are involved. The winner is the one who succeeds to capture the opponent's seeds.	Mathematical skills, team spirit, fosters truthfulness.
2	Anyang	Children use seven pebbles. They scatter them on the floor, pick one which is thrown in the air to pick 1, three sets of two, two sets of three, a set of four and two, a set of five and one then a set of six.	Mathematical skills of counting, respect game rules, avoid idleness
3	Tongtong Bombo	Hide and seek game. One or more players hides in the house. The others stand by outside and ask in the words: "Tongtong bombo ma gvi ayangha?" The ones hiding affirms when ready.	Creativity, investigative instincts, power of observation and identification, voice recognition and socialization, togetherness/team spirit
4	Tung Mbe'	Wrestling. Two children do wrestling. The loser is the one whose back is thrown on the ground:	Wrestling skills and physical buildup.
5	Making toys	Children through play make toy cars, caps, guns, sword	Hands-on, minds-on skills

DISCUSSIONS

The study found a statistically significant positive relationship between indigenous games and intelligent behaviours among Kom children. The finding indicates that greater participation in indigenous games was associated with higher levels of the intelligent behaviours measured in the study. The qualitative findings help to explain this relationship revealed that children engaged in various forms of games such as construction play, object play, pretend play, rough and tumble play (wrestling) and hide and seek play. From the games played by children, the findings revealed that Kom children were able to learn interpersonal skills such as conflict resolution through self-examination, sustenance of friendship through honesty in play, honesty and acceptance of defeat, responsibility and compassion towards one another, performance of future roles like cooking and care for younger ones, cooperation and interaction with friends. Commenting on interpersonal skills learned from games amongst the Shona children of Zimbabwe Nyota and Mapara (2008) observed that children learn to share tools used for the games such as nhodo (a game similar to Jacks) and ndondo where necessary. They learn to manage conflicts which arise from a playmate's accusation, for example, when a playmate says, "Wabira" (You have cheated), especially when the accuser has been beaten in a competitive game. They can also learn to keep friends and playmates. They can learn to manage and deal with those playmates who are not always understanding and self-sacrificing. For instance, one who is always quick to denounce friendship, "Hausi shamwari yangu futi"

(You are after all not my friend). These skills have consequences that teach the children about social interaction from youth to their adult years.

In relation to pretend play, the findings of the study are supported by Nsamenang (2005), who states that much of children's play is imitating the social roles of adults, which is why most African children in the neighbourhood are often seen playing mother and father during peer group activities. This anticipatory socialisation has an important function of easing the transition from one stage in life to another. The findings on Kom children's engagement in pretend play is equally underpinned by Vygotsky's Theory of Social Constructivism. To elaborate, for Vygotsky (1967), pretend play is the activity setting where children first understand that actions (and the objects on which the child acts) can be separated from reality, and that those actions might be based on the meaning of the imagined situation instead of the physical properties of the objects (Vygotsky, 1967). For example, a child can pretend a stick is a horse. In treating the stick as a horse, the child ignores or inhibits some of the stick's properties like its un-horse-like shape.

Through pretend play, children develop abstract thought (Vygotsky, 1967). Play also helps children develop because they take on other roles, often including those of people older than themselves. By pretending to be a parent or a teacher, children learn to take the perspectives corresponding to those roles, and to behave according to their norms (Rakoczy, Warneken, & Tomasello, 2008). Even solitary play, to Vygotsky (1967), is bound by rules. Pretend play thus prepares children for adult life, pulling them up into their zones of proximal development. Because of these features, "In play, it is as though [the child] were a head taller than himself" (Vygotsky, 1978,p.102). Kom children equally engaged in rough and tumble play, *Tung Mbè'* (wrestling), which leads to physical buildup. Commenting on this kind of fight play, Pellegrini (2006) equally found that play fighting typically involves the full body, for example, two children or animals tumbling on top of each other with the aim of holding the controlling position. In humans, play fighting is characterized by smiles and laughter, exaggerated movements, and reciprocal role-taking (e.g., varying, who has the dominant position). In addition, when partners are of unequal strength, the stronger player in a play fight, often engages in self-handicapping; something one would never expect to see in a real fight (Pellegrini, 2006). Although boys (and males of most species) engage in more physical rough-and-tumble play than girls (Blurton Jones, 1967), it is common to both genders (Power, 2000).

Within the Kom community, children through construction play make toy cars, caps, guns, and swords. This kind of play is linked with the development of problem-solving skills. The findings of the study are consistent with those of Sylva (1977) who found out that a particular type of construction play, building tools, has been examined especially in studies of problem solving. In some earlier research, preschoolers saw an adult put two sticks together with a clamp to construct one long stick (Sylva et al 1976; Sylva, 1977). After the initial demonstration, some children were allowed to play with the sticks for several minutes, whereas others watched further demonstrations. Then all children were given a lure-retrieval problem, which required that they use a long stick to get an object. Although the actual results were not as strong (Sylva, 1974) as is implied

in later papers, and did not replicate with blind testers (Smith, Simon, & Emberton, 1985), there was some suggestion that perhaps the playing with the sticks had a positive effect on solving the problem. Other studies, however, have shown that children who engage in more construction play generally also are more likely to solve problems that involve construction (Gredlein & Bjorklund, 2005; Pellegrini & Gustafson, 2005). This could imply that the experience is beneficial, or that children who are motivated to construct are also by nature better at seeing how one could do so to solve problems.

