



# Designing for Children

- With focus on 'Play + Learn'

## DESIGN AS A METHODOLOGY FOR LEARNING OTHER SUBJECTS

Subtitle: Play Designed for Memorable Learning Experiences

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**Abstract:** This paper focuses on the need for educators to re-think how to teach young children, by considering design with a focus on play as a quintessential strategy for learning in early years. Although the body of literature on learning through play has grown exponentially through the years, research into its development in childhood pedagogy and education is nascent. In addition, there is little research that acknowledges the impact of play based learning, which differs across cultures and contexts, and particularly for education practitioners, who traditionally emphasized the learning of established disciplines, rather than helping children develop as individuals. Nonetheless, due to globalization and the contemporary demands of society and technology, educational needs are changing. Accordingly, all teachers have to find a way of coping with the tension between established knowledge and the creative imagination. Using Kenya as a case study, this paper argues that the National Curriculum, should embed design and creative media, as a means of simplifying the learning designs for the facilitator and learner.

**Key words:** *Play-Based Learning, Curriculum Designs, Learner-Centered Teaching and Learning, Educators*

### 1. Introduction

Design and creative media, like play can assist education practitioners promote creative, critical and playful thinking, which thrives on the tension between the ideas of individuals and the evolving forms of social conventions. For instance, learning to model ideas in play, words and pictures, including in three dimensions (3-D) not only benefits children in their development of ideas, but it can also familiarize them with powerful tools for organising information. Consequently, these tools can enhance children's ability to develop and

influence ideas from their imagination, and these ideas can continuously evolve, as they are utilised creatively and innovatively.

Yet, time and experience shows that play is hastily side-lined in the first years of compulsory education, despite many countries having curricular standards. Current research into basic education also confirms that creativity is more than a disposition, talent or skill possessed only by exceptionally gifted students. The lack of teacher professional development that focuses on learning through play is an additional challenge.

However, play need not dissipate entirely if children can be helped to develop playful thinking, exemplified by the openness to prevailing ideas, tools, systems and resources. When coupled with a confident willingness to conceive ways in which things could be done differently, play allows for a wide range of alternative options, which can be modelled into promising forms, and opened up to scrutiny and comment from others.

Using Kenya's Basic Education Framework (2017) as an example, this paper discusses what children can learn from play, to include what can be learned from comparing play with design and creative media as an approach for teaching other subjects.

## **2. Kenya's Basic Education Framework**

The Kenyan government through the Ministry of Education, Science and Technology, has ensured that the current Kenyan Education Basic framework recognizes the critical role of investing in children, laying emphasis on child survival, growth and development. Different stakeholders— parents, communities, other government ministries and agencies, development partners among others, have well defined roles in this framework. However, since the country's devolution process, the Early Childhood Development Education (ECDE), devolved along with the functions of the county governments, paving way for disparities in implementation, based on the different priorities of county governments.

Prior to the Kenya Basic Education Framework (2017) reforms, the country's previous education framework concentrated on 'The Summative Evaluation of the Curriculum' (KIE, 2009), where curriculum content and its implementation was academic and examination oriented. In addition to curriculum overload, most schools were not adequately provided with equipped workshops to facilitate the learning of practical skills, and teachers were not sufficiently trained to impart the requisite knowledge. Likewise, secondary school graduates did not acquire adequate entrepreneurial skills for self-reliance. Coupled with

the high unemployment arising from this phenomenon, was the emergence of social vices such as increased crime, drug abuse and antisocial behavior.

The Mission of the ongoing National Curriculum reforms is 'nurturing every learner's potential'. The curriculum is designed to ensure the provision of opportunities to identify the potential every learner brings to school, and nurture this potential through learning pathways and tracks that will be provided through to Senior School. The mission ensures that no child is labelled a failure at the end of basic education. As Britzman, (1991); Lortie, (1975) state, "*Teachers will initially teach the way they were taught*". The ECDE promotes and highlights competencies in teaching and learning, and embeds values geared towards ensuring that learning takes place through play. This provides children with an opportunity to develop holistically (cognitively, through language, physically and socio-emotionally), as they engage in well-arranged learning centers.

### **3. Playing and the Learning Environment**

The environment and play are important elements that support each other. A well-arranged environment referred to in this paper as a learning center (also as learning area), has clearly defined areas with equipment, materials and supplies, which fit together and enhance children's development through learning and play. It facilitates classroom management and supports the implementation of curricular goals and objectives. The manner in which the physical environment is designed and configured influences how children feel, act and behave.

Evidence suggests that learning centers help children organize materials and classify information based on a specific topic. As children engage in self-selected tasks, teachers observe the habits of selection, the nature of the activity chosen and the growth of social skills. Learning Centres include, but are not limited to:

#### **3.1 Manipulative/Block Centre**

Great block areas contain a variety of materials to spark curiosity and exploration. Many of these include natural or recycled materials, which children can include in their structures.

#### **3.2 Library/Quiet Centre**

The library is a quiet space where children can relax and enjoy reading. A vast majority of children may not be exposed to literature in their homes, thus severely limiting their print

knowledge. The library center provides children with regular and active interactions with print.

