

Epistemological Issues in Early Childhood Education: A Constructivist Appraisal

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Abstract

The twin-questions of 'what to teach' and 'how to teach' young children have engaged the attention of educational thinkers from time immemorial. Many traditional African communities saw children as incapable of perceiving their reality and dictated to them. However, constructivist thinkers argue that all children are born with capacities to initiate learning and children construct their own meaning from what they experience. This study analysed some epistemological issues related to children's learning within the constructivist paradigm. It was observed that current approaches to early childhood education in the Western world vary from those of developing countries because of the circumstances of their emergence. While the study recognised the need for early childhood education practitioners in Nigeria to reflect emerging curricular theory and practice, the paper stressed the need to take into account the peculiar needs of the country in the field. Other issues in this respect are discussed.

Keywords: Epistemology, Early childhood education, Curriculum, Constructivism

Introduction

In many traditional African communities, young children are '*to be seen and not to be heard*'. Parents and older siblings directed them on what to do and expected absolute compliance. Even in contemporary, westernised, Africa and Nigeria, teachers still dictate to school children and encourage rote learning. This makes it difficult for children to express themselves and participate actively in teaching and learning activities. The assumption behind the *seen-and-not-heard* approach to child upbringing and education is that children are incapable of perceiving reality and, so, cannot make meaning out of the experiences they have. However, this assumption has been widely disputed especially since the resurgence of constructivist pedagogy as from the 1970s (Piaget, 1970; von Glaserfeld, 1995; Dennick, 2016).

Studies on constructivist teaching and learning suggest that being young is not the same as lacking in ability to perceive reality or initiate learning (Spodek, 1982; Prout & James, 1997; Levinsen, 2008; Adom, Yeboah & Ankrah, 2016; Panasuk & Lewis, 2012; Gunduz & Hursen, 2014; Ramsook & Thomas, 2016; Go & Kang, 2015; Lee & Han, 2016; Amineh & Asl, 2015; Hong, Torquati & Molfese, 2013; Kalpana, 2014). If learning is defined as a relatively permanent change in behaviour of an individual, as a result of experience which is not due to drug or fatigue (Lefrancois, 1977), it follows that all children have inborn capacities to learn. Children learn to suck their mother's breasts (or substitutes) right from birth. They equally learn to climb stairs, speak, solve problems, and manipulate objects when provided with relevant experiences. And it has been argued that "we can trace the logic of adolescents and adults back to the constructions of babies and pre-school children" (Devries, 2004). However, the extent to which children can realise their potentials for learning depends on the level of stimulation or exposure that the environment provides (Leather, 2004).

In the first six years of life, there is a great opportunity for growth and learning. It is during this period that children acquire language, form habits and develop attitudes that go a long way to define the kind of adults that they can become (Ogunyemi, 2012). Whatever children

experience at this early stage, good or bad, affects their development through adolescence and, subsequently, adulthood (Maduwesi, 2005). “It is clear from anecdotal, neurobiological, and behavioral perspectives that human beings' basic personality, intellect, and 'formation of values' or character are fundamentally formed by age seven.” (Nance, 2009: 4). This was perhaps why Maduwesi (1999) earlier advised that the early childhood stage should be handled with care to guarantee a balanced mental, physical and psychosocial development of children.

Maduwesi's view, however, was not the first. Great thinkers in history had responded to the challenges of proper upbringing of young members of their societies. The Greek philosopher and disciple of Socrates, Plato, was a pioneer in this regard. He was the first to divide educational programmes into stages that, in later centuries, gave rise to the formal mode of early childhood education (Akinpelu, 1981). Rousseau's revolutionary ideas also led to the *child-centred* movement in early care and education (Curtis, & Boulton, 1977). In the same vein, Dewey's pragmatism transformed the idea of *activity* in early childhood education, while the Italian philosopher, Giambattista Vico, laid the foundation for the current advocacy for *constructivist education* (von Glasersfeld, 1989; Dougiamas, 1997; Panasuk & Lewis, 2012; Gunduz & Hursen, 2014; Dennick, 2016). This paper attempts a review of the epistemological dimensions of early childhood education within the framework of constructivism. The paper's objective is three-fold: (1) analyse epistemological issues in early childhood development; (2) explore the major trends in the global early childhood education movement within the framework of constructivism; and (3) draw out the implications of the constructivist paradigm for early childhood education theory and practice in Nigeria.