Conclusion

The main objective of the present study was to examine the effects of indigenous games on the development of intelligent behaviours of children of Kom Community in the North West Region of Cameroon. The study specifically examined how indigenous games influence the development of intelligent behaviours in children. The findings of the study revealed that indigenous games had a positive and significant effect on the development of both cognitive and socio-emotional intelligent behaviours in children. We can then conclude from this study that the socialization of a child does not only depend on parents, but equally on the general social context (society) or environment in which the child is placed. Hence starting with the family, children quickly become part of an expanding social network; soon they must relate to relatives, the neighbourhood and institutions such as the school and church and increasingly become functional members of the community, state and country. Each social context from the immediate family through the human community and ecoculture at large, plays a key role in child development (Nsamenang 2005).

The study reveals that the Kom of Cameroon perception of intelligence goes beyond the traditional psychometric conceptions of intelligence to embrace more recent theories of intelligence that deal with the development of practical skills like those of Gardner (1983) and Sternberg (1975). The development of these practical intelligent skills in children does not only depend on interaction with direct biological parents but equally on the whole, social structure and entire community and environment in which the Kom child finds himself or herself. Children's acquisition of intelligent behaviours is interwoven in participation in indigenous games. Hence, the socialisation of children into intelligent behaviours does not only happen through some formal education, but equally informally through guided participation, modeling, observation and imitation (Tchombe, 2019).

Recommendations

Parents and elders should create regular opportunities for children to hear culturally appropriate folktales, proverbs and riddles and discuss their meanings. Children should also be encouraged to participate in safe indigenous games, songs and appropriate household and community activities.

Schools in Kom should incorporate selected indigenous knowledge resources into appropriate subjects and co-curricular activities. Proverbs, riddles and folktales

may be integrated into English Language, Literature, Moral Education, History and social studies, while indigenous games and play songs can be incorporated into physical education, cultural activities and school clubs.

Traditional and community leaders should encourage and support the documentation and intergenerational transmission of appropriate Kom cultural knowledge. Elders with specialised knowledge could work with schools and community organisations to document proverbs, folktales, riddles, songs, games and other forms of cultural knowledge.

Curriculum planners should create opportunities for appropriate local knowledge to be incorporated culturally responsive education. Such integration should not be limited to ceremonial activities, but should connect indigenous knowledge with curriculum objectives, learning outcomes and classroom pedagogy. This should also recognize indigenous knowledge and scientific knowledge can interact constructively.

References

Ayantayo, J. K. (1999). The *ethical dimension of African indigenous communication systems: an analysis*. University of Ibadan.

Berger, K.S. (2000). *The Developing Person: Through Childhood.* New York: Worth Publishers

Brandt, R. B. (1961). *Value and Obligation.* New York: Jovanovies

Bronfenbrenner, U. (1979). *The Ecology of Human Development.* Cambridge, MA: Harvard University Press.

Creswell, J. W. (2006). *Qualitative inquiry and research design: Choosing among five approaches* (2nd ed.). Sage

Feldman, R. S. (2003). *Development Across the Life Span*. (3rd ed) Upper Saddle River, New Jersey.

Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. Basic Books.

Gardner, H. (1999). *Intelligence reframed: Multiple intelligences for the 21st century*. Basic Books.

Gök, A. (2020). Has the African education system ignored African knowledge? What should be done for its inclusion? *OPUS International Journal of Society Researches*, *15*(23), 1843–1861. doi.org

Gredlein, J. M., & Bjorklund, D. F. (2005). The relative importance of different types of play to preschool children's social and cognitive development. *Early Education and Development*, *16*(2), 183–206. doi.org

Grigorenko, E. L., & Sternberg, R. J. (2001). Analytical, creative, and practical intelligence as predictors of self-reported adaptive behavior: A case study from Russia. *Intelligence*, *29*(6), 483–500. doi.org

Grigorenko, E. L., Geissler, P. W., Prince, R., Okatcha, F., Nokes, C., Kenny, D. A., et al. (2001). The organization of Luo conceptions of intelligence: A study of implicit theories in a Kenyan village. *International Journal of Behavior Development*, *25*, 367–378

Huang, X. (2019). Understanding Bourdieu-cultural capital and habitus *[J]. Rev. Eur. Stud.,* 11: 45.

Lewin, K. (1947). Frontiers in group dynamics: Concept, method and reality in social science; social equilibria and social change. *Human Relations*, *1*(1), 5–41. doi.org

Lewin, K. (1947). Frontiers in group dynamics: Concept, method and reality in social science; social equilibria and social change. *Human Relations*, *1*(1), 5–41. doi.org

May, S., & Aikman, S. (2003). Indigenous education: New possibilities, ongoing constraints. *Comparative Education*, *39*(2), 139–145. doi.org

Mazrui, A. A. (1986). *The Africans: A triple heritage*. BBC Publications.

