

**DEVELOPMENT AND VALIDATION OF SOFT TOY  
PATTERNS FOR CHILDREN IN ANAMBRA STATE**

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**DEVELOPMENT AND VALIDATION OF SOFT TOY  
PATTERNS FOR CHILDREN IN ANAMBRA STATE**

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**APPROVAL PAGE**

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## CERTIFICATION

Nwankwo, Nwamaka Nneka, a post graduate student in the department of Vocational Education, with the registration number PG/M.Ed/03/34493, has satisfactorily completed the requirements for course and research work for the degree of Masters of Education in Home Economics Education. The work embodied in this thesis is original and has not been submitted in parts or in full for any other diploma or degree of this or any other university.

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## DEDICATION

To my beloved father - Sir J.N.C. Nwankwo (Chinaechendo)  
of blessed memory, who was called to higher service on Ash  
Wednesday 25<sup>th</sup> February, 2009.

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May the Almighty God bless and keep you all in Jesus name,  
Amen.

Nwankwo, Nwamaka Nneka

<b>TABLE OF CONTENTS</b>										<b>pages</b>
Title Page	-	-	-	-	-	-	-	-	-	-i
Approval Page	-	-	-	-	-	-	-	-	-	-ii
Certification	-	-	-	-	-	-	-	-	-	-iii
Dedication	-	-	-	-	-	-	-	-	-	-iv
Acknowledgement	-	-	-	-	-	-	-	-	-	-v
Table of Contents	-	-	-	-	-	-	-	-	-	-vii
List of Tables	-	-	-	-	-	-	-	-	-	-x
List of Figures	-	-	-	-	-	-	-	-	-	-xi
Abstracts	-	-	-	-	-	-	-	-	-	-xii
 <b>CHAPTER ONE: INTRODUCTION</b>										
Background of the study	-	-	-	-	-	-	-	-	-	-1
Statement of the problem	-	-	-	-	-	-	-	-	-	-4
Purpose of the study	-	-	-	-	-	-	-	-	-	-5
Significance of the study	-	-	-	-	-	-	-	-	-	-6
Research questions	-	-	-	-	-	-	-	-	-	-8
Scope of the study	-	-	-	-	-	-	-	-	-	-8
 <b>CHAPTER TWO: REVIEW OF RELATED LITERATURE</b>										
Related theories	-	-	-	-	-	-	-	-	-	-10
Conceptual framework	-	-	-	-	-	-	-	-	-	-15
Safe toys and their characteristics	-	-	-	-	-	-	-	-	-	-19
The role of toys and play in child development	-	-	-	-	-	-	-	-	-	-20
Equipment and materials for pattern drafting	-	-	-	-	-	-	-	-	-	-23
Measurements	-	-	-	-	-	-	-	-	-	-24
Methods of drafting pattern	-	-	-	-	-	-	-	-	-	-29
Pattern markings and symbols	-	-	-	-	-	-	-	-	-	-33
Essential tools, equipment and materials for making soft toys	-	-	-	-	-	-	-	-	-	-34







<b>LIST OF TABLES</b>	<b>ages</b>
Population distribution - - - - -	-51
Sample distribution - - - - -	-52
Parts of soft toys to be used - - - - -	-60
How different parts of dog are measured - - - - -	-61
How different parts of fish are measured - - - - -	-62
How different parts of rabbit are measured - - - - -	-63
How different parts of mouse are measured - - - - -	-64
How different parts of lion are measured - - - - -	-65
Mean measurement - - - - -	-67
Teachers assessment chart of the soft toy (Dog) relative to safety for children - - - - -	-87
Teachers assessment chart of the soft toy (Fish) relative to safety for children - - - - -	-88
Teachers assessment chart of the soft toy (Rabbit) relative to safety for children - - - - -	-89
Teachers assessment chart of the soft toy (mouse) relative to safety for children - - - - -	-90
Teachers assessment chart of the soft toy (lion) relative to safety for children - - - - -	-91
Teachers assessment chart of the shape of the parts of soft toy (Dog)-	-91
Teachers assessment chart of the shape of the parts of soft toy (Fish)-	-91
Teachers assessment chart of the shape of the parts of soft toy (Rabbit)-	-91
Teachers assessment chart of the shape of the parts of soft toy (Mouse)-	-91
Teachers assessment chart of the shape of the parts of soft toy (Lion)-	-91

<b>LIST OF FIGURES</b>					<b>pages</b>		
Figure I	:	Dog soft toy patterns	-	-	-	-	-69
Figure II	:	Fish soft toy patterns	-	-	-	-	-72
Figure III	:	Rabbit soft patterns	-	-	-	-	-74
Figure IV:		Mouse soft toy patterns	-	-	-	-	-78
Figure V	:	Lion soft toy patterns	-	-	-	-	-86

## ABSTRACT

The work focused on development and validation of soft toy patterns for children in Anambra State. The design of the study was Research and Development (R/D). A sample of 379 subjects were drawn from 1,514 teachers that are mothers in government approved private nursery schools in the state. Sampling techniques used were purposive sampling and simple random sampling. Instruments used to collect data are ; soft toy measurement chart, toiles sewn from patterns drafted and assessment criteria charts for safety and shape. Pattern pieces were drafted for the five soft toys . Dog, Fish Rabbit, Mouse and Lion. The patterns were transferred to fresh paper and pattern instructions were marked on all the pattern pieces. These pattern pieces were used to cut the five soft toys. The toys were assembled and teachers assessed them for safety and shape. The assessment criteria chart had 5-point scale of 5, 4, 3, 2, and 1 respectively. Mean scores of 3.50 and above were regarded as satisfactory while mean scores below 3.50 were regarded as unsatisfactory. Teachers rated the different variables for the soft toys. The patterns that were not satisfactory were loosened, altered, and corrected. Recommendations were made based on the findings of the study.

## CHAPTER ONE

### INTRODUCTION

#### **Background of the Study**

All over the world, children have materials known as toys. These toys vary from country to country. Robinson (2006) defined toy as an object that is intended for play and whose main purpose is to provide fun and amusement. He further noted that toys play important roles in education of the child and that through play, children at every stage learn about themselves and others and how things work. Similarly, National Literacy Trust (2005) noted that toys are fun and that they help children to learn about themselves, their environment and the people around them. Anyanwu (2004), observed that children have a general tendency to play, therefore suggested that child care givers should provide them with toys and other materials which they can manipulate and play with.

Olaitan and Akpan (2003) noted that parents, as well as teachers, play essential roles in the lives of children. They encourage the right play activities and provide play materials to ensure that their children develop the right skills and creativity at an early stage. Mgbodile and Iwuh (2000) stressed that as children pass through the different stages of development, parents and teachers have great task to ensure that they develop into healthy personalities. Mgbodile and Iwuh (2000), explaining further, also pointed out that parents should give their children opportunities to explore

their environment and get in touch with appropriate toys that enable them to develop their creativity and other potentials.

Play is a natural activity for every healthy young child. It provides many opportunities for children to use toys and other play materials to learn and grow (Goodson, 2005). Toys therefore, are important part of a child's activities. Myoungson (2002) pointed out that toys and play are inseparably linked with childhood and adolescence. Toys and play are relevant in the development of children. According to the National Literacy Trust (2005), a child's development during the first five years greatly depends upon available play materials than at any other age. The use of toys in play helps, children develop physically, socially, intellectually and creatively (Dike 2007). Davis (2001) observed that very early in development, toys dominate in children's daily activities and play crucial role in helping them construct meaning from their every day experiences.

On the other hand, the national policy on Education (Federal Govt. of Nigeria, 2004), recognized the importance of toys, hence one of the objectives of pre-primary education is to inculcate in the child the spirit of enquiry and creativity through the exploration of nature, and the local environment. Toys come in different forms, shapes and colours. They can also be categorized as hard and soft toys. According to Hornby (2003), soft toy is a toy made into a shape, including the shape of an animal, using fabric and filled with a soft substance. Patterns are used in making soft

toys. Igbo and Iloeje (2003), defined pattern as piece of paper drafted and cut to size and shape, used for cutting out fabric pieces for making dresses as well as other articles. Soft toy pattern is developed from basic pattern, which is the starting point for pattern drafting. Aldrich (2002), described basic pattern as the simple plain pattern that fits the body with just enough ease for movement and comfort. Basic pattern is sometimes called master, block or foundation pattern. Development on the other hand is the process of producing or creating something new or more advanced (Hornby 2003).

Soft toy pattern should be valid in order to be functional and useful. Ukwe (2004), stated that validity is concerned with quality and accuracy. There are four types of validity . predictive validity, concurrent validity, content validity, and construct validity (Osuala 2001). Predictive aspect of validity is the ability of an instrument to predict some future event or events. Concurrent differs from predictive validity only in the factor of time. Content validity is the ability of an instrument to represent well the content areas to be evaluated. Construct validity is a concept that is useful in research in areas where knowledge is so limited that usual kinds of interim measures are of little value. Validity in clothing pattern means the suitability of the pattern in meeting the specific needs of the user. After the development of patterns, validation should be done. The pattern from which all the designs are created, can be developed through draping or



they can be drafted from instructions (Igbo and Iloeje 2003). Pattern can also be developed on the computer. Drafting pattern on the computer is known as Pattern Generation System (PGS) (Aldrish 2002). Pattern making is a skilled trade and requires measurements obtained from a figure. The accuracy of a drafted pattern depends on the accuracy of the measurements, drafting instructions and skill of the pattern maker. This study is therefore undertaken to develop and validate patterns for producing five soft toys for Nigerian children.

### **Statement of the Problem**

Soft toys are important part of children's play materials. According to Robinson (2006), soft toys encourage the development of mental and physical skills, stimulate children's imagination and help children to discover something about the world in which they live. In other words, they educate and amuse children. Dike (2007) noted that teachers and mothers in Anambra State, as in other states, are mostly concerned with providing toys and play materials for their children but quite often unable to provide enough for these young ones. Before Nigerian government banned importation of ready-to-wear clothes, second-hand garments and articles-~~to~~ kirika+ and commercial patterns in 1986, parents and teachers were not finding it difficult purchasing soft toys. Presently, soft toys are not locally produced and commercial patterns for making them are not available. Also parents and teachers lack information and

knowledge on how to make these soft toys for use by children. Few parents who are able to provide such toys for their children do so by purchasing used, imported soft toys often smuggled into the country and sold at exorbitant prices. Dike, (1987), lamented that it is unfortunate that majority of toys are imported into Nigeria and as such their cost are high and unaffordable by most parents.

If Nigerian children are to benefit from the use of soft toys, there is need for locally produced patterns so that parents, teachers, tailors/seamstresses can utilize them for soft toy production, in this way, children will be encouraged to use soft toys and can access such toys. This will help to avoid use of hard toys that can cause harm and make them develop negative behaviour e.g. Gun, sticks, batons or objects in the environment. Based on these, there is need to develop patterns for making soft toys. Hence, this study focuses on development and validation of soft toy patterns for production of soft toys.

### **Purpose of the Study**

The major purpose of the study was to develop and validate patterns for soft toys.

Specifically, the study was designed to:

1. Determine parts of the soft toys used in drafting soft toy patterns.
2. Determine how these parts of the soft toys are measured.
3. Establish measurements for drafting soft toy patterns for children.

4. Develop different soft toy patterns for children.
5. True+the pattern pieces developed.
6. Teachers validate the toy pattern pieces produced relative to safety of the children and the shape of the toys.

### **Significance of the Study**

Soft toys encourage the development of mental, emotional and physical skill, stimulate children's imagination and help children to discover something about the world in which they live. In other words they educate and amuse children. Based on this, the soft toy patterns that will be developed in this study will be useful to children.

Children cannot provide their toys rather, their parents and care givers will be sensitized on the need for their use of toys. This will consequently help children in their development. This will enable them to explore their environment and develop their creativity and other potentials. The findings of this study will help both current and prospective nursery school teachers to overcome the problem of teaching with insufficient soft toys. Parents will also find this study significant in the area of making proper choice of soft toys for their children at minimal cost.

The information that will be generated from this study, if accessed, will be of benefit to clothing construction students. They could use the measurements that will be obtained from this study to draft

patterns. The basic block patterns that will be produced in this study could be used by students for pattern alteration and adaptation. Clothing construction teachers will also benefit from this study if accessed. They can use the measurements and the basic block patterns from this study to teach their students. This will make work very easy for them.

Tailors/seamstresses will equally benefit from this study. When they make use of the findings of this study, they will find their job easy and fast. Their economy will be improved because their rate of turnover will be very high. It will also help to save their time and energy. Job seekers can go into entrepreneurship by using the information provided in the study to go into soft toy production. This will reduce unemployment and make them self reliant.

Suggestions from this study are bound to be useful to policy makers. It will help Home Economics Curriculum Planners to allocate or create more time for practical in clothing construction. The data generated from this study can be used by Nigerian Educational Research and Development Council (NERDC). They could recommend it for use in schools and colleges that offer clothing construction courses. Finally, the findings of this study will serve as data base for future studies in the area.

**Research Questions.**

The study sought answers to the following questions.

1. What part of the soft toys are used in drafting soft toy pattern?
2. How can these different parts of the soft toys be measured?
3. What are the measurements of the parts of the soft toys that can be used for drafting soft toys?
4. How can the blocks for soft toy patterns for children be developed?
5. How can the developed block soft toy patterns be trued?
6. How can the block patterns developed for the different toys be validated by the teachers relative to safety of the children and the shape of the toys.

**Scope of the Study:**

The study is restricted to drafting of patterns for five soft toys and trueing of five soft toys from the patterns.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

The related literature has been reviewed under the following sub-headings:

- Related theories
- Conceptual framework
  - The concept of child
  - The concept of play
  - The concept of toys
- Safe toys and their characteristics
- The role of toys and play in child development
- Equipment and materials for pattern drafting
- Measurements
- Methods of drafting pattern
- Pattern makings and symbols
- Essential tools, equipment and materials for making soft toys
- Facial features
- Concept of validity
- Review of related empirical studies
- Summary of literature review

## **Related Theories**

There are some theories of child growth and development which formed the basis of this research work. These include; Erickson's psychological theory, Jean Piaget's cognitive development theory, Gesell's theory on physical growth and motor development and play theories.

- **The Erickson's psychological theory**

This theory emphasized the importance of social factors in personality development and interaction between biological and social factors in the development of the child. Erickson proposed that any child passes through eight psychological stages in his life time and these stages are directly related to forces in the society. He stated that at each stage, there are crises or critical issues to be resolved. For some individuals, the crisis or critical issues are resolved satisfactorily but for others, they do not completely resolve these crises and they affect them in later life.

Santrock, (2005) noted that the eight stages are; Trust Versus Mistrust (Birth . 18 months), Autonomy versus Doubt (18 months . 3 years), Initiative versus Guilt (3-6years), Industry versus Inferiority (6-12 years), Identity versus Role Confusion (12-18years), Intimacy versus Isolation (Young adulthood), Generativity versus Self absorption (Middle adulthood), and Integrity versus Despair (late adulthood). Erickson maintained that personality development is a life-long process and the

theory places primary emphasis on the role of environment in causing crisis and in determining how they can be resolved. During the first two stages, the interactions are primarily with parents and significant others in the family. The school begins to play a vital role from the third stage for most of the children and is central in stage four.

- **Jean Piaget's cognitive development**

Piaget's theory states that children actively construct their understanding of the world and go through four stages of cognitive development. Santrock, (2005) stated that Piaget believed that human beings go through four stages in understanding the world. Each of these stages is age-related and consists of distinct ways of thinking. Santrock, (2005) narrated Piaget's four stages of cognitive development as follows:

- The sensori-motor stage (birth . 2years): here, the infant constructs an understanding of the world by coordinating sensory experiences (such as seeing and hearing) with physical actions. An infant progresses from reflexive, instinctual action at birth to the beginning of symbolic thought toward the end of the stage.
- The pre-operational stage (2-7 years): here, the child begins to represent the world with words, images and drawings. These words and images reflect increased symbolic thinking and go beyond the connection of sensory information and physical action.



- The concrete operational stage (7-11 years): here, the child can now reason logically about concrete events and classify objects into different sets.
- The formal operational stage (11 years and above): here, the adolescent reasons in more abstract, idealistic, and logical ways.

- **Gessel's theory on physical growth and motor development**

According to Arnold Gesseel in Nwachukwu (2000), growth and development in individuals proceed in an orderly pattern and involve stages that are highly similar if not identical from one individual to another. He believed that development is controlled more by genetic factors than by environmental factors. Consequently, he noted that development proceeds in a predictable pattern. For instance, a child has to sit before crawling; he has to crawl before standing. Even though Gessel recognized the role of the environment as the factor in development, he believed that its influence is very minimal. The environment, he noted can influence the age at which certain skills manifest, but not the sequence of development that guides development.