Epistemology and Early Childhood Development

The term 'epistemology' means theory of knowledge. It covers a branch of philosophy which deals with the systematic study of claim to knowledge and how knowledge is developed, generated or exercised. The work of Piaget largely popularised epistemology in educational psychology (Labbas, 2013). Piaget proposed his *genetic epistemology* or stages of mental development based on several

experiments which indicated that children's reasoning contains many ideas that were never taught (Piaget, 1970). He explained his genetic epistemology as the formation and meaning of knowledge (Ogunyemi, 2012).

In contemporary times, epistemological issues in early childhood education revolve around sources of knowledge for children of age 0 to 8 years and what knowledge is worth promoting among preschooler learners. Implicit in this epistemological framework is the question of the relationship between educational activities in the formal (school-based) and the informal/non-formal (out-of-school) settings for children. In other words, it is often asked whether or not a clear line of demarcation can be drawn between school learning (otherwise called formal education) and the type of learning arising from general knowledge acquired at the level of the family and the society (that is, informal education). In the words of John Dewey,

'One of the weightiest problems with which the philosophy of education has to cope is the method of keeping a proper balance between the informal and the formal, the incidental and the intentional, modes of education. When the acquiring of information and of technical intellectual skill do not influence the formation of a social disposition, ordinary vital experience fails to gain in meaning, while schooling, in so far, creates only "sharps" in learning—that is, egoistic specialists. To avoid a split between what men (and women) consciously know because they are aware of having learned it by a specific job of learning, and what they unconsciously know because they have absorbed it in the formation of their characters by intercourse with others, becomes an increasingly delicate task with every development of special schooling' (Dewey, 1916).

Simply put, Dewey is saying that formal and informal learning must complement each other for the knowledge gained to be relevant or useful both to the individual learners as well as their social group.

However, from her epistemological analysis of foundations for the curriculum, Ayodele-Bamisaiye made a distinction between generalised (acquired as a member of the society) and specialised knowledge (arising from formal process of education) this way:

*'We all, educated or uneducated, adult or children, young or old know one thing or another. We know that the sun rises in the morning and sets at night fall in our part of the world. We know **how** to help ourselves to a good meal when we are hungry or **why** a little child should not be allowed to play with a dangerous object like a razor blade. We know this whether or not we go to school. But we may not all know **that** 75% of the earth's surface is covered by water, or **how** to produce kerosene from crude oil or **why** an egg would not sink in a jar of brine water, and so on. These latter examples of knowing are accessible to those who pay more attention to book knowledge (academic studies) than the generalized kinds of knowledge which have been earlier cited' (Ayodele-Bamsaiye, 2009).*

Balancing for Dewey's *sharps in learning* and Ayodele-Bamsaiye's *generalised-specialised knowledge* is particularly more tasking in early childhood education because its ultimate goal is to prepare the young ones for schooling. While it is believed that preschool learners may be brought together within an 'educational setting', they are however not regarded as being 'in school'.

On the surface, it may sound contradictory to argue that preschoolers are not yet in school. But it is for the reason of this seeming contradiction that early childhood educators are usually confronted with the *double-error jeopardy* which DeVries (2002) explained with reference to the *under-focused* versus *over-focused* curriculum content in early childhood education. For instance, how much of formal learning or Dewey's *technical intellectual skill* should be promoted without compromising the goal of preparatory education? Should preschool education stop at the level of *generalised knowledge* which is commonplace? Or, should everything done at the early childhood education centres be reduced to 'play'; believing that the informal process is capable of fostering the *incidental-accidental* learning that would take care of the preparatory needs of the young learners?

