

LEARNING THROUGH PLAY

Equipment of an
african kindergarden
with local resources

Petra Hege

English editing by Gareth Leslie



FOREWORD

-

The lack of adequate facilities and equipments leads to a very difficult environment for many nursery schools in many African countries.

Young children sit together in crowded benches whilst having to pay attention to their teachers. In an attempt to produce „smart and clever „ kids, children as young as three are made to learn letters and numbers.

„Playing is not learning! “

Is this learning approach suitable for the learning development of children?

The development psychologist Jean Piaget, (1896-1980). He observed childrens´ activities and recognized them as cognitive work and concluded that every playing activity was an interaction with cognitive development.

A stimulating learning environment requires equipment.

Although the resources in Uganda are limited, there is still the potential to create adequate low cost child focused learning centers from local resources with support from dedicated, qualified teachers.. This book wants to share some ideas....

May 2020, Petra Hege



Learning through play

STAGES OF COGNITIVE DEVELOPMENT

Jean Piaget

Young animal siblings in the wild play together happily and in doing so develop the skills they need in future.

If our children play, they explore themselves and environment. They try and train skills, they process experiences and imitate adults.

Piaget identified several stages of development and formed his „theory of cognitive development“ from concrete exploration of the body up to abstract symbolic operations. All children in all cultures go through these stages.

I could observe this at retarded children which where almost starved. Their development had stopped. When they got food, felt safe and got the opportunities to play, they started this process delayed. They played game functions in an age of 2 and 4 years, but they went through much faster.

What is the consequence for teachers?

- We have to provide environment and give opportunities for playing
- We have to know about this stages
- We have to observe the child and to realize his stage of development
- We have to interact and make offers of playing according to realized stage of development.

Learn more about the following kinds of playing:

- Game function (sensorimotor exercises)
- Construction game
- Pretend game and Role game
- Rule game

Learning through play

GAME FUNCTION

- Game function body
- Game function objects

Game function

The first kind of play we can observe is in the age from 0 to 2 years. This kind of activities is dominated by repeating of actions. The first play is based on to the baby's body: The baby explores his body enjoying movement, later with objects.

Game function body

Piaget talks about sensorimotor exercises, because the child makes experiences in his sensorimotor perception while acting with hands, eyes, ears nose etc. when it for example sticks the finger in the mouth, grabs...

If the child is successful with his action, because somebody reacts or the baby enjoys itself, it will repeat.

Game function objects

We see babies grabbing for persons and objects. It deals with them. The baby makes experiences that it effects, so it will repeat. We know babies throwing objects away. When they get the object back they throw it away again.

The behavior of young toddlers includes activities like:

- beat
- shake
- pull
- push
- rub
- throw
- in and out
- pull apart

While this self-acting exploring with objects the child is making experiences about materials. It is getting knowledge about shapes, structures, size, weight, colors of objects.

Learning through play

CONSTRUCTION GAMES

Constructing games

means to construct new things with elements of the environment. For this the child uses a variety of methods:

- stacking,
- sorting,
- assembling/disassembling
- molding

The child wants to achieve a goal and tries by:

- making a plan,
- choosing materials
- being faced to challenges how to solve problems
- having to be creative
- be able to test his ideas

For constructive play children need their experiences of game function.

Learning through play

PRETEND

• GAME

ROLE GAME

Pretend game

In the age from two and a half years children do fictive activities. They pretend to do something even if the objects are not around and the situation is actually not given. It is the first abstract skill of the child, because it knows that things exist even if they are not around. They use objects in a symbolic, abstract way.

Role game

In these games children act out or perform a persons they are not in reality. Mostly they use objects for their pretending activities and give them a different meaning (e.g. a stick for cooking and stirring).

This kind of playing has many functions:

- Children learn social behavior because they play social rules: e.g. to be a mother and care for the baby.
- They imitate adults behavior and what they've seen. Through playing they train understanding of the world
- While playing they play out their experiences, observed events in real life, their positive and negative feelings.
- They try to solve problems and train social skills.

Learning through play

RULE

•
GAME

Rule games

Playing board games presuppose a certain cognitive stage of development and comprehension of rules.

The child must be able to talk and understand abstract rules.