### **3.3 Dramatic/Role Play Centre**

The dramatic play area allows children to take on roles and try out new ideas. Children use their imaginations as they cooperate with one another and they practice self-care skills as they try on dress-up clothes. Dramatic play greatly enhances a child's social and emotional development when children cooperate, feel empathy, and control their emotions.

### **3.4 Discovery/Science Centre**

The Science and Sensory centre is an integral part of the preschool programme. It stimulates children's natural curiosity and desire to learn about the world around them. It may be called the "Let's-Find-Out-Table" where children are encouraged to explore something about their world in more detail. Young children require a place where they can explore answers to questions driven by their natural curiosity. *(example photo)*

### **3.5 Music Centre**

Music is a universal language understood by all. Teachers of young children realize the need for music in the classroom, and use music to promote a calm and peaceful atmosphere; for transition from one activity to another; to educate and to encourage movement and exercise. A music centre is important because it creates opportunities for children to cooperate in activities that stimulate creativity, listening, and language.

### **3.6 Art Centre**

An art centre serves as a great creative outlet for children to help express their emotions and ideas. The children get an opportunity to put their sensory skills to use as they touch, feel, smell, taste and express. Their visual senses are stimulated and come into play in their choice of color, shape, size and environment.

### **3.7 Outdoor Centre**

The outdoor environment can also be an extension of the indoor classroom where learning blossoms. The outdoors offers endless possibilities for teaching and learning.

A classroom with learning centres lays emphasis on learning through play, because each learner as an individual, gets involved by gathering their own knowledge, analyzing it,

discovering information on their own, and conceptualizing what they have experienced. This results in problem-solving activities, that in turn, lead to experiential learning.

Teaching and learning strategies around child-centered methodologies ensure that each child learns at their own pace, with the teacher as facilitator. In the Kenyan context, learning has mainly been taking place in an environment where children follow the teacher's lead with minimal opportunities to explore their interests. In the new ECDE curriculum there is a gap when it comes to lesson development and delivery, because many teachers do not understand how to set the above listed environments (1-7).

Examples of other approaches that can effectively assist teachers in delivery are, 'The Madrasa Early Childhood Programme in East Africa', a programme of the Aga Khan Foundation, an Aga Khan Network Development series which provides a template on learner-centered approach to learning; The Reggio Emilia Curriculum from Italy, whose philosophy states that "children are neither vessels to be filled nor people whose time must be occupied; they are strong, capable, and resilient researchers, exploring themselves and their environment. Children have the ability, dexterity, and passion to devour knowledge, requiring only the freedom to explore and experiment. We are nurturers and caregivers, providing a safe environment for this exploration to take place, but we are also collaborators and co-researchers"; and The Early Years Foundation Stage from the United Kingdom, whose learning environment is well planned to promote competencies and values as each learner develops holistically.

In developing countries like Kenya, where education has been teacher-centered, the introduction of the Competence Based Curriculum, has every education stakeholder involved in the teaching and learning process. This study posits that the learner will be the change agents from school to the community, and ideally should be supported by teachers who encourage and acknowledge children's active involvement. The trainer of trainers (TOT) and the Community of Practice (COP) models are worthwhile mentioning as their approaches to professional learning have significant potential to improve teaching and learning in Kenya's education sector:

### **3.7.1 TOT Model**

A train-the-trainer model enables experienced personnel (Master trainers) to show a less-experienced instructor how to deliver courses, workshops and seminars. Currently the training that is taking place to introduce teachers to the new curriculum is a ratio of 1:300

if not more. For teachers to get proper training, the government needs to explore and expand this model to reach all teachers.

### **3.7.2 COP Model**

Community of practice brings a group of people that agree, to interact regularly to solve a persistent problem, or improve practice by coming up with innovative ideas in an area that is important to them. This model is appropriate for teachers who having had training, can best use COP model to follow up and grow their knowledge in response to problem solving.

### **3.7.3 Involvement of design practitioners**

At the onset of the planning of curriculum and training of teachers it is important that design practitioners work together with curriculum developers. This will demystify context and content of the design and media relevant to teachers who in turn work with the early learners.

Still, whereas Kenya's educational practitioners are trained to understand the curriculum and have participated in curriculum design, very little has been taught on lesson development or delivery, to include ways of sustaining the new Competence Based Curriculum. Moreover, both play and design require that children be permitted to make their own choices and decisions, which can be challenging to accommodate within the increasingly tight planning, which many Kenyan schools have introduced, to cope with the demands of the National Curriculum. This makes it challenging for educators to transition from the teacher centred, to the learner centred methodology, advocated by this paper. The following are practical ideas on how to enhance methods of teaching, and in turn improve the quality of early childhood pedagogy and education, through design and creative media:

- **Pull out resources**

The National Curriculum designs need to have pull out resources that illustrate, using more visual aids with tips. These bring out teaching strategies that promote the competencies and provide teachers with content and tools needed to encourage each child as an individual. These pull outs should be simplified information, which is well illustrated to help the teacher use during the lesson.