The challenges associated with the *double-error jeopardy* have always been resolved one way or the other by early childhood

thinkers in the context of established traditions of child development practices. For instance, in the United States of America where Dewey's observations were particularly relevant, Claudia Eliason and Loa Jenkins observed thus:

'Program models differ in their curriculum emphasis, structure, reinforcement methods, teacher role, activities, and materials, but no program has been found to be the best for all children, and the children in any program show improvements in the areas emphasized in that particular program' (Eliason & Jenkins, 2008).

Hence, “Many early childhood programs in the United States have taken an eclectic philosophical approach and draw from many philosophers and theorists to form the perspective that drives their actions and curriculum” (Eliason & Jenkins, 2008: 6).

One major implication of the American experience, therefore, is that there is no *one-cap-fits-all* or a universal model for early childhood education. The focus of a programme would normally dictate what curriculum it deploys to translate its theory into practice. Hence some programme developers go the way of *eclectism*; combining different approaches in developing early childhood curriculum. Another implication is that philosophers of education have played (and continue to play) very critical roles in guiding programme orientations through their implicit and/or explicit epistemological postulations about the nature of young learners and their learning. Prominent among these philosophers and educators are John Locke, Amos Comenius, Jean-Jacques Rousseau, Johann Pestalozzi and Friedrich Froebel. Others include John Dewey, Maria Montessori, Jean Piaget, and Lev Vygotsky. As Ogunyemi (2012) noted, the theoretical perspectives of these and other philosophers of education have provided epistemological pillars for the establishment and operation of early childhood centres from time immemorial. In the same vein, their postulations about the nature of the child and children's learning have provided robust foundations for experimentation with curricular practices and teaching methods till date.

Also worthy of note in the application of epistemological

foundations of early childhood education is concern about how the knowledge should be classified (Applied Sciences, Social Sciences, Humanities and Languages, etc.) to maximally foster integration of knowledge and the wholesome development of intellectual, social and other capabilities of the young ones. Jerome Brunner stresses that “The more elementary a course and the younger its students, the more serious must be its pedagogical aim of forming the intellectual powers of those it serves” (Davies, 1977: 311). As earlier alluded, however, 'the what' and 'the how' of early childhood care and education should be situation- or environment-specific and as well take full cognisance of the child's nature because of the critical element of *relevance* (Ogunyemi, 2012). What is taught, how it is taught, the target child-learner as well as the environment of learning are inseparable; as these must be put in their proper perspective for the attainment of the educational goals.

Constructivist Paradigm and Trends in Early Childhood Education

Constructivism attempts to explain how individuals build on past and present experiences to generate new knowledge. Constructivist educators strive to promote an educational process that fosters the independence of the learner in exploring, synthesising and constructing experiences to influence their own learning (von Glasersfeld, 1989; Dougiamas, 1997; Dennick, 2016; Ogunyemi & Ragpot, 2016). The learners in the constructivist classroom are 'kings' of some sort, as their interests determine what the educator or caregiver must do or not do (Watter & Diezmann, 1998). Constructivist education is opposed to behaviourism which encourages direct teaching activities like dictation, recitation, and programmed instruction.

However, by rejecting behaviourism - a prevalent psycho-philosophical approach in education till date - constructivism stirs up controversies which remain unending. Marie Laroche and Jacques Desautels, for example, observed that:

‘To speak of constructivism ... in education is to place oneself on a field which, like any other academic field, is the scene of

tensions, debates, and indeed battles. While such controversies are, predictably enough, fought out between the partisans of constructivism and those defending other theses, they are also fought out between the constructivists themselves' (Larochelle & Desautels, 2009: 9)

Controversies, as in constructivism, are not unfamiliar in early childhood education and child care. Since the time of Socrates, Plato and Aristotle, interest in early childhood education theories, has generated discussion and debate worldwide. However, it was “only within the last few decades has a groundswell of demand brought about dramatic changes” (McAdams; Henry; Geonsburg & Geonsburg, 2004: 2). McAdams and others have summed what informed this trend in the following way:

'Waves of change keep on coming for pre-kindergarten (preschoolers), mostly in three forms: (1) enrolments that evolve to meet demands from varying social, economic and age groups formerly unconcerned with education outside the home; (2) programs that offer greater variety and availability, often provided by state or federal funds; and, perhaps most important, (3) research that yields new and conclusive justifications for sending children to school prior to age 5'. (McAdams; Henry; Geonsburg & Geonsburg, 2004: 2).