It requires self-regulation by the children who play.

By playing board games children learn to accept rules, to accept frustration if they lose.

Games with dices are an opportunity to get an understanding of sets and numbers.

Games with rules are often characterized by logic and order and as children grow older they can begin to develop strategy and planning in their game playing.

Learning through play

AREAS IN EARLY CHILDHOOD DEVELOPMENT

The **Ugandan Framework of EACD** suggests to provide several areas in classrooms of nursery schools.

In this book you will find ideas to create areas for providing a child-centered learning environment with local resources which are:

- Welcoming and appreciating
- Game function
- Pretend games and Role games
- Construction area
- Fine Motor skills
- Rule Games

according to the development stages of children.



Welcoming and appreciating the children



Wellcoming

Children should feel safe and well in the kindergarten.
This is the condition for learning.

If somebody is waiting for me, welcoming me when I arrive, I am happy.

If my works are appreciated e.g because they are presented, I feel proud., get self-confidence. I will try to do more and even better.

Some possibilities to achieve this are:

- welcome every child every morning personally
- every child has a place with his name at school to keep his things (e.g. a wardrobe or for shoes)
- sing a song where you name all present children
- make an attendance board where every child can pick his name and hang up
- talk in the morning circle about who is missing
- have a place to hang up some of the children work





game

function



In the age up to two years children explore things about their features. That's why they need objects of daily life like cups, plates of plastic, empty bottles and boxes. They will deal with them:

You can fill bottles with sand or water with some dish soap (add some

Toddlers love to fill sand and water in and out, they stack, they fit, they pat....

They train their sensorimotor skills which are a base for later learning areas





Wisi mattis leo suscipit nec amet, nisl fermentum tempor ac a, augue in eleifend in venenatis, cras sit id in vestibulum felis in, sed ligula.

Role playing games



Dolls

of banana leaves

- You need dry banana leaves
- put them in water in a busked for some time for soaking
- wring them out before you use them
- make a small ball for the head.
- put some wider stripes around the head, fix them under the head with small strings, make a knot.
- take some small strings for arms and lay them between the wider stripes.
- fix again with small strings for the hip.
- don't forget to make knots with small strings for shoulders and hands.

or tailored

- Ask one of the tailoring women to tailor nice dolls and babys for you
- Children like to put closes of dolls on and off





Cars

Boys like cars and moving them.

You need

- an empty bottle or jerry can,
- bottle tops, something to make small wholes (needle or nail and hammer)
- 2 long sticks (better than 4 short ones)
- make small wholes in the middle of the coddle tops and on the bottle.
- put the sticks trough
- outside you could fix the tops with e.g. play dough

The same can be made with empty rolls of toilet paper.





Shopping

- pick up empty cartons from the supermarket
- you can color them
- they are used as shelves for the shop
- fill them with items of the daily life (toilet paper, empty packagings, wrappings and boxes of e.g. butter, flour, milk)
- Create fruit and vegetable with newspaper, paste and color.
- For producing paste look in this book.
- take old newspaper and tear snippets
- make a ball (for e.g. tomato) or a sausage (for e.g. banana)
- reap the snippets of newspaper with paste
- cover the model (ball or sausage) with the reaped snippets until it gets the right form
- it has to dry over night (make sure, that it doesn't stick on the ground surface)
- After drying you color with the right color

Ready are your fruit and vegetable for the shop!



Wisi mattis leo suscipit nec amet, nisl fermentum tempor ac a, augue in eleifend in venenatis, cras sit id in vestibulum felis in, sed ligula.

Building and Construction



Stones

can be collected and painted in different colors.

You need:

stones, brushes, colours



Maize

after removing the corn you get the corncob.

You need:

maize, brushes, colors





Wooden blocks

Timber in different sizes can be produced by a carpenter in different sizes:

With color you can get different colored blocks.

Bottle tops

Collecting bottle tops from bottles. Ask your friends and family to do it.

You can make serial pattern, sorting, counting, playing shop,.....

Play blocks

They unfortunately have to be bought in shop.