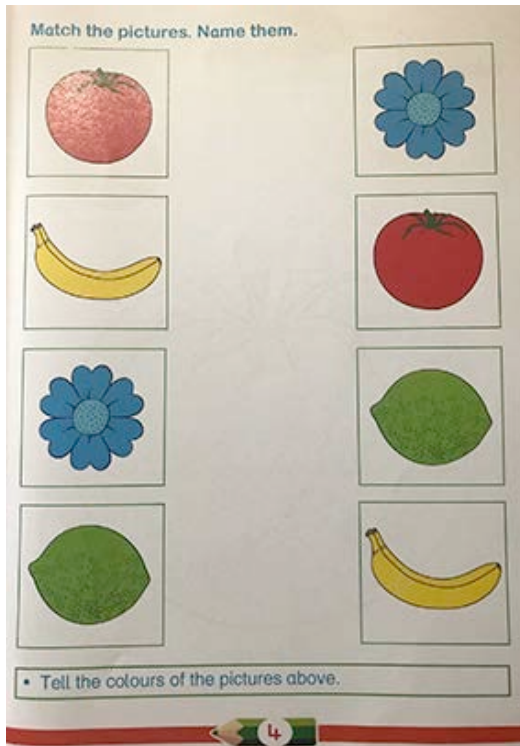


Figure 1. Simple illustrations (Source: *Illustrator*. Frank Odongo, student, Technical University of Kenya, 2019).

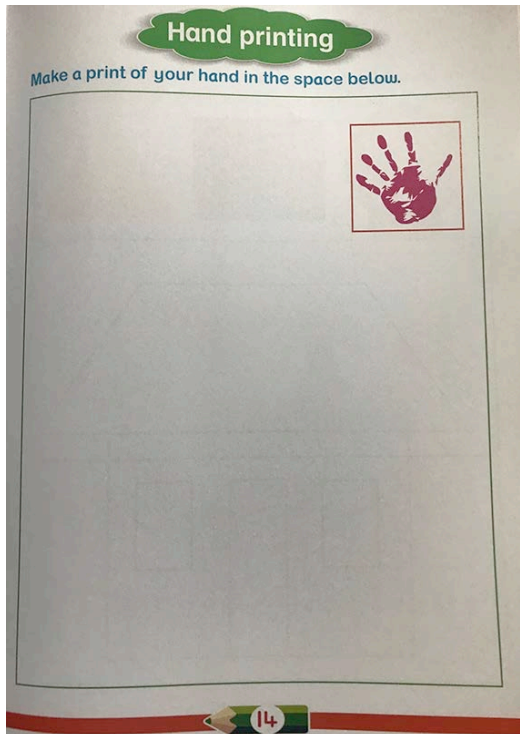


Figure 2. Simple illustrations (Source: *Illustrator*. Frank Odongo, student, Technical University of Kenya, 2019).

The pull-outs will cater for:

- i. **Visual learners**<sup>1</sup>: refer to learners who process information, which they can see better than information that they hear.
- ii. **Kinesthetic learners**<sup>2</sup>: an approach whereby learning takes place by the learners carrying out physical activities through use of materials, rather than listening to a lecture or watching demonstrations
- iii. **Auditory learners**<sup>3</sup>: a methodology which involves a person learning through listening

By utilizing objects in playful, creative ways children develop their understanding both of the objects and of the ideas they are used to represent. The looser, more generalised concepts which are developed in this sort of play also enable children to internalise their imagination, reducing the need for concrete props. Knowledge and imagination develop each other as children play.

- **Teacher training**

The new Competence Based Curriculum should be implemented by use of a child centered, or inquiry-based or play-based teaching and learning. The use of language is just one of the many tools of thought, which education practitioners can use to enhance the ability of the children to imagine and speculate. Typically, children's ability to internalise their imagination is assisted by the modelling of ideas in their play. Likewise, designers' ability to visualise design proposals is increased by experience of modelling ideas in drawings and prototypes. Accordingly, the planning and review of play becomes even more important, as children become increasingly aware of their thinking. Teachers need to undergo a material development training, as a module, in the university and training colleges.

#### 4. Conclusion

This paper concludes that design and creative media share with play many of the functions which promote playful thinking, creating opportunities where learners can enhance experiential learning, and create memories as they develop holistically in cognitive development, socio-emotional development, language and literacy, and physical development. Learners experience real life activities as they play, especially in natural

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<sup>1</sup> [https://en.wikipedia.org/wiki/Visual\\_learning](https://en.wikipedia.org/wiki/Visual_learning)

<sup>2</sup> [https://en.wikipedia.org/wiki/Kinesthetic\\_learning](https://en.wikipedia.org/wiki/Kinesthetic_learning)

<sup>3</sup> [https://en.wikipedia.org/wiki/Auditory\\_learning](https://en.wikipedia.org/wiki/Auditory_learning)



set-ups. This promotes critical and creative thinking which in turn enables them acquire problem solving skills, and life skills. Play is memorable, creativity can be fostered, and both need to be designed for in curricula.

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