Indeed, the increasing global focus on early childhood education is premised on its potentials for enhancing the mental, physical, emotional and socio-moral development of children. Western countries promote early childhood education “as a powerful strategy for reducing the influence of poverty, wastage and stagnation and as a significant step for universalization of primary education” (Singh, 2004: 32). And from the developing world's perspective, Oduolowu (2002) explicitly states three assumptions about education at this level. These, according to her, are that early childhood education is a foundation for all-round development; early childhood education is to cater for the need of the poor; and pre-school and early primary school programmes are to make up for initial deficiencies in life.

The account of Ogunyemi (2012) agreed with DuBey, DuBey and Ndagi (1985) that children who attended nursery schools (a variant of early childhood education) are more ready to perform well in school than those who did not. They concluded that nursery schools can give good opportunities for children to learn suitable social behaviour for school. “In particular, they (children) learn how to interact in an orderly way on time schedules and on the basis of taking turns and fair play with other children” (DuBey, DuBey & Ndagi, 1985). DuBey and others, from this statement, tend to emphasize the socio-moral dimension of childhood education than the academic component. However, evidence from empirical reports by Rheta DeVries and her associates also tend to support the need to balance academic with socio-moral development of children right from their early years (DeVries, Haney & Zan, 1990).

Accumulated reports have further provided elaborate justifications for Early childhood education. These include preparation for elementary school; improvement on primary school grades; and increasing high school graduation rates. Other benefits of Early childhood education as document are increased likelihood of college (tertiary) education; reduction in juvenile crime rate; and enhancing quality of life for children and their parents (Early Childhood Facts sheet, 2005; Zaman & Ghafar, 2014; Lombardi & Sayre, 2013; Osakwe, 2009; OECD, 2016). These benefits possibly informed an earlier conclusion by Maria Evangelou and Kathy Sylva (2003) that early learning in pre-school education has a lasting impact on children's social and cognitive development and that early intervention is more successful than later intervention.

Early childhood education programmes may share some common philosophical foundations in different parts of the world. However, educational frameworks for early childhood development vary according to programme-focus and the nature of the society. From his review of the literature, Woodhead (2006) has classified the emerging perspectives in global early childhood education movement into four, namely: developmental, political cum economic, socio-cultural, and human rights perspectives. The developmental model focuses on the children's physical and psychosocial growth in their early years; recognising their vulnerability and dependence during this formative stage of their

lives. While being guided by the developmental principles, the political-economic perspective to early childhood education translates these principles into social and educational interventions which are underpinned by economic models of human capital. The socio-cultural model of early childhood draws attention to the diverse ways in which childhood is constructed, understood and practised “with implications for how goals, models and standards are defined, and by whom” (Woodhead, 2006: 4). From the human rights perspective, however, conventional approaches to theory, research, policy and practice are reframed “in ways that fully respect young children's dignity, their entitlements and their capacities to contribute to their own development and to the development of services” (Woodhead, 2006: 4).

It must be emphasised that these perspectives hardly operate in isolation and most ECE programmes draw inspirations from more than one perspective at a time. What differentiates them, however, is the emphasis placed on developmental, political-economic, socio-cultural or human rights issues that drive their policies and programmes. For instance, it is expected that ECE policies in “developing countries of Africa, Asia, Latin America, and Oceania ...whose world is in transition from a traditional to a modern way of life” (Warner, 1979: v) would be significantly different from those of the Organisation for Economic Cooperation and Development (OECD) countries where “Early childhood education and care programmes (ECEC) have become more accessible in recent years, with high enrolment rates in both early childhood educational development and pre-primary education” (OECD, 2016: 1). While interest in the latter context may have shifted to addressing the needs of new immigrants and minority rights, the context of early childhood development and education in the former necessitates a continued focus on the inter-related issues of widespread poverty and equality of opportunities.