Rule games



Memory

Bottle tops

- collect bottle tops in one color
- put a bottle top on a white paper and circle with a pen around that you get a circle
- repeat until you have 20 circles
- draw small pictures of objects in the circle (g. flower, duck, tomato, ship...)
- you need 10 motives
- draw each motive twice

or

Flashcards

- **y**ou need manila papers
- cut out 20 squares in the same size
- draw small pictures of objectss in the circle (g. flower, duck, tomato, ship...)
- you need 10 motives
- draw each motive twice

Rules

- * Mix up the cards.
- * Lay them in rows, face down.
- * turn over any two cards.
- * If the two cards match (picture an word), keep them.
- * If they don't match, turn them back over.
- * Remember what was on each card and where it was.
- * watch and remember during the others players turn.
- * The game is over, when all the cards have been matched.





Jig- Saws

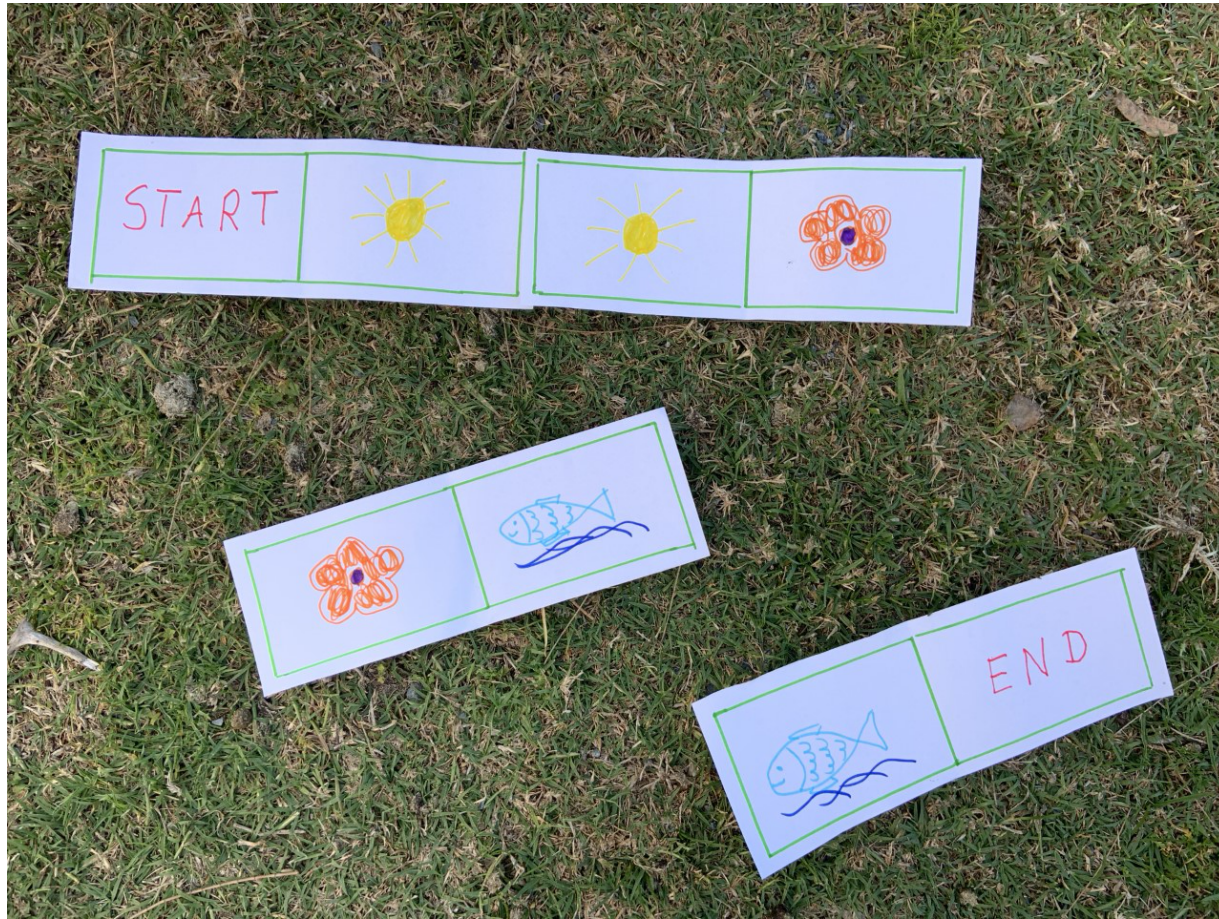
children like very much. to try if the pieces fit and they are happy if they get the picture after finishing. Start with less pieces (3-4).