- **Theories of Play**

Different scholars have relied on one or two aspects of playful activity in order to account for the origin of play. Groos in Nwachukwu (2000) stated that play was preparation for adult life. Also he believed that play was instinctive, since all animals take part in playful behaviour.

Judging from the above fact, Groos equated the play-fighting of animals with initiative activities of children.

Consequently, Hall in Nwachukwu (2000) proposed play as recapitulation of the stages in the evolution of a specie. Explaining further, he stated that man's evolutionary history would have to be repeated in each generation. As a result, each specie has to pass through a predetermined course of experience and play was a classic manifestation of this process.

On the other hand, Spencer in Nwachukwu (2000) advanced what could be regarded as real theory of play. Building on the notion that play is an outlet for surplus energy, Spencer stated that the young of higher species frolic, frisk, gallop, gambol, cavort, engage in mock combat, with every sign of pleasure and high spirits and with no apparent utilitarian objective. This he felt explains the phenomenon of play. Furthermore, Garvey (1984) traces the physiological origin of play to the smile, laughter and glee, and concludes that the more a child is active in creating the conditions that generate humour, so does his activeness in play increase. In the same vein, he explains that in smiling and in playing, the growth of voluntary control is reflected as descriptive characteristics of play:

1. Play is pleasurable and enjoyable. Even when not accompanied by signs of happiness, fun and laughter, it is still positively valued by the player.

2. Play has no extrinsic goals, its motivation are intrinsic and serve no other objectives. It is more an enjoyment of means than an effort devoted to some particular end. It is inherently unproductive.
3. Play is spontaneous and voluntary. It is not obligatory but is freely chosen by the player.
4. Play involves some active engagement on the part of the player.
5. Play has certain systematic relations to what is not play.

Lowenfeld in Dearden (1970), in objection sees play as all activities in children that are spontaneous and self generated. Garvey (1984) explaining further pointed out that laughter and play are both reflections of well being since we are not likely to expect either behaviour from a sick, confused and frightened child. Garvey (1984) finally analyzed that while a smile may be an indication of play, it is certainly not a reliable index of playful orientation.

Goldstein (1994) in his own opinion on play theory suggests that play is an important tool for developing social skills, culture and community. Also Froebel in Encyclopedia Britannica expresses that Child's play is a process of discovering and recognition that educated the child to the unity as the diversity of things in nature. Froebel believed that the young child learned best not through formal instructions but through play and imitation, self-activity. The researcher chose to use the above

theories and philosophy because they are the ones that are concerned most with the environment and objects.

## **Conceptual framework**

### **Concept of child**

A child is a young human being who is not yet an adult. According to encyclopedia Encarta (2004), the child is a young person from birth to the age of full physical development. Saunders (2005), defined a child as person between 18 months and 13 years of age. The definition of a child in the Nigeria context is always arbitrary and varies from one ethnic group to another due to lack of uniform system of customary laws in Nigeria (Mgbodile and Iwu, 2000). In some parts of the world, especially in Nigeria, some cultures have expectations and standards used to classify an individual as an adult. In the eastern part of Nigeria, some communities have ~~the~~ becoming of age ceremony, which initiates young adults into full recognition as adults. In this case, a child is one who has not been initiated into adulthood through ~~the~~ becoming of age ceremony.

In some ethnic groups, a boy remains a child until initiated into an age grade society or until he is old enough to contribute financially to community development. In other ethnic groups, childhood terminates at puberty. In a study carried out by Olaitan and Akpan (2003), parents felt that one who is dependent on the parents or cannot care for himself or herself remains a child. Under the Organization of African Unity (OAU)

chapter on the rights and welfare of the child, Article 111, a child means every human below the age of 18 years. A child is seen by Santrock (2003) as an individual between infancy and adolescence. Encyclopedia Encarta (2004), defined a child as somebody under legally specified age who is considered not to be responsible for his or her actions.

It may not be an overstatement to state that every couple in Nigeria desire children, since culturally it is the main purpose for marriage. Children are social and economic assets for the family. They help with the household chores, farm work, and run errands. They are social security for their parents at old age and serve as source of family prestige (Feldman, 2000).

### **Concept of Play**

Play is a natural activity for every healthy young child. It provides many opportunities for children to learn and grow physically, mentally and socially (Godson, 2005). Godson reasons that if play is the child's work then toys are the child's tools, and sufficient toys can help children do their work well. Myoungson (2002), pointed out that play is fun and makes one feel good, happy and alive. It could be said that many Nigerian parents still feel that play is waste of time. These parents feel that play-time ought to be spent more profitably in other activities, (Anyanwu 2004). They hold work in high esteem and when a child is found playing, it is often considered as idleness. Whether an activity is play or work, is determined

by the attitude of the individual towards the activity. However, both work and play are very important to a child's growth and development.

Play is not just a recreational activity, it is an essential growth and development activity (Jewitt, 2003). Jewitt stated that play is the child's natural medium of communication. In a safe environment the child is able to express himself naturally, using play as communication and it offers the child a form of self-therapy. Regardless of culture, language, or background, children are able to play, which allows them to make sense of and connect with their world. Jewitt (2003) observed that even the youngest baby interacts with his world. He learns, develops physically, psychologically, cognitively and builds relationships through play. Anyanwu (2004), observed that through play children learn difficult concepts and skills easily. Most children's play involve the use of toys. Therefore toys are tools for learning. When proper and sufficient toys are provided for children, they are thrilled and their abilities and talents are more likely to unfold.

### **Concept of Toys**

Toys are items or objects for play. Lichenstern (2004) stated that toys are play objects used mainly by children, and that they are also essential in the development of children. The new Encyclopedia America (2000), sees toy as a play thing for an infant or child. It is often an instrument used in a game. Robison (2006) stated that a toy is an object

children can be used as a play thing. Toys can often be the stimulus to enhance communication, and co-operation between children, between children and parents and also between families+ (National Literacy Trust 2005). Robison (2006) defined a toy as an object that is intended for play and whose main purpose is to provide fun and amusement. He further noted that toys play an important part in education and that through play, children at every stage learn about themselves and others and about how things work. He maintained that children need a variety of toys, both soft and hard, that challenge them to use their minds, bodies and feelings. Toys are fun and they help children learn about themselves, their environment, and the people around them (National Literacy Trust 2005).

Myoungson (2002) noted that children play happily with different objects, which they find around the house and garden, and that these objects are used as toys. He pointed out that toys and play are inseparably linked with children and adolescence and that toys are the material around which play revolves. Toys are said to be as old as the history of man. Myoungson (2002) observed that even cave children had balls made from dried fruits or animal bladders, which could roll and bounce. He speculated that real objects such as sticks, seeds; bones, fruits, rattles and smooth stones may have been the first toys which children used for play. Some of these are still used today by children. Hiller (2000), stated that toys can be

seen as the tools of human child, training him in physical skills, developing his inauguration, and stimulating his thinking.

### **Safe Toys and their Characteristics**

Safety, according to Hornby (2003), refers to the state of being safe and protected from danger and harm. Safe toys, therefore, refer to toys children can use especially during play without the risk of injury. United States Consumer Protection Safety Commission (1998), and Lichenstein (2004) are in agreement that safe toys should have the following characteristics:

- i. Well constructed to withstand the use and abuses of children in the age range, for which the toy is appropriate.
- ii. No shock of thermal hazards in electrical toys
- iii. No toxic materials in or on toys
- iv. No sharp point on toys
- v. No small parts to be lodged in the throat, ear nor nose.
- vi. No glass or brittle plastic
- vii. No parts to entrap fingers, toes and hands,
- viii. No long strings etc.

Common sense may be the most important preventive measure regarding the safety of toys. According to Dike (2007), parents and teachers should be knowledgeable about the toys and playthings children are playing with. If toys show signs of wear or have broken parts, they



should be discarded. Taylor, Morris and Rogers (1997) noted that the most common reasons why toy-related accidents occur are:

1. The toys are inherently dangerous.
2. The toys are use inappropriately by children.
3. The toys are not developmentally appropriate and
4. The toys are used without rules for their safe use.

According to them, having staff who are trained in early childhood education that can help parents and children select the right toys can help to prevent these potential problems. Lichenstein (2004), however is of the view that the most important thing to do to ensure your child's safety is to supervise the child while he or she is playing with a toy, even if the item is recommended for the child's age group. He noted that injuries to children could be prevented most of the time, with the use of safe toys and proper supervision.

### **The role of Toys and Play in Child Development**

Toys are intrinsically linked with play. In other words, they are the main materials for play and used by children. According to National Literacy Trust (2005), a child's development during the first five years is more dependent upon the available play materials than at any other age. Myoungson (2002), noted that most materials influence children's development positively. The use of toys in play helps children develop

physically, socially intellectually and creatively (Dike 2007). Davis (2001) observed that a young child uses objects in his or her physical environment as tools to accomplish activities, and the use of tools as mediators of activity is linked ultimately to the child's intellectual development and learning. He maintained that toys are the most common tools available during infancy and the early childhood period. Very early in development, toys dominate children's daily activities and play critical role in helping them construct meaning from their every day experiences.

Play is described by the Nation Literacy Trust (2005), as the work of a child. Mgbodile and Iwuh (2000) saw play as a natural activity for every young child. Play provides many opportunities for children to learn and grow- physically, mentally and socially. They stress that if play is the child's work then toys are the child's tools. Play has an undeniable influence on every aspects of a child's development. Davis (2001) pointed out the contributions of toys and play towards child growth and development in the following ways-

- Physical skills develop as a child learns to reach, crawl, walk, run, climb, jump, throw, catch and balance. Fine- motor skills (the use of hands and fingers) advance as he or she handles playthings.
- Mental skills are sharpened through play that encourages problem solving. Children learn about shapes, colours, sizes and other

concepts through play. Language blossoms as a child interacts with others and uses words for favourite playthings and activities.

- Learning to follow directions, cooperate, take-turns are important social skills mastered through play.
- Play stimulates creativity and imagination and allows children to expand the horizons of their world. When a child pretends to be a doctor, teacher, parents, or a fire fighter, he or she learns that life is full of possibilities and opportunities.

play is pleasurable activity that is engaged in for its own sake (Santrock 2003). It is one of those activities children engaged in as they grow and develop. It is essential to a child's health and contributes to the domain of development. Through play, the child's senses are stimulated and they learn how to use their muscles, coordinate sight with movement, gain mastery over their bodies and acquire new skills, (Feldman, 2000). Play increases affiliation with peers, releases tension, advances cognitive development, and stimulates exploration. Play develops individual's thinking and ability to take risk and it helps children to practice the roles they will assume later in life. Through play, children satisfy their exploratory drive by acting as a means whereby they can safely explore and seek out new information (Santrock, 2001). In play, children learn new roles, adapt to situations, cope with emotions, and understand other people's viewpoints better.

## Equipment and Materials for Pattern Drafting

Every skill demands that tools and equipment must be available for efficiency and ease of work. Igbo and Iloeje (2003) emphasized on the use of equipment when drafting and suggested the following as essential tools and equipment for pattern development.

- Metric tape measure: this is used for taking body measurements and also measurement of fabric.
- Pencil- used for drawing shapes, lines on paper pattern.
- Metric stick- used for drawing long straight lines on pattern.
- French curve rubbers- for drawing long curves
- Set square- a large set square with a 15 angle is useful. Metric grading square can be obtained.
- Fibred pens- used for writing clear instructions on paper pattern
- Paper: brown paper is used for patterns. Parchment or thin card should be used for blocks that are used frequently.
- Coloured pencil . for lining complicated areas.
- Working surface- a flat working surface of 90 by 20cm high is required.
- Toile fabrics- calico or muslin cloth used for making design. For best results; the weight of the calico is as close to the weight of the cloth as possible.

- Pattern notches- this tool marks balance points by snipping out a session of paper pattern
- Cello-tape- for joining paper pattern where applicable
- Tailors chalk- for marking out the final pattern marking to the cloth and making fitting alternation.
- Dressmakers pins- for temporarily holding of paper or work together.
- Trace wheel and carbon paper- for transferring markings especially where double patterns are needed.
- Cutting shears- there are different sizes of cutting shears e.g. the one for cutting notches, paper pattern and other smaller difficult shapes. Do not use the same cutting shear for paper and fabric. This is because such dual use encourages the bluntness of the cutting shears.
- Metric square- for cutting angles.
- Calculator- for ease in computing measurements.
- Pattern weight- this keeps pieces of pattern in position on paper or cloth.
- Stand form or model- for trying on garments
- Pin cushion- for safety in keeping pins.

### **Measurements**

Taking measurements is one of the essential skills in pattern making activities. Igbo and Iloeje (2003) stated that measurements are needed for

choosing pattern size. Taking the key measurements is the first step in determining a pattern size (Shaw, 2000). A good knowledge of measurements is very vital for drafting basic block patterns and for constructing garments and articles. Akubue (2004) observed that some measurements are basic and essential for the construction of every pattern while some are supplement and may be useful when working on a particular design or for a particular figure. To Peake (2000), the basic measurements for drafting soft toys for Whale, Fox, Rabbit, Mouse, Ladybird, Dog, Lion, Tortoise, and Frog are;

**WHALE**

Side body,

Upper tail fluke

Lower tail fluke and

Flipper

**FOX**

Side body,

Inside backleg,

Back sole, and

Front sole

**RABBIT**

Side body,

Arm,

Sole

Head,

Upper tail,

Lower tail,

Inside leg, and

Head gusset

**MOUSE**

Side body,

Base,

Nose and

Ear

**LADYBIRD**

Side body,

Head,

Base and

Spot.

**DOG**

Head and body

Head gusset

Ears

Tails, and

Legs.

**LION**

Back of head

Body-back and side

Front body

Face, and

Legs.

**TORTOISE**

Body

Head

Tail

Legs, and  
Shell scallops

## **FROG**

Base gusset,  
Head,  
Foot,  
Body top,  
Body sides,  
Body front, and  
Tail.

For effective measurements, Igbo and Iloeje (2003) recommended the following principles to be observed while taking measurements.

1. Make sure that the tape is held snugly and tent, but not tightly against the body or article, and parallel to the floor for most circumference and width measurements.
2. The person being measured should wear a smooth close fitting dress, to prevent bulk,
3. Do not measure over many or bulky clothing like cardigans or overcoats.
4. The person measured should stand relaxed when the measurements are being taken.
5. Do not pull or overstretch the tape, as this will reduce the true measurements but allow the tape to run closely over the body or article without dropping.



6. Use a non-stretch tape.
7. Round the measurements up to the nearest even number, as they are simpler to work with.
8. The person should maintain correct posture while being measured.
9. He/she should stand straight but not stiff, not slouching or leaning on one side, as this gives inaccurate measurement.
10. Engage in conversation while your measurements are being taken, as it is difficult to tuck in one's stomach whilst engaged in a conversation.

Certain precautions are pointed out by Mackorhill (2004) to ensure that the measurements are taken accurately.

The precautions are:-

1. Place a tape with an equal amount of tension on the appropriate part to avoid getting inaccurate measurement, which may cause unnecessary amount of fitting and re-cutting after tacking together.
2. Variations from normal posture of the figure such as shoulders, and bent back should be observed before taking measurements.
3. Missing measurement may occur so measurement should be taken sequentially.

4. Note the landmarks for measurement on the soft fleshly body and locate them while measuring.
5. Measurement may be taken on dress if it is closely fitted and also measurement may be taken over foundation garment.

### **Method of Drafting Pattern:-**

A pattern is a plan for making a garment or project. It contains the shapes of the various pieces of a style and gives the directions for making garments or articles. Igbo and Iloeje (2003) described pattern as a piece of paper drafted and cut to sizes and shapes, used for cutting out fabric pieces for sewing dresses or articles. Pattern drafting originated in United States of America in 1863 by Ebenezer Butterick (Agbo 2004). Originally, his idea for a garment was usually sketched, after the first rough sketch has been prepared, the designer shaped the pattern pieces, the pieces were then drawn to actual sizes on paper and cut on a rough material muslins. The Muslin pieces were sewn together and fitted on a model. These patterns may be commercial or drafted. Commercial patterns are drafted patterns made by professional pattern companies or industries. Drafted pattern is the type the dressmaker makes using the body measurements for mass production or for specific individuals. There are different methods of different pattern drafting.

The methods as identified by Igbo and Iloeje (2003) are:-

1. The modeling or draping method

2. The knock off design method
3. Modifying from a set of pattern (grading)
4. The computer-aided design method, and
5. The flat pattern method.

### **The modeling or Draping Method:-**

This involves working directly with a fabric on a model or dress form to make a cloth pattern. It is a method of making patterns, using the art of manipulating a cheap fabric, such as calico or muslin cloth on a dress stand to create a style, (Igbo and Iloeje, 2003). An advantage of this method as indicated by Aldrich (2002) is that the designer can see how the garment will look as the pattern develops.