Implications for Nigeria

Early childhood education in Nigeria consists of opportunities for preschool learning available to children from birth to age five. The country's educational policy defines Early Childhood Care, Development and Education (ECCDE) as “the care, protection,

stimulation and learning promoted in children from age 0-4 years in a crèche or nursery” (FRN, 2013: 18). This makes it a preparatory to one-year kindergarten which is now a component of the nine-year Universal Basic Education (UBE) programme. Both the ECCDE and kindergarten are, in a way, preschool programmes in the sense that they share common objectives except for the fact that while the former is left to the discretion of parents and private service providers, the latter is now regarded as part of the responsibility of the Nigerian state under the UBE Act (FRN, 2004).

Broadly speaking, preschool educational facilities in Nigeria are provided at such centres like day care or child-care centre, the kindergarten, nursery education, play group, laboratory school or practising nursery schools, and co-operative nurseries/crèches (Oduolowu, 2002). One common element among these early education facilities is that they are provided to cater for children prior to their formal entry into primary schools (Maduwesi, 2005) and may, as such, all be regarded as *preschool centres*.

So, while Nigeria may borrow from the theoretical principles of constructivism in re-constructing her early childhood education programmes, this must be done within a framework that domesticates Western-oriented ideas and ideals. For example, there is the need to view young children as learners; redefine the role of early childhood educators; make clearer the principles of assessment; and refocus the core values of early childhood curriculum (Ogunyemi, 2012). All this should be done in a manner that reflects a balance between tradition and modernity as envisaged by the NPE especially with reference to its Language Policy. To a large extent, the NERDC's Draft *National Early childhood Education Curriculum for Ages 0-5 Years* (with the support of FGN/UNICEF Nigeria) tilts towards constructivism. However, the gaps in the *Curriculum* include its non-inclusion of the general objectives of early childhood education; the overlap in the classification of the young learners; and the non-presentation of curricular activities along the learners' age-grades as done in the 1987 *Curriculum Guidelines*.

Ogunyemi (2012) has observed that much of the existing gaps could be addressed through an improved model of the CESAC Process Curriculum Model to make it more interactional within the context of emergent early childhood education orientations. As she

recommended, an adaptation of the Bank Street or Developmental Interaction Model, backed by model lesson plans, would largely take care of the difficulties associated with translating the national curriculum guide into practical activities at the preschool level where the end-users like teachers/caregivers current drive the process with less competence.

The issue of adequate planning must be taken very seriously. Early childhood education can only bring about the advantages or 'expectations' commonly associated with it when the educational programme is properly conceived and well implemented. The provision of an unplanned, uncoordinated and unfocused early childhood education programme, as observed in Nigeria over time, may be counterproductive in a child's life. In addition, poverty has the potential to reduce the cognitive and social capacities or translate into limitations in a child. In other words, children's out-of-school experiences and lack of opportunities for early childhood education "become deficits when teachers and educational institutions fail to recognize the diversified backgrounds of children and (take steps) to design instructional methods accordingly" (Oduolowu, 2002: 53).

Conclusion

It has been observed that many traditional African communities supported the notion that young children cannot think or reason independent of adults. Tradition-inclined individuals who believe that children - particularly those below the age of five - are too young to reason cannot make effective early childhood educators. This is because the fast-spreading philosophical idea of constructivist early childhood education stipulates that being young is not the same thing as inability to perceive reality in order to understand it. The growing consensus, as evident in the constructivist paradigm, rejects the conservative view of children as lacking in what it takes to relate meaningfully to their world. Nevertheless, while children may be naturally endowed, they equally need good nurturing for their endowments to blossom. Hence, there is need for meaningful and skilful intervention in Nigeria's Early Childhood Care, Development and Education (ECCDE) to achieve the desired results.

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