Cardboard

pick up cardboard from the supermarket
cut two rectangle slices in the same size
first slice is the `groundwork`, fundamental-
cut out of the second rectangle a smaller one, so
that the rest will be the frame for the jig-saw
stick the frame on the fundamental rectangle
draw a picture on the smaller rectangle
cut this picture into pieces
fitted place the pieces into the frame

Wood

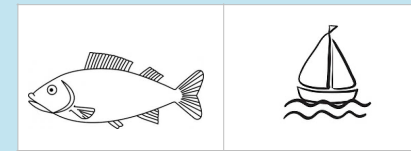
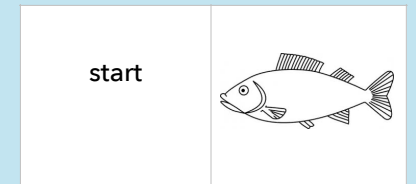
do the same with wood



Domino

Flashcards



- you need Manila paper
- cut e.g. 10 rectangles like:
- draw a line in the middle
- add pictures, the first of a card must match to the last one of another card
- the first card starts with „start“
- the last card ends with „end“

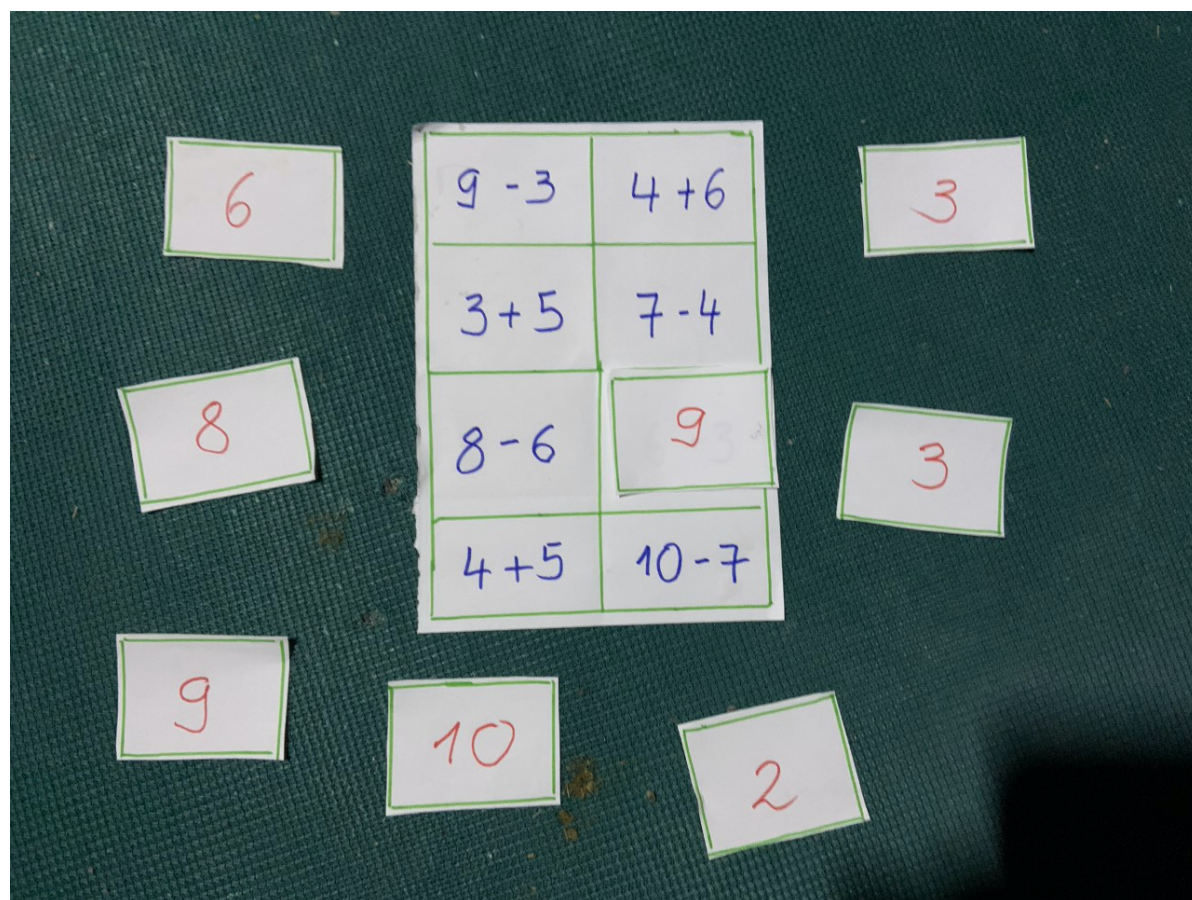


Wooden sticks/poppicle sticks

- get some wooden sticks
- color the ends with different colors or maybe sometimes the same
- match always the same color if you add a new

Rules

- Mix up the cards.
- Lay them down.
- Start at 