### **The knock off Design Method:-**

This is a very useful technique, which involves buying the best selling cloth items in a company, ripping off the seams and copying or knocking off the design. It is a way to duplicate the fit as well as the look of a garment that is in vogue or best selling by other companies (Igbo and Iloeje, 2003). This technique is legal because there is no copyright in clothing designs. They further, explained different ways of making patterns using the knock off design technique as follows:-

1. Taking a garment apart at seam lines to copy the shapes.
2. Using muslin and soft lead pencil to rub off the shape of each pattern piece.

3. Using paper and tracing wheel to copy each garment piece and.
4. Using a tape measure to measure simple garment shapes and drafting patterns to these dimensions.

### **Modifying from a set of pattern (Grading):-**

This is used to obtain pattern in other size by increasing the pattern to make larger sizes and decreasing the pattern to make small sizes. Pattern can be modified and graded using the slash-and-spread techniques or the slash-and-over lap technique (Igbo and Iloeje 2003). They further explained that slash-and-spread technique is used to increase sizes while the slash-and overlap technique is used to decrease size. Grading all patterns by hand is a time consuming job and requires a skilled pattern grader. Many apparel manufacturers today grade pattern by computer. A library of grade rules can be developed and entered into the computer, which accurately grades the patterns to desired sizes at the touch of a button (Mackorhill 2004)

### **Computer-Aided Design Method:-**

This is the method by which computers are used in making pattern. Igbo and Iloeje (2003) explained that shapes of cardboard pattern pieces are given X and Y, by a digitizer and entered into a computer which is displayed on a monitor as pattern with shapes. This requires the dressmaker to be computer literate. Aldrich (2002), is of the opinion that

pattern drafting on computer is a process where most of the systems excels on pattern modification or the development of basic styles from blocks or previous patterns.

### **The flat Pattern Method:-**

In this method, the dressmaker uses the body measurements of the customer or the sizes to be mass-produced following instructions to make pattern. Travis (2000) indicated that this method uses accurate measurements taken on a person or a dress form and also measurements from sizing system. Igbo and Iloeje (2003) sees this method as a process of obtaining patterns by working from a set of measurements of a figure, and adhering to a set of instructions. Usually, one block is drafted, and then graded into smaller or bigger sizes (Shaw, 2000). Block is the foundation pattern or a master plan (Igbo and Iloeje 2003). The finished patterns are transferred to muslin or in-expensive fabric. This helps the pattern-maker to see the effects of the block and also to correct faults.

Travis (2000) identified five basic pattern pieces as follows:- bodice front and bodice back, skirt front, skirt back, and sleeve. They also indicated that block is made up of five different patterns thus:-

- ❖ The front bodice
- ❖ The back bodice
- ❖ The basic skirt front
- ❖ The basic skirt back, and

❖ The basic sleeve.

Peake (2000) noted that in soft toy making, each pattern piece is identified by the name of the animal or doll and by the name of the relevant part of the body. This study will adopt flat method of pattern development using essential measurements for soft toys production.

**Pattern Markings and Symbols:-**

Pattern markings are the lines, dots and other symbols printed on a pattern to provide information (Igbo and Iloeje 2003). They give directives on how a dress-maker will use the patterns. According to Peake (2000) soft toys pattern markings and symbols are as follows:



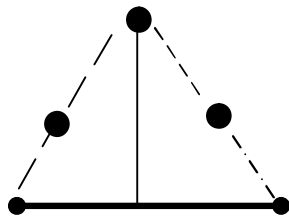
Place on straight grain of fabric



Place on fold of fabric



Place on the diagonal grain of fabric



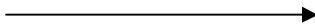
The centre line shows fold of dart



Cutting line



Fold line



direction for stroke of pile or  
straight grain of fabric



Stitching line for seams and darts



Guide line for top stitching,  
gathering, and elastic



Clip seam allowance



Position of eye



Position of parts in seam

### Essential, Equipment and Materials for Making Soft Toys:-

Many equipment are necessary for carrying out soft toys pattern drafting. According to Peake (2000), such equipment include:

1. Pliers (Snipe nosed or electricians Pliers): They are used for pulling needles through bulky areas and for joining toys.
2. Stuffing Tools: Most shapes can be stuffed by hand, using one's fingers instead of stuffing sticks, but shapes like dolls fingers require special tools to ensure that the filling reaches right down to the ends. A narrow stuffing stick can be made from dowelling. The end should be shaped like a pencil tip, to make it easier to use. Some toymakers use pencils, knitting needles, chopsticks and even the points of scissors, all of which are useful aids provided that care is taken not to puncture the fabric.
3. Paper: Patterns are traced onto thin paper or tracing paper and then glued onto card to make card patterns.
4. Card: Card patterns are more durable than paper and provide a firm edge around which to draw. They are essential for cutting fur fabric because paper patterns tend to buckle on fur. Card patterns also eliminate the need for pins, which might get lost in the toy and become dangerous.
5. Pencils: Pencils are used for patterns. Felt tipped pens should not be used as the ink can easily smudge on fur. Red pencil is a useful alternative. 2B Pencil or light coloured furs and a white or yellow dressmaker's chalk should be used on dark furs.
6. Pins: The use of pins should be kept to a minimum to avoid a stray pin remaining in a toy and becoming a potential source of danger. Pin with



coloured heads should be used so that one can keep count of them easily.

7. Needles: Medium-sized sewing needles are used for hand-sewing seams, while short, finer needles are needed for embroidering doll's faces. Long darning needles are needed for shaping toys and for sewing on heads and limbs with strong thread.
8. Glue: A thin coat of latex fabric adhesive will glue paper to card when making patterns and it will also stick felt to felt. A clear, all purpose glue which dries colourless yet remains flexible can be used to stick on small felt fabric features.
9. Fabrics: Colour, texture and pattern contribute enormously to the appeal and success of a toy. In some instances colour and pattern actually identify the animals example, blue whale and lady bird, zebra, while other animals can be made in colours of one's choice.
10. Fur fabrics: Fur fabrics are very popular with toymakers because they come in such a variety of pile depths and colours, enabling a wide range of animals to be made. Pile can be short, medium or long, with wonderfully soft textures. Plain colour are plentiful and there are also realistic that toys made with them seem very life-like.
11. Felt: The very first commercially produced soft toys were made of felt and this fabric has remained a firm favourite with toymakers thereafter. A wide range of colour is available in small squares, so felt is

frequently recommended to contrast with fur for lining ears, and making soles, paws, beaks and eyes.

12. Fleece: Fleece is used to make children's dressing gowns and because of its softness, the washability, is a useful substitute for felt when lining ears and making the soles of paws and feet.
13. Velour: Velour can be made from cotton, wool or a mixture of fibres. Again, it is a useful substitute for felt when a washable contrast is needed.
14. Calico: Calico, a traditional doll-making fabric is a closely woven fabric and toys made from it can be stuffed firmly. Calico can be coloured to make darker skins by soaking it in an infusion of tea bags in water with a little vinegar added.
15. Stockinette: Stockinette is a knitted stretch fabric which can be used for making toys with rounded cheeks and chubby fingers. This is achieved by shaping with a needle.
16. Cotton and Cotton Lawn: For small dolls particularly, fabrics with patterns of the correct scale should be selected.
17. Interfacing: Soft, iron-on, non-woven interfacing will give body thin felt and will control the amount of stretch when used as a backing for stockinet.
18. Threads: Sewing threads for seams should match the fabric. Synthetic threads for man-made fabrics such as furs, and cotton thread

for natural fabrics should be used. Alternatively, an all-purpose thread, which can be used for both types of fabric should be used. All-purpose threads are cotton-covered polyester threads that combine strength with sheen and are suitable for both heavy and lightweight fabrics as well as stretch knits without snapping.

19. Fillings: Fillings for toy-making can range from lumpy foam chips to fine, resilient polystyrene granules or from heavy, cut-up waste fabrics to non-resilient kapok. The choice of filling is very important because it influences the shape, weight and texture of a toy.

### **Facial Features:**

The character of toys is largely determined by the choice and positioning of facial features. Happiness, for instance, is conveyed by a smiling mouth, while youthfulness can be indicated by positioning the eyes slightly lower down and further apart on face. This is easier to do on dolls than on animals, although larger eyes can often indicate youthfulness in an animal (Pixar 2005), Peake (2000) noted that commercially-made eyes range in size from 6mm to 24mm (1/4-1in) and there are several colours to choose from while commercially-made safety noses are either black and designed for animals such as dogs, bears, and seals or they are red balls, which are more suitable for clowns.

## **Concept of Validity**

Every test should possess two important qualities . validity and reliability. Validity is a more important characteristic than reliability. Validity according to Uzoagulu (1998), is the appropriateness of an instrument in measuring what is intended to measure. Okoro (2002), noted that a test with high validity will ensure accurately the particular qualities it is supposed to measure. A number of concepts are involved in a discussion of validity. Osuala (2001), identified four types of validity . predictive validity, concurrent validity, content validity, and construct validity. On the other hand, Okoro (2002) recognized five types of validity . predictive validity, concurrent validity, content validity, internal validity and construct validity.

### **Predictive validity**

Predictive validity according to Okoro (2002) is concerned with degree to which success or failure in a particular test can be used to predict success or failure in a future test or activity. One method of establishing predictive validity is to administer a test to a group of students and sometime in future administer another test to the same group of students. The two sets of scores obtained are correlated to determine if there is any relationship between them. If the correlation coefficient is high, then the original test is able to predict performance in the subsequent test. The first test will be said to have predictive validity.

Ukwe (2004), observed that often, predictive validity has more relevance in comparing performance on a test with actual performance on the job. Educational programmes are established to equip individuals with certain information, skills, and modes of behaviour so that they could perform well in their place of work and live useful productive lives in the society. If students who do well in their final examinations are the same students who do well in the place of work and in society generally, the final examination could be said to have predictive validity because, it has predicted accurately performance of students in after school occupation and engagements.

### **Concurrent Validity**

Concurrent validity is similar to predictive validity, except that the two tests are administered in quick succession. Concurrent validity refers to the extent to which performance in one test or activity can be used to predict performance in another test or activity, taking place, not in the future, but at the present time (Okoro 2002). Concurrent validity attempts to answer the question: Are two tests measuring the same thing? Will students who perform well in test A also perform well in test B. If results obtained by the administration of test A to a group of students correlates highly with scores obtained when test B is administered, then the tests have concurrent validity.

## **Construct Validity**

A construct, according to Uzoagulu (1998) is a postulated attribute that a certain individual possesses. Such as anxiety, intelligence, attitude, creativity, endurance, etc. Construct validity is the most difficult type of validity to understand and measure. Wiersma in Uzoagulu (1998), wrote regarding construct validity.

*The concurrent validity... can be examined by a single statistics, the correlation coefficient between the test scores and the criterion scores. Not so with construct validity. It involves a more long-term procedure including imagination, reasoning, observation and their interactions. (p. 195).*

Construct validity involves establishing the real meaning of scores obtained in a test to determine how the scores are related to actual behaviours. If a test is designed to measure intelligence, such a test would yield a set of scores if administered to some students. The test has construct validity if we can establish that there is a relationship between performance in the test and the actual intelligence behaviour of the tested students.

## **Internal validity**

Internal validity is concerned with the analysis of students responses to individual items in test to ensure that each item in the test is measuring what the whole test is measuring. If a test is measuring a particular quality, all the item in the test should be measuring the same thing. Any item that is not measuring what other items are measuring is not

valid and its lack of validity lowers the validity of entire test. Okoro (2002), noted that if each item in a test is measuring what the entire test is measuring, then any student who does well in the whole test should also do well in each of the items that make up the test. Determination of internal validity involves administering a test to a group of students, scoring the test to obtain a score for each item and for the test as a whole, and correlating the distribution of total scores with the scores in each of the items. A high correlation establishes internal validity.

### **Content validity**

An instrument has content validity, if it represents the content areas to be evaluated. Nkpa in Uzoagulu (1998) defined content validity as the extent to which the items of an instrument are representative of the content and behaviours specified by the theoretical concept being measured. The validator is asked to check whether the instrument (e.g. test items, questionnaire, interview schedule etc) contains all the aspects of the subject that should be included in the test or the questionnaire. If there are five topics, sections, branches, features or parts, the researcher must ensure that the five topics are well represented in the instrument. Content validity can be estimated by comparing the sample of the items with the content and behaviours which they should represent. If the sample

of the items covers all aspects of the content and behaviours, then a high degree of content validity may have been achieved.

To carry out content validity, send the instrument to validators and specify what they should do. The more validators that are involved, the better for the instrument. The validators should be the experts in the area who should have the idea of what should be included and what should not be included. The research questions and hypothesis (if any) should be made available to the validators. This type of validation should be used to validate the instrument for this research work.

### **Review of Related Empirical Studies:-**

It is noteworthy that there is paucity of research in soft toys pattern drafting even though some studies have been carried out in relation to pattern drafting generally.

Dike (2007), carried out a study on strategies for enhancing the practices adopted by parents in the provision of safe toys for children in Anambra state. Three hundred and Twenty (320) parents who were teachers from the six educational zones in the state were used as sample for the study. Questionnaire was used for data collection. The researcher used both descriptive and inferential statistical tools to analyze the data. Among the findings are:

- i. Parents are not aware of the factors to consider in the provision of safe toys for their children.



- ii. Parents encounter many problems in the provision of safe toys for their children.

Hence, the researcher suggested ways to enhance the practices parents adopt in the provision of safe toys for their children. Among the suggestions are:

- i. Parents should follow the age grading guidelines of consumer product safety commission in providing toys for children.
- ii. Toys should be used, maintained, and stored correctly.
- iii. Parents should keep older children's toys out of the reach of younger kids particularly when safety is an issue.

This study is related to the present study in that it dealt on toys. It differs from the present study in the sense that it did not develop patterns for soft toys.

Bergen, Capjack, Mckenna, Richard (1996), investigated the unique clothing needs of neonates under hospital care. The researchers applied the functional design process criteria of comfort, safety, adjustability, accessibility, aesthetics and production to evaluate prototype garments for pre-mature babies. Findings include.

- i. There were definite need for clothing in a range of sizes with special adjustments for premature infants in the intensive care of hospitals.

- ii. Clothing, designed especially for neonates in the intensive care setting should provide a pacifying micro-environment to reduce heat loss, meet the medical procedure required in the intensive care unit as well as provide a sense of security for the baby.

The difference in this study and the present study is that this study designed clothing for the neonate while the present study is on soft toy patterns.

Iloeje (1995), carried out a study on the establishment of average body measurement and development of block patterns for female adolescents in Enugu State. The population composed of all Junior Secondary Students in fifty five Girls Secondary Schools in Enugu State of Nigeria. The purpose of the study was to establish average body measurements of female adolescent students of 12, 13, and 14 years of age for use in drafting block patterns for them. Data was collected using measurement chart and questionnaire. The researcher analyzed the data using Mean and Analysis of Variance (ANOVA). A sloper comprising of front and back pieces for the bodice and sleeve pattern was drafted for the target group. These pattern pieces were transferred to fabrics and the toile were tried on standard figure to obtain fit. This study share similarities with the current study in the area of pattern drafting but differs in the problem of the study and study group.

Anikweze (2003) conducted a research on the development and validation of dress pattern for women with figure problems in Enugu State. A sample size of 90 women with observable figure problems categorized under small, medium and large were randomly selected for the study. Measurement of 13 parts of the body were taken with a non-stretch tape. The mean body measurements of the sample of women with figure problems were established in three categories of small, medium and large. Obtained data were used to draft basic blocks for bodice, sleeve, and skirt. The toile was worn by models and judges assessed the fit. The researcher developed two basis of fitting standard guide for women. The obtained data from assessment instrument were analyzed using descriptive statistics, mainly mean and percentages. Findings from the study indicated that the widest distributions of values were found with figure problem of bust and hips. The average rating in the clothing fit by judges was 76.5% with a range of 7.8 implying satisfactory fit.

This study is related to the present study, which has to develop and validate patterns. It however differs from it in that the patterns were for women with figure problems.

Igbo (1989) carried out research on the development and evaluation of task instruction sheet for teaching selected clothing construction skills to senior secondary school students in Anambra State. The researcher used both the teachers and students in secondary schools

for her research. The researcher used questionnaire to obtain information from teachers and used instruction sheets to elicit information from the students. Result from the study showed that tasks and skills such as pattern selection, pattern drafting, choosing commercial patterns, performing pattern adaptations, transferring pattern marks, cutting out pattern pieces, among others are lacking in the area of study.

The study is not related to the present study because it has nothing to do with pattern drafting and children. However, it identified pattern selection, pattern drafting, transferring pattern marks, and cutting out pattern pieces, among others as skills that are lacking in the area of study.