Molefe, R. (2010). *Spatialising African indigenous customs in Langa* (Doctoral dissertation), University of Cape Town.

Mweli, P. (2018). Indigenous stories and games as approaches to teaching within the classroom. In I. Eloff & E. Swart (Eds.), *Understanding Educational Psychology* (pp. 94–101). Cape Town, RSA: JUTA.

Nkwi, P. N. (1976). *Traditional government and social organisation of the Kom* [Doctoral dissertation, University of Fribourg]. Southern Cross Press.

Nsamenang, A. B. (2005). African culture, human ontogenesis within. In C. B. Fisher & R. M. Lerner (Eds.), *Encyclopedia of applied developmental science* (pp. 58–61). SAGE.

Nsamenang, A. B. (2005). Educational development and knowledge flow: Local and global forces in human development in Africa. *Higher Education Policy*, *18*(3), 275–288. doi.org

Nsamenang, A.B. (1992). *Human Development in Cultural Context: A Third World Perspective.* Newbury Park, CA: SAGE Publications.

Nxumalo, S. A., & Mncube, D. W. (2018). *Using indigenous games and knowledge to decolonise the school curriculum: Ubuntu perspectives*. [Paper presentation].

Nxumalo, S. A., & Mncube, D. W. (2019). Using indigenous games and knowledge to decolonise the school curriculum: Ubuntu perspectives. *Perspectives in Education*, *36*(2), 103–118. doi.org

Nyota, S. & Mapara, J. (2008). *Shona Traditional Children's Games and Play: Songs as Indigenous Ways of Knowing:* Great Zimbabwe University

Pellegrini, A. D. (2006). The development and function of rough-and-tumble play in childhood and adolescence. In A. D. Pellegrini & P. K. Smith (Eds.), *The nature of play: Great apes and humans* (pp. 91–110). Guilford Press.

Pellegrini, A. D., & Gustafson, K. (2005). Boys' and girls' uses of objects for exploration, play, and tools in early childhood. *Developmental Psychology*, *41*(1), 166–177. doi.org

Pieget, J. (1962). *Play, dreams and imitation in childhood.* New York: Norton.

Power, T. G. (2000). *Play and exploration in children and animals.* Mahwah, NJ: Erlbaum.

Rajasekaran, B. (1993). *A framework for incorporating indigenous knowledge systems into agricultural extension organizations: A case study from India* [Doctoral dissertation, Iowa State University]. Iowa State University Digital Repository.

Santrock, J. W. (2004). *Educational Psychology*. Mc Graw – Hill

Serpell, R. (1993). *The Significance of Schooling: Life Journeys in an African Society.* Cambridge University Press, New York.

Serpell, R. (1994). An African social selfhood: Review of A. Bame Nsamenang (1992): Human development in cultural context. *Cross-Cultural Psychology Bulletin*, *28*, 17–21.

Serpell, R. (2000). Intelligence and culture. In R. J. Sternberg (Ed.), *Handbook of intelligence* (pp. 549–580). New York: Cambridge University Press.

Smith, M. K. (2001). *Kurt Lewin: Groups, experiential learning and action research*. The Encyclopedia of Informal Education. infed.org

Smith, P. K., Simon, T., & Emberton, R. (1985). Training effects on problem-solving: It ain't necessarily so. *British Journal of Developmental Psychology*, *3*(2), 101–104. doi.org

Spearman, C. (1904). "'General intelligence,' Objectively Determined and Measured". *American Journal of Psychology* 15 (2): 201–293.

Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence*. New York: Cambridge University Press.

Sternberg, R. J. (2007). Who are the bright students? The Cultural Context of Being and Acting Intelligent. *Educational Researcher,* Vol. 36, No. 3, pp. 148–155

Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence*. Cambridge University Press.

Sylva, K. (1974). *Play and problem solving* [Doctoral dissertation, Harvard University]. Harvard University Repository.

Sylva, K. (1977). Play and learning. In B. Tizard & D. Harvey (Eds.), *Biology of play* (pp. 59–73). Spastics International Medical Publications.

Sylva, K., Bruner, J. S., & Genova, P. (1976). The role of play in the problem-solving of children 3–5 years old. In J. S. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution* (pp. 244–257). Penguin Books.

Taber, K. S. (2020). *Vygotsky's socio-cultural theory of learning*. Science Education Gateway. science-education-research.com

Tchombe, T. M. S. (2019). *Psychological parameters in teaching: An Africentric perspective to learning as a process for cognitive enrichment*. Design House

Tchombe, T. M. S. (2011). *Psychological parameters in teaching: An Africentric perspective to learning as a process for cognitive enrichment*. Design House.

Vygotsky, L. S. (1967). Play and its role in the mental development of the child. *Soviet Psychology*, *5*(3), 6–18. doi.org

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.

Yatta K., (2007). Tradition and Educational Reconstruction in Africa in Postcolonial and Global Times. *In African Studies Quarter: The Online Journal For African Studies.* (Vol 9) p. 1 – 14