- Add the next card with the right word to the picture.
- You finish with this card .



Lotto

Flashcards

- You need manila paper, paper, pencils and tape.
- One board card with 6 or 8 fields/boxes.
- Each box has one motive (picture, number, letter, word or task e.g. 5-2)
- For each field/box you prepare a separate card in the same size with

a) the same picture
or

b) the solution for the task (e.g. 3)

Rules

- The player takes a playing board with the pictures.
- The cards with the words are placed face down not the table.
- Turn over one card and read the word.
- Match it with the right picture omg the playing board.



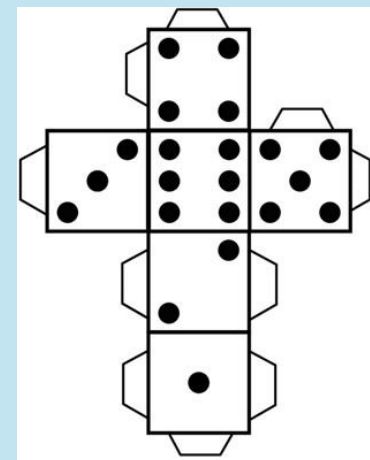
Dices

boardgames with dices offer a wide range of learning possibilities. You can train nearly every subject by creating an appropriate dice game.

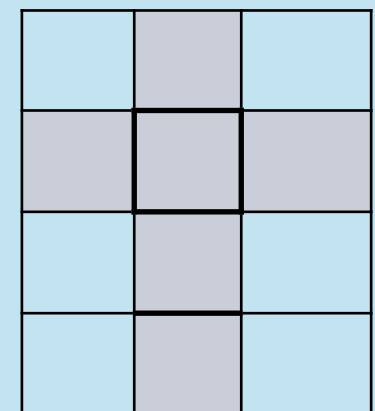
First of all learns the child counting and realizing every number is an own according to the steps it setzt seine Spielfigur. It von alleine sich aneignen number sets because of the dots of the dice.