### **Summary of Literature Review**

Literature reviewed highlighted theories of child growth and development. They include; Erickson's psychosocial theory, Jean Piaget's cognitive development, Gessell's theory on physical growth and motor development and play theories. Literature reviewed also show that play is a natural activity for every healthy young child. It provides many opportunities for children to use toys to learn and grow. There are several equipment and materials for pattern drafting such as metric tape measure, pencil, metric stick, french curve rubbers, set square, fibred pens, paper, coloured pencil, working surface, toile fabric, pattern notcher, cello-tape, and tailor's chalk.

Others are dressmakers pins, tracing wheel and carbon paper, cutting sheers, metric square, calculator, pattern weight, stand form or model and pin cushion.

Literature revealed that measurements are needed for drafting pattern and that some measurements are basic and essential for construction of every pattern while some are supplementary. Basic measurements for drafting soft toys as well as principles to observe while taking measurements are stated. Literature show that there are several methods of pattern drafting such as the modeling or draping method, the knock off design method, modifying from a set of patterns (grading), the computer-aided design method, and the flat pattern method. Patterns marking and symbols as well as essential equipment and materials for making soft toys were also dealt with. The review also discussed concept and types of validity.

Some studies have been conducted on providing safe toys for children, developing instruction sheet for teaching clothing construction skills, pattern drafting for neonates, female adolescence, women with figure problems but non on soft toys. It is worthy to note that soft toys are important part of children's play materials. They encourage the development of mental and physical skills, stimulate children's imagination. Soft toys also bring out children's hidden talents, for some children use them as classroom pupils, some as subjects of admiration and

conservation of wildlife. In other words, they educate and amuse children. Unfortunately, soft toys are not locally produced and commercial patterns for making them are not available. Also parents and teachers lack information and knowledge on how to make these soft toys for use by children. Few parents who are able to provide such toys for their children do so by purchasing used, imported soft toys often smuggled into the country and sold at exorbitant prices. If Nigerian children are to benefit from the use of soft toys, there is need for locally produced patterns. This study is then undertaken to develop and validate patterns for production of soft toys.

## **CHAPTER THREE**

### **METHODOLOGY**

This chapter describes the design of the study, area of the study, population for the study, sample and sampling technique, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection and method of data analysis.

#### **Design of the Study**

This is a research and development study (R&D). Research and Development is an industry-based development model in which the findings of research are used to design new products and procedures, which then are systematically field-tested, evaluated, and refined until they meet specified criteria of effectiveness, quality, or similar standards (Gall, Gall, and Borg 2007). The steps adopted in carrying out the study are as follows:

1. Developing soft toys measurement chart that were used to collect data.
2. Actual taking of measurement of the soft toys for soft toy making.
3. Drafting of block soft toy patterns (for Dog, Fish, Rabbit, Mouse and Lion).
4. Constructing the different identified soft toys. (Dog, Fish, Rabbit, Mouse and Lion).
5. Field testing for safety and shape of the block patterns drafted.

6. Correcting and transferring the correct pattern on fresh paper.

### **Area of the Study**

The study was carried out in Anambra state of Nigeria. Anambra state is one of the states in South-East geo-political zone of Nigeria. It is made up of six educational zones which are Aguata, Awka, Nnewi, Ogidi, Onitsha and Otuocha zones. There are 438 government approved private nursery schools in Anambra state. (State Ministry of Education Statistics 2004).

### **Population for the Study**

The population for the study constituted teachers in all the government approved private nursery schools in Anambra State who are mothers. There are 1,514 such nursery school teachers in the area of the study (Anambra State Ministry of Education).

Distribution of the population for the study is shown in table one.

**Table 1: Population Distribution**

S/NO	Zone	Number of private nursery schools	Population of teachers that are mothers
1	Aguata	48	183
2	Awka	60	205
3	Nnewi	96	312
4	Ogidi	98	361
5	Onitsha	130	435
6	Otuocha	6	18
	Total	438	1,514

Source: (Anambra State Ministry of Education)



### Sample for the Study

Purposive sampling technique was adopted in selecting teachers who are mothers from the six educational zones namely; Aguata, Awka, Nnewi, Ogidi, Onitsha and Otuocha zones. Purposive sampling technique is suitable for this study because according to Nworgu (1991), in purposive sampling, specific elements which satisfy some pre-determined criteria are selected.

Random sampling was used to select 12 schools from Aguata zone, 15 schools from Awka zone, 24 schools from Nnewi zone, 25 schools from Ogidi zone, 33 schools from Onitsha zone and 2 schools from Otuocha zone.

In other words 25% of the schools in all the zones were randomly drawn. According to Nkemakolam (1995), when there are many hundreds that make up the population, 25% was used as sample size. The sample distribution is shown on table II

Table II: Sample Distribution

S/N	Zone	Number of schools to be sampled.	Sample size
1	Aguata	12 schools	46
2	Awka	15 schools	51
3	Nnewi	24 schools	78
4	Ogidi	25 schools	90
5	Onitsha	33 schools	109
6	Otuocha	2 schools	5
	Total	111 schools	379

## Instruments for Data Collection

Three types of instruments were developed for data collection.

These are;

1. Soft toys measurement chart
2. Toiles constructed from five drafted soft toys for children.
3. Assessment criteria chart for respondents.

**1. Measurement Chart:** The measurement chart was for recording soft toys measurements. The soft toy measurement chart included the needed measurements for drafting the five soft toys patterns . Dog: head and body, head gusset, ear, tail, and leg. The measurements needed for Fish: side body, upper fluke, lower fluke, and flipper. For rabbit - side body, arm, sole, head, upper tail, lower tail, inside leg and head gusset. For mouse . side body, base, nose and ear. Measurements required to draft Lion: back of head, body-back and side, front body, face and leg.

**2. Toiles that were constructed from the five soft toy patterns:** The five soft toy patterns that the researcher drafted were used to construct five basic soft toys (Toiles).

**3. Assessment Criteria Chart:** Assessment criteria chart was used to evaluate the safety and shape of the pattern pieces that were drafted. The chart comprised of 5 point scale of 5, 4, 3, 2 and 1 representing strongly agree, agree, undecided, disagree, and strongly disagree respectively.

Mean of 3.50 and above was considered as agreement while those below 3.50 was regarded as disagreement for the five point scale.

### **Validity of the Instrument**

Three instruments were used to collect data for the study. Soft toys measurement chart, soft toy toiles constructed from pattern pieces that were drafted, and the assessment criteria chart. The soft toys measurement chart was used by the researcher to take soft toys measurement from the five soft toys. This was used to construct the soft toy toiles. The assessment criteria chart was used by the respondents to evaluate the safety and shape of the patterns. The three instruments were face validated by three clothing experts from University of Nigeria, Nsukka, to make sure that they measured what they are expected to measure. A three-point validation scale of very relevant, relevant and irrelevant representing 3,2, and 1 respectively were used.

### **Reliability of the Instrument**

The assessment criteria test chart and the toiles constructed from five drafted soft toys by the researcher were subjected to trial testing using teachers that are mothers in one nursery school in the area of the study but not involved in the study. The scores were subjected to Cronbach Alpha method of testing internal consistency.

The inter-item correction was 0.85. This index is reasonably high enough to consider the instrument reliable.

### **Method of Data Collection**

This involved the actual taking of soft toys measurements, drafting, cutting out, assembling the patterns, evaluating the safety and shape, correcting and producing final pattern pieces. The data were collected following these phases.

- 1 Taking of soft toys measurements
- 2 Drafting soft toy patterns
- 3 Constructing/assembling and stuffing of soft toy patterns.
- 4 Validating the safety toy patterns for safety and shape.
- 5 Producing the final pattern pieces.

**Phase 1:** Taking of soft toys measurements. The soft toys measurements were taken by the researcher following the guide lines of taking measurement as stated by Igbo and Iloeje (2003). All measurements were taken and recorded on the Soft Toy Measurement Chart (STMC).

**Phase 2:** Drafting soft toy patterns. Five soft toy patterns were drafted using the required measurements. Required soft toys measurements that were used are;

Dog . Head and body, head gusset, ears, tail, and leg.

Fish . side body, upper tail fluke, lower tail fluke, and flipper.

Rabbit . Side body, arm, sole, head, upper tail, lower tail, inside leg, and head gusset.

Mouse . Side body, base, nose and ear.

Lion . Back of head, body-back and side, front body, face and legs.

The materials that were needed to draft the soft toy patterns are; paper . brown and cartridge paper, pencil, tape, ruler, flat working surface, pen for recording measurements and cleaner. The process of drafting pattern were followed for the five soft toys. The patterns were drafted following the guide line stated by Peake (2000). Paper marking and allowances were added. Seam allowances of  $\frac{1}{4}$  inch were added to all edges.

**Phase 3:** Constructing/Assembling and stuffing soft toy patterns.

Five soft toys were drafted by the researcher, which were used to make soft toys for children. The fabric that was used to construct the soft toys were calico while other equipment such as sewing machine, scissors, tape measures, pin and sewing thread were also used. The pattern layout were cut out and pattern marking transferred from paper to fabric by use of tracing wheel and carbon paper. The toiles were constructed and stuffed following the principles for stuffing soft toys as stated by Peak (2000).

**Phase 4:** Validating the Soft toy patterns for safety and shape.

The five soft toys were constructed to be in natural form. The assessment charts were used to evaluate the safety and shape of the five soft toys.

Final pattern pieces were drafted based on respondents' assessments, thereby obtaining the standard block pattern for the five soft toys.

### **Method of Data Analysis**

Means were used to answer the six research questions. Research question one (1) sought to determine the parts of soft toys that will be used in drafting five soft toy patterns. The measurements needed for drafting soft toy patterns were established. Research question two (2) sought to determine how these parts of the soft toys can be measured. To answer the question, the actual measurements of the five soft toys were taken and the measurements were recorded on STMC. To answer research question three (3), which sought to establish measurements for drafting soft toy patterns for children, the mean of the measurements were established for the five soft toys. For research question four (4), which sought to develop different five soft toy patterns, the measurements that were obtained were used to draft five soft toy patterns following the principles for soft toy patterns drafting as stated by Peake (2000). To answer question five (5), which sought to true the pattern pieces developed, the drafted pattern pieces were assembled following the method for pattern assembling to make the toile.

In analyzing data collected from research question six (6) which sought to validate the pattern pieces drafted, the toiles were validated by the respondents. The mean of the evaluators score on assessments

criteria chart were used to draft soft toy patterns for children. This chart have 5 options, which were rated thus:

Strongly agree	-	5
Agree	-	4
Undecided	-	3
Disagree	-	2
Strongly disagree	-	1

Any item with a mean that is equal to 3.50 and above were regarded as satisfactory, while those below 3.50 were regarded as unsatisfactory. The evaluator's score formed a parameter for drafting the final pattern, which served as block patterns for soft toys for children in Anambra State.

## **CHAPTER FOUR**

### **PRESENTATION AND ANALYSIS OF DATA**

This chapter deals with presentation and analysis of data collected. The data were presented and analyzed based on the research questions. All measurements in the work were carried out in inches.

#### **Research Question I**

What part of the soft toys (Dog, Fish, Rabbit, Mouse and Lion) should be used in drafting their patterns?

The answer to this research question is in table 1



**Table 1: Parts of the Soft Toys to be used for Drafting their Patterns.**

S/N	SOFT TOY	PARTS FOR DRAFTING	$\bar{X}$	REMARK
1	<b>Dog</b>	Head and body,	4.00	Satisfactory
		Head gusset	3.97	Satisfactory
		Ear	3.69	Satisfactory
		Tail	4.09	Satisfactory
		Leg	3.69	Satisfactory
2	<b>Fish</b>	Side body	4.55	Satisfactory
		Upper tall fluke	4.12	Satisfactory
		Lower tall fluke	3.64	Satisfactory
		Flipper	3.81	Satisfactory
3	<b>Rabbit</b>	Side body	4.55	Satisfactory
		Arm	3.87	Satisfactory
		Sole	4.00	Satisfactory
		Head	4.06	Satisfactory
		Upper tail	3.68	Satisfactory
		Lower tail	3.53	Satisfactory
		Inside leg	3.81	Satisfactory
		Head gusset	3.96	Satisfactory
4	<b>Mouse</b>	Side body	4.11	Satisfactory
		Base	3.64	Satisfactory
		Nose	3.71	Satisfactory
		Ear	4.01	Satisfactory
5	<b>Lion</b>	Back of head	3.81	Satisfactory
		Body . back and side Front	4.47	Satisfactory
		body	4.31	Satisfactory
		Face	3.61	Satisfactory
		Leg.	4.12	Satisfactory

The table showed that all the body parts listed for each soft toy was needed for the drafting since each scored a mean of 3.50 and above.

## Research Question II

How can the different parts of the soft toys be measured?

The answer to this research question is in Tables 2 to 6

**Table 2: How Different Parts of Dog Toy Are Measured**

<b>SOFT TOY</b>	<b>PART TO MEASURE</b>	<b>HOW TO MEASURE</b>	<b><math>\bar{X}</math></b>	<b>REMARK</b>
Dog	Head and body	Place a tape measure from the head of the toy. measure down to the body for the length, also measure round the largest part of the body for the width.	3.97	Satisfactory
	Head gusset	Measure length and width	4.50	Satisfactory
	Ear	From the end of the ear, measure down lengthwise. Measure round for the width.	4.50	Satisfactory
	Tail	Measure lengthwise and width.	4.60	Satisfactory
	Leg	Measure from the joining of the leg to the toe. Then measure from the toe to the sole.	4.10	Satisfactory

The results in table 2 above showed a mean range of 3.97-4.60. This means that the respondents were satisfied on how different parts of the Dog could be measured.

**Table 3: How Different Parts of Fish Toy are Measured**

<b>SOFT TOY</b>	<b>PART TO MEASURE</b>	<b>HOW TO MEASURE</b>	<b>X</b>	<b>Remark</b>
Fish	Side body	Place a tape measure on the side of the fish and measure straight for the length and round for the width.	4.20	Satisfactory
	Upper tail fluke	Measure the upper tail fluke both lengthwise and width.	4.07	Satisfactory
	Lower tail fluke	Measure both length and width.	3.60	Satisfactory
	Flipper	Measure length and width	4.12	Satisfactory

Based on the data presented in table 3 above, the respondents had mean range of 3.60 . 4.20. This means that the items were how to measure different parts of fish for making soft toy.

**Table 4: How different parts of Rabbit Toy are measured**

<b>SOFT TOY</b>	<b>PART TO MEASURE</b>	<b>HOW TO MEASURE</b>	<b>X</b>	<b>Remark</b>
Rabbit	Side body	Measure lengthwise and round of the body.	4.57	Satisfactory
	Arm	Measure length and width.	4.05	Satisfactory
	Sole	Measure for the length and width	4.20	Satisfactory
	Head	Measure the longest part for length and the widest for width.	4.80	Satisfactory
	Upper tail	Use the tape measure and measure the upper side of the tail lengthwise and round	4.54	Satisfactory
	Lower tail	Use the tape measure and measure the lower side of the tail lengthwise and round.	3.84	Satisfactory
	Inside leg	Measure this part of the body lengthwise and round	4.63	Satisfactory
	Head gusset	Measure length and width	4.51	Satisfactory

The analysis in table 4 revealed that the respondents were satisfied in all the items. They had a mean range of 3.84 to 4.80.

**Table 5: How Different Parts of Mouse Toy are Measured**

<b>SOFT TOY</b>	<b>PART TO MEASURE</b>	<b>HOW TO MEASURE</b>	<b>X</b>	<b>Remarks</b>
Mouse	Side body	Measure the length and the width of the leg	4.00	Satisfactory
	Base	Measure the length and the width of the base.	4.63	Satisfactory
	Nose	Use the tape measure and measure this part lengthwise and round	3.77	Satisfactory
	Ear	Measure lengthwise and round.	3.81	Satisfactory

The analysis in table 5 showed that the respondents had a mean range of 3.77 to 4.63. It therefore means that these descriptions are how to measure parts of mouse toy.

**Table 6: How different parts of Lion Toy are Measured**

<b>SOFT TOY</b>	<b>Part to measure</b>	<b>How to measure</b>	<b>X</b>	<b>Remark</b>
Lion	Back of head	From the back of the head, measure down to the lower side of the body for length. Measure round the largest part of the body for width.	3.88	Satisfactory
	Body . Back and side.	Measure from neck down the lower part of the body for length and round for width.	4.51	Satisfactory
	Front body.	Measure from neck down the lower part of the body for length and round for width	3.74	Satisfactory
	Face	Measure lengthwise and round.	3.91	Satisfactory
	Leg	Measure the length and the width of the leg down to the toe.	4.13	Satisfactory

The results in table 6 above showed a mean range of 3.88 to 4.51. This means that these items are how to measure different parts of a lion toy

**Research Question III**

What are the measurements of the parts of the soft toys that can be used for drafting soft toys?

To answer this research question, measurements of the five soft toys were taken as shown in table III.