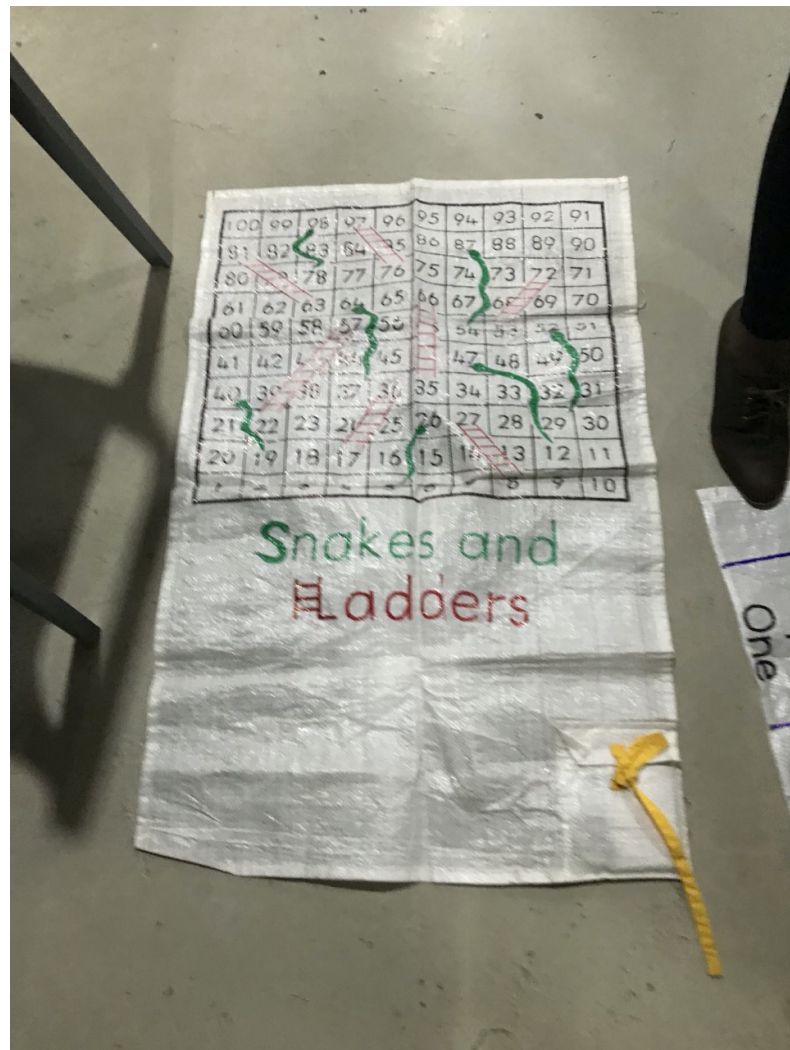
You can basteln a dice yourself:

- create a chart with 3x4 boxes
- cut out the colored ones
- trage ein the dots like you see in the unterstehenden example
- fold(knick at the fat printed lines



•tape the
edges
and
corners





Boardgames with dice

You need

- white sacks
- Edding permanent

For playing you need a dice and pawns.

Create numberless games to any subject.

"Snakes and ladder" or „Ludo" are famous board games.

You need start and end, then fields to move through.

Some fields can give tasks or asking questions.....





Wisi mattis leo suscipit nec amet, nisl fermentum tempor ac a, augue in eleifend in venenatis, cras sit id in vestibulum felis in, sed ligula.

fine motor skills



Chalk

- take a pencil or a stick,
- wrap it in a piece of paper
- stick together at the ends
- remove the stick/pencil
- you got a roll, close at the bottom
- mix 1part water and one part Gypsum(you can add color)
- fill into the roll
- let dry overnight
- remove paper



Chalkboards

Give every child a chalkboard, then teacher can give an exercise.

Every child can solve and hold up the board, so the teacher gets a quick overview.

- piece of wood e.g. 40cm x30cm
- paint with chalkboard color



Paste

is needed as glue or for creating objects e.g. for a shop

1 /4 cup (150g) kassawa flour

1 cup (500g) water

Cook and stir

Cook and go on sitting to avoid the formation of glob

Fill hot in containers (e.g.glasses)



Glue

is needed for arts, crafts etc.

1 cup (125g) corn- or foodstarch

1 tablespoon vinegar

1 teaspoon salt

1 cup (500g) cooking or very hot water

Mix hot water with vinegar, salt and stir all

Add corn-/foodstarch



Snippet picture

Use old papers, news or colored paper.

children tear snippets

they get a picture with an outline of an object

stick snippets into the shape

Children can fill shapes and forms (Letters, Numbers, Animals,...) with snippets.



Snippet picture with balls

Use old papers, news or colored paper.

children tear snippets

crumble snippets into a ball they get a picture with an

outline of an object

stick snippets into the shape

Children can fill shapes and forms (Letters, Numbers, Animals,...) with snippets.



Play dough

1 cup (500g) cooking water
 4/5 (400g) cups flour
 2/5 (200g) cup salt
 3 spoons oil
 2 spoons citric acid
 food color

- Mix and knead all ingredients
- divide in 4 parts
- add food color one per part last
- keep in an airtight container

Salt dough

is an alternative to clay.

- two parts of flour (e.g. two cups)
- one part salt (e.g. one cup)
- mix both and add water until you get a solid dough

Children can form objects and you can dry it.