**Table 7: Mean Responses of Measurements of the Parts of the Five Soft Toys to be used for Drafting Their Patterns.**

Variables	Length	$\bar{X}$	Width	$\bar{X}$	Remarks
<b>Dog</b>					
Head and body	17ins	3.60	13ins	4.48	Satisfactory
Head and gusset	4ins	4.30	8 ½ ins	3.92	Satisfactory
Ear	9 ½	4.12	5 ins	4.36	Satisfactory
Tail	10ins	4.33	6ins	4.00	Satisfactory
Leg	10ins	3.70	6ins	4.32	Satisfactory
<b>Fish</b>					
Side Body	8 ½ ins	3.85	4ins	4.56	Satisfactory
Upper tail fluke	6 ins	3.55	2 ½ ins	3.62	Satisfactory
Lower tail fluke	4 ins	4.65	2 ½ ins	3.88	Satisfactory
Flipper	4 ins	4.30	2ins	3.68	Satisfactory
<b>Rabbit</b>					
Side Body	8 ¼ ins	4.65	6ins	4.48	Satisfactory
Arm	5 ins	4.30	2ins	3.69	Satisfactory
Sole	4 ins	4.04	2 ½ ins	4.12	Satisfactory
Head	4ins	4.15	5 ½ ins	4.81	Satisfactory
Upper tail	3 ins	3.82	2 ½ ins	4.44	Satisfactory
Lower tail	3 ins	3.90	2 ½ ins	3.76	Satisfactory
Inside leg	4 ½ ins	4.00	6 ins	4.28	Satisfactory
Head gusset	8 ins	4.61	2½ ins	4.12	Satisfactory
<b>Mouse</b>					
Side body	4 ins	4.02	5 ½ ins	4.56	Satisfactory
Base	6 ins	4.44	3 ½ ins	4.36	Satisfactory
Nose	2 ½ ins	3.96	2 ½ ins	3.72	Satisfactory
Ear	2 ½ ins	3.82	2 ½ ins	3.88	Satisfactory
<b>Lion</b>					
Back of head	11 ins	4.15	7 ins	3.88	Satisfactory
Body-back and side	11 ins	4.22	7 ins	4.63	Satisfactory
Front body	7 ins	4.01	4 ½ ins	4.48	Satisfactory
Face	5 ins	4.30	4 ins	4.74	Satisfactory
Leg	10 ins	3.91	6 ins	3.84	Satisfactory

Based on the data presented in table 7 above, the respondents had a mean range of 3.55 to 4.65 for length and 3.62 to 4.81 for width respectively. This means that the respondents were satisfied with the measurements obtained for drafting the toy patterns.



## **Research Question IV**

How can the blocks for soft toy patterns for children be developed?

To answer this research question, the measurements for each toy were used to draft basic soft toy patterns. Therefore, five toys patterns were drafted. This is shown figures I-V and the description of method for drafting each toy.

### **Drafting of Dog soft toy pattern pieces**

The measurements for each part of Dog toy were presented in table 7. These were used to draft basic patterns for the Dog soft toy.

**Figure I**  
**Dog soft toy Pattern prices**

**Procedure for drafting:****Head and body**

1. Start from left hand side of the drafting paper call it A. from A measure a straight line 17ins call the other end B.
2. From A measure 13 ins down and call it C.
3. From B measure 5 ins down and call it D
4. From D measure 10ins straight towards A and C and call it E.
5. From E measure 8 ins down to be in the same line with C and call it F.
6. Join with curves as seen in figure I

**Head gusset**

1. Make a point at the center of the paper and call it A. From that A measure straight down 4 ins and call it B
2. Mark the center of A and B and call it C
3. From C towards right, measure 5 ½ ins and call it D.
4. From C towards left, measure 3 ins and call it E
5. Join D to A and D to B
6. Draw a straight line A towards E and from B towards E, call them F & G.
7. Join A to E and B to G with curves as in figure I. Then join F and G.

**Ear**

1. Make a straight line lengthwise 9 ½ ins, call ends A and B

2. Measure across the two ends and call them C and D forming a rectangle.
3. Follow figure I above and curve.

### **Tail**

1. Draw a straight line length wise 10 ins call the top A and down B
2. From A, measure 2 ins down call it C.
3. From C measure 3 ins each to the left and right, Call the D and E.
4. Join A to D and A to E with curve as in figure I
5. Join B to D and B to E with curve as in figure I

### **Leg**

1. From A draw a straight line length wise 10 ins call it B
2. From A draw a straight line towards right 6 ins and call it C
3. Join B and C with curve
4. From B measure 3 ins towards A and curve as in the figure above.

### **Drafting of Fish soft-toy pattern Pieces.**

The measurement for each part of fish toy patterns were presented in table I. These were used to draft basic patterns for the fish soft toy.

**Figure II**  
**Fish soft toy pattern pieces**

**Procedure for drafting:****Side body**

1. Draw a vertical line measuring  $8 \frac{1}{2}$  ins call it A and B
2. From A measure a slant curve of 4 ins to the left and call it C
3. Measure another curve from C down as it is in the pattern.
4. Curve the lower tail fluke down

**Upper tail fluke**

1. Obtain a length of 6 ins call A and B
2. Obtain a width of  $2 \frac{1}{2}$  ins call C and D
3. From C make curves to A and B.
4. From D also make curves to C as it is in figure 2

**Flipper**

1. Draw a straight line measuring 2 ins lengthwise. Call top A and down B.
2. From A make a curve measuring 4 ins as in figure 2 and call it C.
3. From B mark a straight line of  $\frac{1}{2}$  ins towards the right call it D.
4. From D make another curve to join C as in figure 2.

**Drafting of Rabbit soft toy pattern pieces**

The measurements for each part of rabbit toy were presented in table I. These were used to draft basic patterns for the rabbit soft toy.

**Figure III**  
**Rabbit soft toy pattern pieces**





**Procedure for drafting:****Side body**

1. Measure a straight line of 6 ½ ins call A and B
2. From A towards right, measure a straight line of 3 ins and call it C.
3. From C make a curve line down 4 ½ inches and call D
4. From B make double curves down as in figure 3 of 1 ½ ins and call E.
5. From D make double curves down of 4 ½ inches as in figure 3 and call F.
6. Join E to F with a slant curve.

**Arm**

1. Curve two lines of 5ins by 2 ins as in figure 3.

**Sole**

1. Make an oval shape of 4 ins length and 1 ½ ins width as in figure 3.

**Head**

1. Make a pattern of 4 ins length and 5 ½ ins width following the shape on figure 3.

**Upper tail/lower tail**

1. Make a curve circle as in figure 3 of 3 ins length and 2 ½ ins width.

**Inside leg**

1. Make a straight line of 6 ins width for the base and call A and B
2. From B make 4 ins of the line towards A and call it C.
3. From C, Draw a straight line up of  $4\frac{1}{2}$  ins and call D.
4. From B make a curve of  $1\frac{1}{2}$  ins up and call E.
5. From D, make a slant curve to join E.
6. From D make double curves to join A.

**Head gusset**

1. Draw a straight line of 8 ins length call A and B.
2. Divide A and B into 2 and call the center C
3. From C measure  $1\frac{1}{4}$  ins to both left and right call them D and E.
4. From A make curves to both left and right of 2ins down. Then another two curves to join B with an angle point.

**Drafting of Mouse soft toy pattern pieces**

The measurements for each part of mouse toy were presented in table I. These were used to draft basic patterns for the mouse soft toy.

**Figure IV**  
**Mouse soft toy pattern pieces**

## **Procedure for drafting:**

### **Side body**

1. Measure a straight line length wise of 4 ins.
2. Make a curve of  $5 \frac{1}{2}$  ins width and call A and B
3. Make curves as in figure 4.

### **Base**

1. Make an oval like shape of 6 ins length and  $3 \frac{1}{2}$  width as in figure 4.

### **Nose**

1. Make a circle of  $2 \frac{1}{2}$  ins by  $2 \frac{1}{2}$  ins
2. Reduce  $\frac{1}{2}$  inch from inside and make a smaller circle.

### **Ear**

1. Make a base line of  $2 \frac{1}{2}$  ins and call them A and B
2. From A, measure  $\frac{1}{4}$  in and call it C
3. From B, measure  $\frac{1}{4}$  in and call it D
4. Get the center of A and B and call it E.
5. From E measure up  $2 \frac{1}{2}$  ins and call it F.
6. From F measure  $\frac{1}{4}$  in and call it G.
7. With a curve, join A, F and B.
8. With another curve join C, G and D

## **Drafting of Lion soft toy pattern pieces**

- The measurements for each part of lion toy were presented in table
- I. These were used to draft basic patterns for the lion soft toy.

**Figure V**  
**Lion soft toy pattern pieces**

**Procedure for drafting:****Back of head/body-back and side**

1. Draw a straight line lengthwise of 11ins. Call the top A and down B.
2. Measure a width of 7 ins below B and call C and D
3. Measure 4 ins from A down and call it E.
4. Measure 3 ins each from E to the right and left side call F and G
5. Make a curve from F, A and G as in figure 5
6. Join F to C and G to D.

**Front Body**

1. Draw a straight line lengthwise of 7 ins. Call A and B
2. Draw another line below B for width 4 ½ ins call C and D
3. Measure 2 ins each side from A and call E and F.
4. Join E, A and F with a curve.
5. Join C and E then D and F

**Face**

1. Make an oval shape of 5 ins length and 4 ins width.

**Leg**

1. From A draw a straight line lengthwise 10 ins call it B
2. From A draw a straight line towards right 6 ins and call it C.
3. Join B to C
4. From B measure 3 ins towards A and curve as in the figure above.

## **Research Question V**

How can the developed block soft toy patterns be trued?

To answer the research question, the developed soft toy patterns were transferred to fresh paper, laid, cut and assembled. Block soft toy patterns were constructed and these were transferred to a fresh paper with seam allowance of (  $\frac{1}{4}$  in) added on all the fresh pattern places. They are shown below as method of trueing.

### **Method of trueing**

The block patterns developed were trued following the procedure used by Igbo and Iloeje (2003).

1. Trace the different blocks on fresh paper.
2. Add (  $\frac{1}{4}$  in) seam allowance
3. Indicate all necessary pattern instructions such as grain line indicator, place on fold, stitching line, notch marks and cutting lines.
4. Grain the fabric and iron out
5. Lay out the pattern pieces on the fabric.
6. Transfer the pattern marking to the fabric using tracing wheel.
7. Pin the pattern pieces together first, then tack.
8. Use the long sewing machine stitches to assemble the soft toy patterns (round method). According to Bull (1980), this method is particularly suitable because of the joining of the parts which is similar to garment with waist seam.

## **Method of assembling soft toy patterns**

Methods used in assembling the soft toys were both round and flat methods. This is because assembling the toy is almost the same with assembling garment with a waist seam. The round method allows the tacking of the main parts of a garment and fixing the main parts together then the smaller parts to the larger.

To assemble the Dog soft toy;

### **Body**

- Stitch head gusset to face gusset at forehead,
- Stitch face gusset to underbody gusset at throat.
- Place head and body pieces together with right side facing.
- Pin the completed gussets in between, baste and stitch together all round.
- Leave gap open for stuffing at one side of underbody gusset seam.
- Stitch across back of dog. Clip curves and corners carefully.
- Turn to right side and fill very firmly with stuffing and fill up gap.
- With right side facing, stitch 2 legs pieces together all round, leaving top open.
- Clip curves. Turn to right side and fill very firmly with stuffing.
- Run a gathering thread round the top opening.



- Draw up enough to keep stuffing from falling out and fasten off.
- Stitch leg to underbody as indicated in pattern. (feet must point forward)

**To assemble the Fish soft toy:**

- Stitch the flippers together, right sides facing, leaving the straight edge open.
- Turn right out, baste where indicated in the pattern to the right side of the side body.
- Sew in place make the second flipper in same way and attach it to the other side body.
- Stitch the body dart, then with right sides together, stitch the center top.
- Stitch the base in place, spread the lower tail fluke apart and lay the upper fluke on top right sides facing stitch.
- Turn the body and fluke right side out, stuff and close opening.

**To assemble the Rabbit soft toy**

- On the body piece, work a row of gathering stitches along the long edge of the slash, then draw the thread up until both edges of the slash are equal in length.
- Work the other side of the body in the same way

- Stitch the front body gussets together along the center front from the neck edge to the tail end.
- Place the body gusset between the body pieces then stitch from the neck down the chest, round the leg to the foot.
- Clip into the angle between the foot and the leg. Run a gathering thread around the edge of the foot and pull up to fit the sole.
- Baste, then sew the sole in place.
- Sew the centre back to the neck.
- Take an arm piece with the circle draw on it and stab a pin through the centre of the circle. With right sides together, push the same pin through the center of the circle on the body.
- Backstitch around the pencil line to secure the arm in place.
- To make the head, stitch the small mouth dart, then the larger cheek dart.
- Place the head pieces together and stitch the nose to the neck seam.
- Insert the head gusset, pin each side, baste then stitch in place.
- Match the center front and the center back seams, then stitch the head to the body.
- Turn the completed skin right side out and stuff.

**To assemble the Mouse soft toy.**

- Stitch the darts on each side body and finger-press the seams open.
- Position the base and stitch the side bodies to the base. Turn the skin right side out.
- Run a gathering thread around the pink nose circle in from the edge, pull up the thread inserting a piece of stuffing and continue pulling up the gathering thread, drawing all the raw edges together into a stalk.
- Stuff the body firmly and fasten off the thread.

**To assemble the Lion soft toy**

- Join front body piece to side and back with right sides facing baste and stitch together down both sides.
- Turn to right side, push all seams well out to make a good shape.
- Place the end of the funnel in the filling gap and fill.
- For each leg, stitch 2 pieces together wrong sides facing . insert the filling and base across gap.
- To work the face, over sew neatly around each pieces.

## Research Question VI

How can the block patterns be validated?

To answer this research question, the toiles were used to find out about the safety and shape of the drafted patterns. The study's sample (teachers) assessed the safety and shape of the soft toys.

**Table 8: Teachers assessment of the soft toy (Dog) relative to safety for children.**

S/N	CRITERIA	$\bar{X}$	REMARKS
1	Well constructed to withstand the use and abuses by children	4.00	Satisfactory
2	No rough edges.	4.10	Satisfactory
3	No toxic materials in or on the toy	3.97	Satisfactory
4	No sharp point on toys	3.73	Satisfactory
5	No small parts to be lodged in throat, ears and nose	3.69	Satisfactory
6	No glass or brittle plastic	4.07	Satisfactory
7	No parts to entrap fingers, toes and hands	2.66	Unsatisfactory
8	No long strings	3.69	Satisfactory

Table 8 showed that seven of the criteria had means of 3.50 and above indicating that these respondents found the soft toy to be satisfactory in terms of meeting the criteria on safety for children. Only item 7 criterion had a mean of 2.66 which is an indication that there are parts that can entrap fingers, toes and hands. Based on this observation, the assembled soft toy (Dog) was loosened, corrected and re-assembled.

**Table 9: Teachers assessment of the soft toy (Fish) relative to safety for children.**

<b>S/N</b>	<b>CRITERIA</b>	<b>X</b>	<b>REMARKS</b>
1	Well constructed to withstand the use and abuses by children	4.31	Satisfactory
2	No rough edges.	3.96	Satisfactory
3	No toxic materials in or on the toy	4.00	Satisfactory
4	No sharp point on toys	3.77	Satisfactory
5	No small parts to be lodged in throat, ears and nose	3.44	Unsatisfactory
6	No glass or brittle plastic	4.04	Satisfactory
7	No parts to entrap fingers, toes and hands	3.93	Satisfactory
8	No long strings	4.13	Satisfactory

Table 9 showed that seven of the criteria had mean range of 3.77 and above indicating that respondents found the soft toy to be satisfactory in terms of meeting the criteria on safety for children. Only criterion 5 had a mean of 3.44 which is an indication that there are small parts to be lodged in throat, ears and nose. Based on this observation the assembled soft toy (Fish) was loosened and corrected.

**Table 10: Teachers assessment of the soft toy (Rabbit) relative to safety for children.**

S/N	CRITERIA	$\bar{X}$	REMARKS
1	Well constructed to withstand the use and abuses by children.	3.63	Satisfactory
2	No rough edges.	3.68	Satisfactory
3	No toxic materials in or on the toy	3.77	Satisfactory
4	No sharp point on toys	4.51	Satisfactory
5	No small parts to be lodged in throat, ears and nose.	4.13	Satisfactory
6	No glass or brittle plastic	3.69	Satisfactory
7	No parts to entrap fingers, toes and hands	4.11	Satisfactory
8	No long strings	4.09	Satisfactory

Table 10 shows that the respondents rated the safety of the Rabbit soft toy as satisfactory on all the criteria. Each criteria had a mean above 3.50.

**Table 11: Teachers assessment of the soft toy (Mouse) relative to safety for children.**

S/N	CRITERIA	$\bar{X}$	REMARKS
1	Well constructed to withstand the use and abuses by children	4.00	Satisfactory
2	No rough edges.	3.80	Satisfactory
3	No toxic materials in or on the toy	3.55	Satisfactory
4	No Sharp point on toys	2.38	Unsatisfactory
5	No small parts to be lodged in throat, ears and nose	4.47	Satisfactory
6	No glass or brittle plaster	4.00	Satisfactory
7	No parts to entrap fingers, toes and hand.	3.48	Unsatisfactory
8	No long strings	4.10	Satisfactory

Table 11 indicated that six out of eight criteria for assessment of safety had a mean range of 3.55 to 4.47 showing they were safe while two criteria with a mean range of 2.38 and 3.48 showed that some parts of the toy had sharp points and could entrap fingers, toes and hands respectively. The toys were therefore loosened, corrected and reassembled.

**Table 12: Teachers assessment of the soft toy (Lion) relative to safety for children.**

S/N	CRITERIA	X	REMARKS
1	Well constructed to withstand the use and abuses by children	4.18	Satisfactory
2	No rough edges.	3.66	Satisfactory
3	No toxic materials in or on the toy	3.58	Satisfactory
4	No sharp points on toys	4.43	Satisfactory
5	No small parts to be lodged in throat, ears and nose	3.48	Unsatisfactory
6	No glass or brittle plastic	4.55	Satisfactory
7	No parts to entrap fingers, toes and hand	4.47	Satisfactory
8	No long strings	4.00	Satisfactory

Table 12 shows that the respondents expressed non satisfaction with the lion soft toy in terms of criterion no. 5. So it was loosened, corrected and re-assembled.

**Table 13: Teachers assessment of the shape of the parts of soft toy (Dog)**

S/N	Parts of the soft toy (Dog)	$\bar{X}$	REMARKS
1	Head and body	4.38	Satisfactory
2	Head gusset	4.10	Satisfactory
3	Ear	3.88	Satisfactory
4	Tail	3.59	Satisfactory
5	Leg	3.16	Unsatisfactory
6	Whole toy	4.04	Satisfactory

Table 13 shows that respondents indicated that the leg of the Dog soft toy was not well fixed. This item had a mean of 3.16. The soft toy Dog was loosened and corrected. Other parts of the Dog as well as the whole Dog each had a mean of 3.50 or above and therefore were satisfactory.

**Table 14: Teachers assessment of the shape of the parts the soft toy (Fish).**

S/N	Shape of parts of soft toy (Fish)	$\bar{X}$	REMARKS
1	Side Body	4.25	Satisfactory
2	Upper tail fluke	4.30	Satisfactory
3	Lower tail fluke	3.98	Satisfactory
4	Flipper	3.79	Satisfactory
5	Whole toy	4.10	Satisfactory

Table 14 shows that respondents rated the shapes of the different parts of the fish soft toy as satisfactory. The respondents had a mean range of 3.79 to 4.30.



**TABLE 15: Teachers assessment of the shape of the parts of soft toy (Rabbit)**

S/N	Shape of the parts of soft toy (Rabbit)	$\bar{X}$	REMARKS
1	Side Body	3.96	Satisfactory
2	Arm	4.10	Satisfactory
3	Sole	4.04	Satisfactory
4	Head	4.02	Satisfactory
5	Upper tail	3.88	Satisfactory
6	Lower tail	3.98	Satisfactory
7.	Inside leg	3.51	Satisfactory
8	Head gusset	3.18	Unsatisfactory
9	Whole toy	3.59	Satisfactory

Table 15 shows that respondents are of the opinion that the shape of the rabbit soft toy is satisfactory except the shape of the head gusset. So, it was loosened and corrected

**Table 16: Teachers assessment of the shape of parts of soft toy (Mouse).**

S/N	Shape of parts of soft toy (Mouse)	$\bar{X}$	REMARKS
1	Side body	4.24	Satisfactory
2	Base	4.19	Satisfactory
3	Nose	4.06	Satisfactory
4	Ear	4.12	Satisfactory
5	Whole toy	4.43	Satisfactory

Table 16 indicates that the respondents rated the shape of the parts of soft toy (Mouse) satisfactory. The respondents had a mean range of 4.06 to 4.43.

**Table 17: Teacher's assessment of the shape of the parts soft toy (Lion).**

<b>S/N</b>	<b>Shape of parts of soft toy (Lion)</b>	<b><math>\bar{X}</math></b>	<b>REMARKS</b>
1	Back of head	3.82	Satisfactory
2	Body-back and side	3.92	Satisfactory
3	Front Body	4.14	Satisfactory
4	Face	4.18	Satisfactory
5	Leg	3.49	Unsatisfactory
6	Whole toy	4.24	Satisfactory

Table 17 shows that respondents were not satisfied with the leg of the Lion soft toy. This item had a mean of 3.49. The leg was loosened, filled and re-assembled. Other parts each had a mean of 3.50 and above and therefore were satisfactory.

### **Final pattern production**

The researcher picked the toile one at a time, ripped the long stitches, ironed it and with the aid of sewing tools, using a large flat table, transferred it to a tracing paper (also known as cartridge paper). The final soft toy patterns for the five soft toys . Dog, Fish, Rabbit, Mouse and Lion are in appendices G to K.

### **Findings of the study**

The following findings were made;

- Parts of the soft toys to be used for drafting were identified as:

Dog . Head and body, head gusset, ear, tail and leg.

Fish . Side body, upper tail fluke, lower tail fluke, and flipper.

Rabbit . side body, arm, sole, head, upper tail, lower tail, inside leg, and head gusset,

Mouse . Side body, base, nose and ear

Lion . Back of head, body-back and side, front body, face and leg.

- Methods of measuring parts of the soft toys were identified (see tables 2 to 6).
- Measurements of the five soft toys were taken using non-stretchable tape. The parts that were measured are:

Dog . Head and body, head gusset, ear, tail and leg.

Fish . side body, upper tail fluke, lower tail fluke, and flipper.

Rabbit . side body, arm, sole, head, upper tail, lower tail, inside leg, and head gusset.

Mouse . side body, base, nose and ear.

Lion . back of head, body-back and side, front body, face and leg.

- The mean for each of these measurements were established and these were used for drafting the soft toy patterns.

The mean measurements are presented in table 7.

- Methods of drafting the patterns of the soft toys were identified and five soft toys (Dog, Fish, Rabbit, Mouse and Lion) were drafted. (see figures 1-5 and procedures).
- The patterns were tried and assembled to make soft toy toiles.

- The mean ratings of the teachers on the safety of the Dog soft toy ranged from 3.69 to 4.10. The range of mean ratings on the safety of the Fish soft toy ranged between 3.77 to 4.44. The mean ratings of the teachers on the safety of the Rabbit soft toy are in the range of 3.69 to 4.51. The mean ratings on the safety of the Mouse soft toy are in the range of 3.55 to 4.47. The mean ratings of teachers on the safety of the Lion soft toy fall within the range 3.58 to 4.48.
- The range of the mean ratings of the teachers on the shape of the parts of soft toy Dog was 3.59 to 4.38. The mean ratings on the shape of the parts of soft toy Fish are in the range of 3.79 to 4.30. Also the mean ratings of the teachers on the shape of the parts of soft toy Rabbit fall within the range 3.59 to 4.10 which is an indication of good shape. The mean ratings on the shape of the parts of soft toy Mouse fall within the range 4.06 to 4.43 which is within the satisfactory range. The range of the means ratings of the teachers on the shape of the parts of the soft toy Lion which is within the range 3.82 to 4.24 was satisfactory.

### **Discussion of findings**

The discussion of the findings was organized around the data presented by the research questions.

Parts of the soft toys that needed to be measured were identified as:

Dog . head and body, head gusset, ear, tail and leg

Fish . side body, upper tail fluke, lower tail fluke and flipper.

Rabbit . side body, arm, head, upper tail, lower tail, inside leg and head gusset.

Mouse . head and body, head gusset, ears, tails and legs.

Lion . back of head, body back and side, front body, face and legs.

The findings agreed with Peake (2000) who stated the basic measurements for drafting soft toys for animals. Akubue (2004) observed that some measurements are basic and essential for the construction of every pattern while some are supplement and may be useful when working on a particular design or for a particular figure.

Methods of measuring parts of the soft toys were identified and presented in tables 2 to 6. Measurements of the five soft toys were taken following the methods identified. Parts that were measured are Dog-head and body, head gusset, ears, tails and legs. Fish-side body, upper tails fluke, lower tail fluke, and flipper. Rabbit . side body, arm, head, upper tail, lower tail, inside leg, and head gusset. Mouse . head and body, head gusset, ears, tails and legs. Lion . back of head, body: back and side, front body, face and legs.

The means for the parts were calculated and presented in table 7. These means were utilized in the drafting of block patterns for the toys. Taking measurements is one of the essential skills in pattern making

activities. Igbo and Iloeje (2003) earlier stated that measurements are needed for choosing pattern size. In support of this, Shaw (2000), observed that taking the key measurements is the first step in determining a pattern size.

Flat pattern method was used to draft five block patterns for children's soft toys in Anambra State. (see figures i-v & procedures) Igbo and Iloeje (2003), Aniekweze (2003) earlier agreed that flat pattern method is one of the good methods of obtaining patterns used for making clothing articles. Tools and equipment necessary for pattern development were used. They include a working space, paper, pencil, notebook, trenched curved rubbers, pins, tailor's chalk, tracing wheel, carbon paper and scissors, calculator, metric tape measures, calico. The drafted patterns were trued, cut and assembled. The mean ratings for the safety of the five soft toys were satisfactory. The findings are in line with the agreement of the United States Consumer Protection Safety Commission (1998), and Lichenstein (2004) on characteristics of safe toys. Those patterns that were rated unsatisfactory were loosened corrected and reassembled. They include Dog - No parts to entrap fingers, toes and hands. Fish - No small part to be lodged in throat, ears and nose. Mouse- No sharp point on toys and No parts to entrap fingers, toes and hands. Lion- No small parts to be lodged in throat, ears and nose.

The mean ratings for the shape of the five soft toys were satisfactory except; Dog . leg, rabbit . head gusset and Lion . leg. They were loosened, corrected and re-assembled. Igbo and Iloeje (2003) observed that the accuracy of a drafted pattern depends on the accuracy of the measurements, drafting instruments and skill of the pattern makers. Also to obtain a more realistic fit/shape, Marshal et al (2000) observed that manufacturers toile their trial garment. The toiles are used to correct the patterns before the final construction of the garments/articles.

This result is quite satisfactory bearing in mind that these teachers are nursery school teachers that know the needs of children and also mothers that provide play materials for their children. This goes to confirm the view of Dike (2007) that teachers and mothers are mostly concerned with providing toys and play materials for their children. All the toys were loosened, each put in its bag from where each was taken, ironed properly and placed on fresh paper, the patterns were transferred to the paper. Pattern markings were then indicated on them and these were validated soft toy patterns for children.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter deals with summary of the research report with emphasis on re-stating the problem, procedure used for the research work, the major findings of the study, implication of the study and conclusion made. Recommendations for action. Suggestions for further studies were also made. This is necessary because the research cannot cover all aspects relating to soft toy patterns.

#### **Re-statement of the problems**

In Anambra State now and Nigeria as whole, soft toys are not locally produced and commercial patterns for making them are not available because they were banned by government. Also parents and teachers lack information and knowledge on how to make these soft toys for use by children. Few parents who were able to provide such toys for their children do so by purchasing used, imported soft toys often smuggled into the country and sold at exorbitant prices.

The objective of this research is to develop and validate five soft toy patterns for children in Anambra State.

Presently, there is difficulty in getting white-collar jobs, graduates and job seekers can be job creators using these soft toy patterns to make soft toys and to earn a living.



**Procedure followed in conducting the study.**

This study was carried out in Anambra State. The population was teachers in all the government approved private nursery schools in the state. The design of the study was Research and Development (R & D). A sample size of 379 teachers was drawn from 1, 514 teachers using purposive sampling techniques according to Nworgu (1991). Simple random sampling techniques were also used.

The instruments were face validated by three clothing experts from University of Nigeria, Nsukka. The reliability of the instrument was tested using test-retest method. The prepared questionnaire was administered to a defined group, after two weeks, the same questionnaire was again administered to the same group. The two sets of scores from the administrations of the same questionnaire is a measure of the reliability of the instrument. This did not form part of the study.

Three instruments were developed and used to collect data, namely: the soft toy measurement Chart, Assessment Criteria Chart for teachers and toiles block soft toys for Dog, Fish, Rabbit, Mouse and Lion. The patterns were trued and transferred to a fresh paper with all pattern makings indicated on them. The pattern pieces were laid, cut and pattern markings transferred to the calico. These were assembled using long machine stitches and stuffed. The teachers assessed the safety and shape of the soft toys. The criteria assessment chart for teachers had a 5 . point

scale 1,2,3,4 and 5. Any variable with a mean that is equal to 3,5 and above were regarded as satisfactory while those below 3.5 were regarded as unsatisfactory. Those variables regarded as disagreement were corrected and assembled. The soft toy pattern were then loosened, ironed and transferred to fresh paper. These patterns developed and trued formed the validated patterns for children's soft toys in Anambra State.

### **Major Findings**

The major findings include:

- Parts of the soft toys to be used for drafting were identified. (see table I).
- Methods of measuring parts of the soft toys were identified. (see tables 2 to 6).
- Measurements of the five soft toys were taken. (see table 7).
- Methods of drafting the patterns of the soft toys were identified (see figures I . v and procedures).
- Five soft toy patens were drafted for Dog, Fish, Rabbit, Mouse and Lion (see Appendix).
- The patterns were trued and assembled to make soft toy toiles.
- The toys were viewed as safe for the children's use (see tables 8,9,10,11 and 12).

- The shapes of the joys validated were appropriate (see tables 13, 14, 15, 16 and 17).

### **Implications of the study**

The findings of this study have implications for teachers and parents as it will furnish them with improved knowledge and valid information on how to make soft toys for their children.

The findings of the study have implications for children as it will give them opportunities to explore their environment fully and get in touch with appropriate toys.

The findings of the study have implications for clothing construction students as they can use the basic block patterns for pattern alteration and adaptation.

The findings of the study have implications for tailors/seamstresses as they can use the soft toy patterns to make soft toys for children with high turnover.

The findings of the study have implications for classroom teachers of clothing as they can use the soft toy patterns to teach in their entrepreneurship class.

It will help various vocational centers as they use the knowledge to improve their skill acquisition.

The findings of this study have implications for investors who may have the desire of investing their money as they can start medium or large-scale soft toy industry.

The findings also have implications for the Federal Government of Nigeria as she can help the citizenry with loan to which the citizens can invest in owning a pattern form. This will reduce over dependence on smuggled patterns and toys.

## **Conclusion**

Patterns are basic necessities in the construction of soft toys. In particular, they are quite valuable for large-scale production. The mean ratings of the respondents on the shape of the soft toys . Dog, Fish, Rabbit, Mouse and Lion were all indicative of good shape for most of the variables used for the assessment. The good shape obtained must have resulted from accurate measurements taken, precision in the drafting and development of the blocks as well as good construction technique employed in assembling the pattern pieces.

The findings of this study will adequately prepare tailors/seamstresses for large scale soft toy production for the target group. They should be able to use patterns developed from the blocks for mass production of soft toys for children's play. This will create jobs for Nigerians and at the same time make the citizens self reliant in soft toy productions.

The implementation of the results of the study would also help in reducing poverty, creating wealth and generating employment.

### **Recommendations**

The following recommendations have been proffered based on the findings of the study.

- a. Tailors/seamstresses should use the patterns obtained from the study to make soft toys for children.
- b. The result of this study provides the information that there is no commercial soft toy pattern industry. Therefore investors in big sewing industry can find Anambra state a land of establishing one without any competitor. The population of children is large enough for a good soft toy producing business.
- c. Students who study clothing in higher institutions should use the result of these findings to produce soft toy for children in their entrepreneurship class.
- d. Vocational teachers should use the soft toy patterns to improve their teaching and can also use the patterns to produce soft toys for exhibition. Exhibition for vocational teachers is sometimes a prerequisite for their promotion.

**Suggestion for further studies**

The following suggestions were made for investigation in order to carry out further studies on development and validation of soft toy patterns.

- a. Development and validation of soft toy patterns can be carried out in other states/countries.
- b. Development and validation of soft toy patterns can be done on other animals.

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**APPENDIX A**

**DATA OF GOVERNMENT APPROVED PRIVATE NURSERY SCHOOLS**

**IN ANAMBRA STATE**

**AGUATA ZONE**

S/N	NAMES OF SCHOOLS	NUMBER OF TEACHERS THAT ARE MOTHERS IN THE SCHOOLS
1	ST. MARY AGULUZEZCHUKWU	3
2	EL. CLOHIM MODEL UMUNZE	5
3	ST MICHEAL\$ NKPOLOGWU	4
4	POPE JOHN PAUL II FEDPOLY OKO	6
5	ALL SAINT EKWULUOBIA	5
6	EMMANUEL NKPOLOGWU	3
7	GOOD SHEPHERD OGBUNKA	4
8	MERCY ACHINA	3
9	FUTURE HOPE NGO IGBO-UKWU	3
10	IMMACULATE HEART OF MARY ULA EKWULUBIA	2
11	SEAT OF WISDOM UMUNZE	3
12	ST. ANDREW\$ AMAOKPALA	4
13	ST. MARTIN\$ IGBO-UKWU	5
14	ST. JAMES NANKA	2
15	GENESIS MODE UFUMA	4
16	ST. PAUL AKPO	5
17	HOLY CHILD, ISUOFIA	4
18	ST. PETERS UGA	3
19	HOLY NAME UMUCHU	3
20	FURTHER HOPE IGBO-UKWU	3
21	HOLY CHILD UMUCHU	4

22	ST. AUGUSTINE UMUNZE	3
23	OUR SAVIOUR IGBO-UKWU	3
24	HOLY FAMILY IGBO-UKWU	4
25	ST. ANTHONY& NANKA	2
26	IMMACULATE HEART UGA	2
27	IMMANUEL& EZINIFITE	4
28	ST. PETER& OKO	4
29	ALL SAINTS AWGBU	3
30	ST. JAMES UGA	3
31	FATIMA IGBO-UKWU	3
32	MODEL IGBO-UKWU	4
33	HOLY TRINITY IFITE OKO	4
34	ST. JOHN THE DIVINE OKO	3
35	ST. MARY& ORA-ERI	3
36	VICTORY MODEL AWGBU.	4
37	ST. JOSEPH& EKWULUOBIA	5
38	EXCELLENT NANKA	4
39	STAFF FED POLY OKO	5
40	ROCK FOUNDATION NANKA	4
41	ENTON OKO	3
42	SPARA FOUNDATION EKWULUOBIA	4
43	SACRED HEART AWGBU	3
44	HOLY TRINITY NKWOAGUNAI	2
45	HOLY CHILD EKWULUOBIA	4
46	CHRIST CHURCH MODEL ACHALLA	3
47	ST. PETERS AKPO	4
48	BETHEL EKWULUOBIA	5
<b>Total</b>	<b>48</b>	<b>182</b>

**AWKA ZONE**

<b>S/N</b>	<b>NAMES OF SCHOOLS</b>	<b>NUMBER OF TEACHERS THAT ARE MOTHERS IN THE SCHOOLS</b>
1	AGGIE NIMO	4
2	ST. PATRICK WISDOM AGULU-UZUIGBO	3
3	AQUINAS MODEL AWKA	3
4	KROSA MODEL AMAWBIA	4
5	MADONNA AGULU	3
6	ST. JOHN ENUGWU-UKWU	4
7	HOLY CHILD ENUGWU-AGIDI	4
8	OUR LADY OF FATIMA ENUGWU-AGIDI	5
9	REDEEMED CHILD AWKA	3
10	LITTLE ANGEL AWKA	2
11	SANTA MARIA NIBO	4
12	NADORA MEMORIAL AWKA	2
13	DIVINE LOVE EDUCATION CENT, ENUGWU-UKWU	3
14	HOLY GHOST ACADEMY AWKA	3
15	ST. MICHAEL'S AKWAEZE	4
16	HOLY INNOCENT AGULU-UZOIGBO	3
17	ALPHA AGULU	4
18	ST. JOHN'S MODEL NENI	3
19	BENBEE AWKA	3
20	ST. ANTHONY'S CATH CHURCH UMUDIOKA	3
21	WISDOM IFITE-DUNU	4
22	TOTAL CHILD AWKA	5
23	POLICE CHILDREN SCHOOL AWKA	3
24	LALIAE DAY AWKA	4
25	REV. FR. EKWU MEMO AWKA	5
26	TENDER TOUCH AWKA	3

27	ANGEL IFITEDUNU	4
28	FAITH DAY AWKA	3
29	ST. MARK&#x26; ABAGANA	3
30	ST. PAUL AWKA	4
31	KEMY AMAWBIA	4
32	DAY SPRING ABAGANA	4
33	ST. FELIX CATHOLIC SCH. NISE	3
34	ADONAI STANDARD UMUNCHI	4
35	KINGS AMAWBIA	3
36	GOOD CHILD ENUGWU-UKWU	4
37	EVANGELICAL CHURCH WEST AFRICA AWKA	3
38	ST. MARY MODEL UKPO	2
39	ST. DOMINIC&#x26; CATH. SCH. ADAZI-ENU	3
40	SOLID ROCK AWKA	4
41	ST. JOHN NISE	3
42	CHILDREN OF LIGHT NIBO	4
43	ST. ALBERT GREAT AGULU	2
44	SANTA MARIA ADAZI-NNUKWU	3
45	AKPAENYI MEMO OKPUNO	4
46	FUTURE HOPE AWKA	5
47	GOD&#x26; CARE GROUP OF SCHOOL AWKA	3
48	ROYAL CHILDREN AWKA	4
49	ST. AUGUSTINE&#x26; MODEL AWKA	3
50	INFANT JESUS AWKA	4
51	SUNBEAM NAWFIA	2
52	DAYSRING ABAGANA	3
53	REDEMPTION MODEL AWKA	2
54	NETHER LAND&#x26; INT. AWKA	3
55	GOOD SHEPHERD NRI	2
56	FATIMA ENUGWU-AGIDI	3

57	HOLY SPIRIT EBENEBE	2
58	FUTURE HOPE AGULU	3
59	MATER DE OBELEDU	4
60	INFANT JESUS NIMO	4
61	UNIQUE COMPREHENSIVE AMAWBIA	3
<b>Total</b>	<b>60</b>	<b>205</b>

**NNEWI ZONE**

<b>S/N</b>	<b>NAMES OF SCHOOLS</b>	<b>NUMBER OF TEACHERS THAT ARE MOTHERS IN THE SCHOOLS</b>
1	ST. PETER CLAVERS UTUH	4
2	ST. JOSEPH & FUTURE HOPE NNEWI-ICH	3
3	ST. MONICA & NNEWI	2
4	FIDELITY UNUBI	2
5	SEAT OF WISDOM NNEWI	3
6	STANDARY MBANAGU OTOLO NNEWI	5
7	CHRIST FOUNDATION NNEWI	5
8	ST. LOUIS IHIALA	3
9	VIKO AUSTIN PREMIER MODEL IHIALA	2
10	CAOLAVE NNEWI	2
11	ST. JUDE & ORAIFITE	4
12	ST. TIMOTHY ORAIFITE	5
13	THE LITTLE ANGEL & NNEWI	4
14	THE CHOICE NNEWI	2
15	OKOYE WARD MEMO NNEWI	3
16	TRUE LIGHT NNEWI	4
17	ST AUGUSTINE & INT. OZUBULU.	3
18	C.W.O. IHIALA	4
19	GOD & TIME NNEWI	2
20	ALPHA MODEL IHIALA	3
21	AFUBE AMICHI NNEWI	4
22	MADONNA OZUBULU	3
23	BISHOP OKOYE MEMO. UKPOR	2
24	BLESSED IMULDA IHIALA	3
25	GLEAZAR MEMO NNEWI	4
26	THE FIDELING NNEWI	3



27	PROGRESSIVE EZNIFITE NNEWI	3
28	QUEEN OF ANGELS NNEWI-ICHI.	5
29	ST. JOSEPH& OTOLO NNEWI	4
30	SAVIOUR IHIALA	2
31	BISHOP UZODIKE GOD& CARE NNEWI- ICHI	3
32	ST. PAUL& MODEL NNEWI	3
33	AGAPE LOVE NNEWI	4
34	ST. STANDARD ICHI-NNEWI	2
35	ST. ANDREWS NNEWI	3
36	GOD WISDOM INT. NNEWI	4
37	MARY OSUMENYI	3
38	ST. PHILIP& MODEL NNEWI	2
39	BETHEL EKWULUMILI NNEWI	3
40	TRINITY UMUDIM NNEWI	4
41	KING& NNEWI	3
42	NEW MODEL OZUBULU	2
43	MERCY AZIA IHIALA	5
44	COMMUNITY AZIA IHIALA	3
45	CHRIST THE KING INT. NNEWI	4
46	FOUNDATION OZUBULU	3
47	ST. JOSEPH& CATHOLIC OZUBULU.	2
48	SANTA MADONA OTOLO NNEWI	3
49	PRECIOUS CHILDREN NNEWI	4
50	ST. JUDE& NNEWI	3
51	ANGLICAN DISTRICT WOMEN NNEWI	4
52	SALVA FOUNDATION, INT. NNEWI	3
53	HURRAY, UMUEZENNI NNEWI	4
54	THE GOOD SHEPHERD UMUDIM NNEWI	5
55	LITTLE ANGEL UMUDIM NNEWI	3

56	ROYAL DAY OZUBULU	4
57	THE CRAPEUTIC INTER. NNEWI	3
58	NNEOMIC NNEWI	2
59	ST. MARY $\phi$ ORAIFITE	3
60	ST. PHILIP $\phi$ AMICHI	2
61	ST. MARYS NNEWI	4
62	MATER DEI ORAIFITE	5
63	CHRIST ROYAL IHIALA.	2
64	DIVINE NNEWI	4
65	IMMACULATE NNEWI	5
66	REGINA CAELI EKWULUWMILI.	2
67	CHRIST OSUMENYI.	3
68	HELP YOUR CHILD NNEWI	3
69	HOLY CHILD UKPOR	2
70	THE LORO FOUNDATION NNEWI	2
71	OMEKANNAYA MODEL ORAIFITE.	4
72	NEW-ERA, NNEWI	5
73	ST. JOSEPH $\phi$ NNEWI	3
74	PEACE NNEWI.	2
75	ST. PATRICK $\phi$ INT. ICHI.	4
76	CHRIST THE WAY CATHECHETICAL NNEWI.	3
77	CHRISTIAN NNEWI	3
78	FRIEND OF FRIEND NNEWI	2
79	DALAS STANDARY OZUBULU.	3
80	QUEEN $\phi$ AMICHI NNEWI	4
81	EARLY BIRD ISSEKE IHIALA.	5
82	SUMMIT UMUDIM NNEWI	2
83	ROYAL CHILDREN UKPOR	3
84	DUBEM NNEWI	4

85	PRECIOUS CHILDREN NNEWI.	3
86	BET COMPREHENSIVE UKPOR.	3
87	GOD'S CARE URUAGU NNEWI	2
88	ASSUMPTION UKPOR.	3
89	CANANA URUAGU NNEWI.	4
90	ST. STEPHEN'S MODEL NNEWI.	5
91	ST. MICHEALS INT. NNEWI	3
92	CREATIVE MODEL NNEWI	4
93	HOLY INNOCENT NNEWI	2
94	PILLAR FOUNDATION AZIA.	3
95	DEMONSTRATION NNEWI.	4
96	BENNET ETIABA MEMO. NNEWI.	3
<b>TOTAL</b>	<b>96</b>	<b>312</b>

## OGIDI ZONE

S/N	NAMES OF SCHOOLS	NUMBER OF TEACHERS THAT ARE MOTHERS IN THE SCHOOLS
1	OUR SAVIOUR FOUNDATION AWADA	3
2	MARIA INES OBOSI	5
3	VICTORY INT. MODEL AWADA	4
4	GOOD NEWS FOUNDATION NKPOR	4
5	LUCKY STAR	3
6	REDEMPTION MODEL AWADA	3
7	NEW LIFE FOUNDATION NKPOR.	4
8	KAY CHRIST OGIDI	3
9	KIDDIES JUNCTION MODEL NKPOR	3
10	INFANT MODEL OBOSI	2
11	HOLY FAMILY OBA	3
12	ST. GREGORY OBOSI	4
13	PERFECT MIND FOUNDATION NKPOR	5
14	MERCIL SPECIAL OBOSI	4
15	SUNRISE CREATIVE MODEL NKPOR	3
16	WINNERS INT. NKPOR	3
17	ST. ANTHONY OF PADUA NKPOR	4
18	CHILD PRIDE OBOSI	3
19	FAITH MODEL NKPOR	4
20	FOUNTAIN FOUNDATION NKPOR	3
21	ST. JAMES WISDOM FOUNDATION AWADA	3
22	CHRIST THE KING NKPO-AGU.	2
23	HOPE NKPOR-AGU.	3
24	SUPREME KNOWLEDGE NKPOR	4
25	MANYEL FOUNDATION AWADA.	3

26	NEW WORLD INT. AWADA	4
27	ST. ANTHONY OF PADUA NKPOR.	2
28	EARLY LIFE NKPOR-AGU.	3
29	EVANS MODEL NKPIKPA OBOSI	4
30	JESUS FOUNDATION AKUZOR NKPOR	5
31	MATER CHRISTI, AWADA OBOSI.	4
32	MUSTARD MODEL NKPOR.	3
33	HOLY ANGEL NKPOR-AGU.	3
34	SUNRISE CREATIVE MODEL NKPOR.	4
35	NEW HORIZON OGIDI	2
36	PROGRESSIVE UGUABAA OBOSI	4
37	GUARDIAN ANGEL ABATETE	2
38	MODEL INNOVATION SCH. OF TODAY NKPOR-AGU.	4
39	MODEL FOUNDATION NKPOR-AGU.	4
40	DAY BY DAY NKPOR.	3
41	OUR LADY& UMUOJI	3
42	GROWN EDUCATION CENTER NKPOR	3
43	STARLIGHT MODEL OGIDI	4
44	ST. ODILAS OJOTO UNO.	4
45	HOLY FAMILY NKPOR.	3
46	PRIMIER UMUOJI	3
47	BUSY BRAIN INT. AWADA.	4
48	ROCK FOUNDATION AKWA-UKWU OGIDI	5
49	IDEAL MINDS NKPOR. AGU.	4
50	MATER DEI ALOR	5
51	GOOD NAME IRE UMUOJI	4
52	SEVEN MARTYE MEMO UMUOTA OBOSI	3
53	ST. STEPHEN& (ANG) NNOKWA	4
54	HOLY LAND OGIDI	3

55	GREATER TOMORROW NKPOR-AGU	2
56	STANDARD EZIOWELLE	4
57	CITY PRIMARY SCHOOL NKPOR-AGU	3
58	UNION AWADA	4
59	FUTURE HOPE NKPOR	5
60	MADONNA NNOBI	3
61	ROHI MODER NNOBI	4
62	MONT ZION MODEL	3
63	MARIA FOUNDATION ORAUKWU	4
64	HOLY CROSS NKPOR	2
65	CRESCENT OGIDI	2
66	SUMMER INTER. OGIDI	3
67	OBA WOMEN OBA	2
68	BRIGHT OBA	3
69	CALVARY OBA	4
70	GRACE OF GOD MODEL NKPOR-AGU.	4
71	THE LIVING GOD NKPOR-AGU.	3
72	IXORA MODEL NKPOR-AGU	5
73	AVE MARIA NNOKWA	4
74	ST. PAUL'S ALOR.	3
75	ST. MARY'S OBOSI	2
76	MATER ECCLESIA OBOSI	3
77	INTELLECTUAL DEMONSTRATION OBOSI	5
78	URBAN NKPOR.	6
79	ONE FOUNDATION NKPOR-AGU.	4
80	SCIENCE FOUNDATION NKPOR-AGU	4
81	CHRIST THE KING OBOSI	3
82	FUTURE HOPE OBA	4
83	ODIKE MODEL CENTRE OBOSI	3
84	ROCK FOUNDATION AWADA.	2

85	ST. PAUL NKPOR-AGU.	3
86	VICTORY INT. MODEL AWADA.	1
87	ERINNE MODEL OBOSI	3
88	ST. JOHN OBA	4
89	SOLID ROCK FOUNDATION NKPOR.	5
90	KINGS OF GLORY NKPOR-AGU	6
91	SALVATION (ANG) ABATETES.	3
92	STANDARD AWADA OBOSI	4
93	BUSY OBA	3
94	GIANT STEP INT. OBA.	3
95	ST. PAUL (ANG) OGIDI	4
96	LIBERATION OKUZU OBA	3
97	METHODIST ACADEMY AWADA	4
98	DIVINE STANDARD INT. NKPOR-AGU	5
99	EARLY LIFE OBOSI	5
100	THE LORD'S CREATION INT. NKPOR	4
101	MODEL OJOTO	3
102	JERRY AND	4
103	WISDOM FOUNDATION OBOSI	5
<b>TOTAL</b>	<b>104</b>	<b>361</b>

## ONITSHA ZONE

S/N	NAMES OF SCHOOLS	NUMBER OF TEACHERS THAT ARE MOTHERS IN THE SCHOOLS
1	ST. ANDREW& ODEKPE	4
2	COMPREHENSIVE FEGGE	3
3	ASSEMBLES OF GOD OKPOKO	2
4	ST. THADDEVE IYIOWA ODEKPE	5
5	SS PETER & PAUL OGBARU.	3
6	ROYALTY ONITSHA	4
7	ROCK FOUNDATION ONITSHA	3
8	TWINKLE STAR INT. ONITSHA	4
9	CHRIST THE KING ONITSHA	5
10	DEMERGING OF COMMUNITY ODEKPE	6
11	HOLY LAND FOUNDATION OKPOKO	6
12	OUR LADY OF GRACE INT. ODEKPE	5
13	MARMNATHE INT. ONITSHA	4
14	ST. MARKS STANDARD OMOGBA.	5
15	IMMACULATE CONCEPTION ONITSHA	4
16	ROYAL FOUNDATION ONITSHA	5
17	REDEEMED CHRISTIAN ONITSHA	4
18	DEMERAING OF COMM.. OKPOKO II	5
19	NEW BETHEL OKPOKO	6
20	EXCELLENT INT. ONITSHA	5
21	ST. VINCENT DE PAUL ODEKPE	4
22	UNIQUE OKPOKO	4
23	GRACE OF GOD FEGGE	3
24	MARANA INT. ONITSHA	4
25	HOLY CROSS ONITSHA	3
26	CMECCS COMMUNITY OKPOKO	4



27	KING'S CHILDREN OKPOKO	5
28	CHRIST THE KING IYIOWA ODEKPE	4
29	TRINITY ONITSHA	6
30	KINGS ROYAL OKPOKO	3
31	NNENNA INT. OKPOKO	4
32	ZION INT. ONITSHA	5
33	ROSE OF SHAROW INT. ONITSHA	3
34	ST. MONICA'S WOLIWO ONITSHA	4
35	RONIKA INT. ONITSHA	4
36	AGAPE STANDARD WOLIWO ONITSHA	3
37	HERITAGE HEIGHTS ONITSHA	4
38	FOUNDATION OKPOKO	4
39	GOODNESS OKPOKO	3
40	BRAINING OKPOKO	4
41	INFANT JESUS FEGGE	5
42	SACRED HEART ONITSHA	6
43	IDEAL MIND FOUNDATION ONITSHA	4
44	IBE LIGHT OF GOD ONITSHA	3
45	CAMPUS ONITSHA	4
46	CRESCENT MOON INT. OMAGBA II	3
47	MAY RAY MONTESSOR ONITSHA	4
48	FATIMA ONITSHA	4
49	ROCK FOUNDATION ONITSHA	3
50	SEDES SAPIENTAE ONITSHA	4
51	NDONAI INT. ONITSHA	4
52	ST. JUDES IYIOWA ODEKPE	5
53	GOOD SHEPHERD ONITSHA	6
54	GOOD HOPE INT. FEGGE ONITSHA	6
55	OXFORD CREATIVE INT. ONITSHA	5
56	SALVATION ARMY ONITSHA	4

57	WISDOM OKPOKO ONITSHA	3
58	CREATIVE EDU. ONITSHA	3
59	ST. JUDES OKPOKO	4
60	ADONAI FOUNDATION OKPOKO	5
61	OUR LADY OF GRACE INT. ODEKPE	4
62	GLORY ONITSHA	6
63	EVANGEL OKPOKO	4
64	LEARNING FIELD INT. ONITSHA	5
65	NKISI COMPREHENSIVE ONITSHA	6
66	DAISY MODER ONITSHA	5
67	BLESSED CHIDINMA NEW H. ONITSHA	4
68	BIGAIL FEGGE ONITSHA	3
69	LIVING CHRIST OWELLE OBO ONITSHA	4
70	ST. THERESA OKPOKO	4
71	SOL OMOGBA ONITSHA	3
72	PROGRESS INT. OKPOKO	3
73	REDEMPTION MODEL ONITSHA	4
74	COMMAND CHILDREN ONITSHA	3
75	CHARIES HEEREY MEMO ONITSHA	4
76	HOLY FAMILY ONITSHA	3
77	PRINCE CHARLES OKPOKO	4
78	TENDER CARE INT. ONITSHA	3
79	GREEN FIELD MODEL ONITSHA	4
80	CHRIST THE KING MODEL ONITSHA	4
81	ST. LAWRENCE ONITSHA	4
82	COLE OKOTI ODEKPE	3
83	OUR CHILDREN FEGGE.	3
84	GRACE OF GOD MISSION OKPOKO	6
85	CHINA FOUNDATION IYIOWA ODEKPE	5
86	THE ANGLES MODERN EDU. CHILD ONITSHA	3

87	AUSTIN JOHN OKPOKO	4
88	WOSLEY METHODIST INT. ONITSHA	5
89	LATTER RAIN FOUNDATION ONITSHA	4
90	KIBLIES JUNCTION ONITSHA	5
91	ZIM IYIOWA ODEPKE	4
92	PIVOTAL ONITSHA	5
93	CROWN MODEL WOLIWO	6
94	FRIEND FOUNDATION ONITSHA	3
95	PRINCE OF PEACE FOUNDATION OKPOKO	4
96	SHOW LIGHT. INT. IYIOWA ODEKPE	3
97	ZION INTERNATIONAL ONITSHA	6
98	DELIGHT ACADEMY ONITSHA	5
99	FUTURE HOPE ONITSHA	4
100	KEZZ FOUNDATION ONITSHA	5
101	KINGS KIDS INT. ONITSHA	4
102	ST. CHARLES LWANGU INT. OGBARU	4
103	CALVARY ONITSHA	5
104	ENDURANCE OKPOKO	4
105	ST. JAMES (ANG) IYIOWA ODEKPE	3
106	ASAF ONITSHA	4
107	MOUNT OLIVE ONITSHA	5
108	B. C. M SPECIAL ONITSHA	5
109	ST. MARY THE VIRGIN ONITSHA	4
110	ST. JUDES FEGGE	3
111	GRACE OF GOD MODEL OKPOKO	4
112	LIFE INT. ONITSHA	5
113	REDEEMERϕ OKPOKO	3
114	IRENE MENAKAYA ONITSHA	4
115	REDEEMES CHRISTIAN ONITSHA	3
116	HOLY SPIRIT INT. ONITSHA	4

117	Y.W.C.A. ONITSHA	5
118	PROMISE INT. ONITSHA	3
119	OUR LADY MODEL OKPOKO	4
120	ASSEMBLIES OF GOD OKPOKO	6
121	SHANAHAN OKPOKO	5
122	REDEEMER INT. ONITSHA	4
123	MODEL FOUNDATION ONITSHA	3
124	ROOTS MODEL NKISI ONITSHA	3
125	JESUS OWN SCHOOL ONITSHA	4
126	UNITY NATIONAL OKPOKO	3
127	IVORY FOUNDATION ONITSHA	4
128	HOLY CHILD INT. ONITSHA	3
129	HOLY CHILD IMMACULATE HEART FEGGE	4
130	ST. JOHN'S ONITSHA	5
<b>TOTAL</b>	<b>130</b>	<b>435</b>

## OTUOCHA ZONE

S/N	NAMES OF SCHOOLS	NUMBER OF TEACHERS THAT ARE MOTHERS IN THE SCHOOLS
1	PROGRESSIVE NSUGBE	2
2	ONCHPYSTO OTUOCHA	3
3	ST. JOSEPH'S AGULEPI	3
4	NNAFOR ORIZU COLL. OF EDU. DEMONST. NSUGBE	3
5	FEED MY LAMB NSUGBE	4
6	DISCIPLE AWKUZU	3
<b>TOTAL</b>	<b>6</b>	<b>18</b>

## APPENDIX B

### VALIDATION OF SOFT TOY MEASUREMENT CHART FOR DESIGNING SOFT TOY PATTERNS

Department VTE (Home Economics),

University of Nigeria,

Nsukka.

October, 2008

Dear Sir/Madam,

### VALIDATION OF SOFT TOY MEASUREMENT CHART FOR DESIGNING SOFT TOY PATTERNS

The attached score sheet is referred to as validation chart. It is designed for the purpose of accessing the soft toys, using the soft toysq measurement.

Kindly rate each instrument and item provided on the assessment chart in terms of relevance in drafting and evaluating soft toys for children by using the three point scale of:

3 = very relevant

2 = relevant

1 = not relevant

Useful suggestions for improving the instrument will be highly welcomed.

Thanks for your sincerity.

Yours faithfully,  
Nwankwo Nwamaka Nneka

S/NO	Variables	Very relevant	Relevant	Not relevant
1	DOG			
	Head and body			
	Head gusset			
	Ear			
	Tail			
	Leg			
2	FISH			
	Side body			
	Upper tail fluke			
	Lower tail fluke			
	Flipper			
3	RABBIT			
	Side body			
	Arm			
	Sole			
	Head			
	Upper tail			
	Lower tail			
	Inside leg			
	Head gusset			
4	MOUSE			
	Side body			
	Base			
	Nose			
	Ear			
5	LION			
	Back of head			
	Body-back and side			
	Front body			
	Face			
	Leg			

**APPENDIX C**

Department of V.T.E.  
University of Nigeria,  
Nsukka

Dear Sir/Madam

**VALIDATION OF ASSESSMENT CRITERIA CHART FOR TEACHERS**

The attached criteria chart has been designed for collecting data on safety and shape of soft toys for children in Anambra State.

Your views are requested for validating this assessment instrument as appropriate for each item in the assessment chart. This is in terms of relevance on safety and shape for children using three-point scale of:

Very relevant	.	3
Relevant	-	2
Irrelevant	-	1

any input or suggestion for improving the instrument for data collection will be highly valued.

Yours faithfully,  
Nwankwo Nwamaka N.



S/NO	Criteria for safety	Very relevant	Relevant	Not relevant
1	DOG			
a	Well constructed to withstand the use and abuses by children.			
b	No rough edge			
c	No toxic materials in or on the toys			
d	No sharp point on toys.			
e	No small parts to be lodged in throat, ears and nose.			
f	No glass or brittle plastic.			
g	No parts to entrap fingers, toes and hands.			
h	No long strings.			
2	FISH			
a	Well constructed to withstand the use and abuses by children.			
b	No rough edge.			
c	No toxic materials in or on the toys.			
d	No sharp point on toys.			
e	No small parts to be lodged in throat, ears and nose.			
f	No glass or brittle plastic.			
g	No parts to entrap fingers, toes and hands.			
h	No long strings.			
3	RABBIT			
a	Well constructed to withstand the use and abuses by children.			
b	No rough edge.			
c	No toxic materials in or on the toys.			
d	No sharp point on toys.			
e	No small parts to be lodged in throat, ears and nose.			
f	No glass or brittle plastic.			
g	No parts to entrap fingers, toes and hands.			
h	No long strings.			
4	MOUSE			
a	Well constructed to withstand the use and abuses by children.			
b	No rough edge.			
c	No toxic materials in or on the			

	toys.			
d	No sharp point on toys.			
e	No small parts to be lodged in throat, ears and nose.			
f	No glass or brittle plastic.			
g	No parts to entrap fingers, toes and hands.			
h	No long strings.			
5	LION			
a	Well constructed to withstand the use and abuses by children.			
b	No rough edge			
c	No toxic materials in or on the toys			
d	No sharp point on toys.			
e	No small parts to be lodged in throat, ears and nose.			
f	No glass or brittle plastic.			
g	No parts to entrap fingers, toes and hands.			
h	No long strings.			

Observe if the constructed toys are having the shape of the real animals

S/NO	Criteria for Shape	Very relevant	Relevant	Not relevant
1	DOG			
	Head and body			
	Head gusset			
	Ear			
	Tail			
	Leg			
	Whole toy			
2	FISH			
	Side body			
	Upper tail fluke			
	Lower tail fluke			
	Flipper			
	Whole toy			
3	RABBIT			
	Side body			
	Arm			
	Sole			

	Head			
	Upper tail			
	Lower tail			
	Inside leg			
	Head gusset			
	Whole toy			
4	MOUSE			
	Side body			
	Base			
	Nose			
	Ear			
	Whole toy			
5	LION			
	Back of head			
	Body-back and side			
	Front body			
	Face			
	Leg			
	Whole toy			

**APPENDIX D**  
**SOFT TOYS MEASUREMENT CHART (STMC) FOR DESIGNING SOFT**  
**TOY PATTERNS**

S/NO	VARIABLE	LENGTH	WIDTH
1	DOG		
	Head and body		
	Head gusset		
	Ear		
	Tail		
	Leg		
2	FISH		
	Side body		
	Upper tail fluke		
	Lower tail fluke		
	Flipper		
3	RABBIT		
	Side body		
	Arm		
	Sole		
	Head		
	Upper tail		
	Lower tail		
	Inside leg		
	Head gusset		
4	MOUSE		
	Side body		
	Base		
	Nose		
	Ear		
5	LION		
	Back of head		
	Body-back and side		
	Front body		
	Face		
	Leg		

**APPENDIX E**  
**ASSESSMENT CRITERIA CHART FOR TEACHERS**

**Topic:** Development and Validation of Soft Toy Patterns for Children in Anambra State.

Section A: Personal Data

1. Name of your school \_\_\_\_\_

2. Your Zone \_\_\_\_\_

**Section B**

The following items are designed for the assessment of soft toy patterns for children in Anambra State. Kindly score the safety and shape of the soft toys with all sincerity by placing a tick ( ) in the column that best represents your opinion based on the following scale.

Strongly agree (SA) - 5

Agree (A) - 4

Undecided (U) - 3

Disagree (D) - 2

Strongly disagree (SD) - 1

S/NO	CRITERIA FOR SAFETY	SA	A	U	D	SD
1	DOG					
a	Well constructed to withstand the use and abuses by children.					
b	No rough edge.					
c	No toxic materials in or on the toys.					
d	No sharp point on toys.					
e	No small parts to be lodged in throat, ears and nose.					
f	No glass or brittle plastic.					
g	No parts to entrap fingers, toes and hands.					
h	No long strings.					
2	FISH					
a	Well constructed to withstand the use and abuses by children.					
b	No rough edge.					
c	No toxic materials in or on the toys.					
d	No sharp point on toys.					
e	No small parts to be lodged in throat, ears and nose.					
f	No glass or brittle plastic.					
g	No parts to entrap fingers, toes and hands.					
h	No long strings.					
3	RABBIT					
a	Well constructed to withstand the use and abuses by children.					
b	No rough edge.					
c	No toxic materials in or on the toys.					
d	No sharp point on toys.					
e	No small parts to be lodged in throat, ears and nose.					
f	No glass or brittle plastic.					
g	No parts to entrap fingers, toes and hands.					
h	No long strings.					
4	MOUSE					
a	Well constructed to withstand the use and abuses by children.					
b	No rough edge					

c	No toxic materials in or on the toys.					
d	No sharp point on toys.					
e	No small parts to be lodged in throat, ears and nose.					
f	No glass or brittle plastic.					
g	No parts to entrap fingers, toes and hands.					
h	No long strings.					
5	LION					
a	Well constructed to withstand the use and abuses by children.					
b	No rough edge.					
c	No toxic materials in or on toys.					
d	No sharp point on the toys.					
e	No small parts to be lodged in throat, ears and nose.					
f	No glass or brittle plastic.					
g	No parts to entrap fingers, toes and hands.					
h	No long strings.					

Observe if the constructed toys are having the shape of the real animals.

S/NO	CRITERIA FOR SHAPE	SA	A	U	D	SD
1	DOG					
	Head and body					
	Head gusset					
	Ear					
	Tail					
	Leg					
	Whole toy					
2	FISH					
	Side body					
	Upper tail fluke					
	Lower tail fluke					
	Flipper					
	Whole toy					
3	RABBIT					
	Side body					
	Arm					
	Sole					
	Head					
	Upper tail					

	Lower tail					
	Head gusset					
	Whole toy					
4	MOUSE					
	Side body					
	Base					
	Nose					
	Ear					
	Whole toy					
5	LION					
	Back of head					
	Body-back and side					
	Front body					
	Face					
	Leg					
	Whole toy					



## APPENDIX F

### POPULATION AND SAMPLE DISTRIBUTION OF RESPONDENTS

#### ACCORDING TO ZONES

S/NO	Zones	Number of private nursery schools	Population of teachers that are mothers	25% of schools in each zone	Sample size
1	Aguata	48	183	12	46
2	Awka	60	205	15	51
3	Nnewi	96	312	24	78
4	Ogidi	98	361	25	90
5	Onitsha	130	435	33	109
6	Otuocha	6	18	2	5
	Total	438	1,514	111	379

**(Anambra State Ministry of Education)**