Early literacy and numeracy development



Describe the learning context

The children aged five years old were matching, writing number symbols and copying number words (for those who can) from 1 to 10 as they created their number book with stamps. The children used stamps to quantify the numbers based on the number symbol reflected on each page. Five children sat around the table, getting ready for the activity. Child A began stamping number one on one page, followed by two, then three on subsequent pages. Child B also began stamping on the pages. Child A saw Child B who had more than 6 stamps on the number ' 5' page told Child B. " you are wrong, is number 5".

Child B looked at me and I told Child B, " it's alright, let's do it again." I asked Child B as I pointed to the number symbol " What is the number?" " 5" replied Child B and Child B printed two stamps on the page. A while later, Child A has completed printing stamps on the number book and began copy writing of the number words. Child B then completed the stamping of number with my assistance. Child B mumbling counted it while printing the stamps reflected on the page. Then, Child B moved on to copy writing on the number symbols. When the children have completed, they had a sharing session on their number book.

Analyse the learning for conceptual ideas I have explored in the readings

Based on the above learning context, the analysis of the following numeracy and literacy ideas are observed. Sociocultural context has happened in this small group learning. Rogoff's three foci of analysis – personal, interpersonal and community provide a useful tool for analyzing young children. It emphasized how children's thinking is incorporated with and constituted by the setting, collaboration, signs and cultural tools (Robbins, 2007). From the personal focus of analysis, we can observe how Child A transforms during the course of the activity, and how Child A collaborate and relate to others (interpersonal focus of analysis) in the setting (contextual focus of analysis).

Vygotsky described Child B's muttering as ' private speech'. He appeared to be giving himself guidance and reassurance that his written answer was correct, showing a development in his cognitive thinking as he selected, matched and gave himself confidence (Ahmed, n. d.).

Zone of Proximal Development (ZPD) describes the area between the child's level of independent performance and what the child can do with support (Zone of Proximal Development and Scaffolding, n. d.). From the observation, Child A has reached her level of independence of understanding the quantifying of numbers and thus, she pointed out to Child B's correction that he had six stamps on the number page five.

Children learn these number names by imitating adults and as they practice counting, they often say nonconventional sequences of number names (Reys, Lindquist, Lambdin, Smith, Rogers, Falle, Frid, Sandra & Bennett, 2012). Children reflecting counting principles may show confusion when counting, however, with encouragement and opportunities to count, children will develop efficient counting strategies with any specific directions (Clements & Sarama as cited in Reys et al., 2012). Child B is observed to face difficulties in counting beyond five, thus, with assistance and encouragement from the teacher, he was able to complete counting one to one correspondence up to ten.

Child A's pointing of the number symbols to Child B assists in her recognition of symbols . Child A in this case is more knowledgeable other (MKO), who has a higher ability level than Child B, in creating the number book (McLeod, 2014). This is useful to Child B as he attempts to store knowledge and information making a connection of the symbol to the word. Eventually this knowledge will be stored as *symbolic representation* and classified under different categorizations, as proposed by Bruner (McLeod, 2008) .

Number symbols are essential prerequisites for children to move on to more sophisticated mathematical algorithms that include the use of symbols for relations, operations and punctuations. Children must make meaning of what they are learning so that they can understand the reasoning behind the operations (Sperry, 2009). However, understanding of mathematical concepts has to be built first to help children further their understanding and learning in abstract terms, such as symbols.

As such, Child B is making meaning of the symbols and number words, connecting the two, constructing his own mental image and understanding and modifying his previous knowledge, after interaction with his peers, therefore creating a new schema (McGee & Richgels, 2008).

The speech of the children served different purposes, as described by Halliday (as cited in McGee & Richgels, 2008). Child A's use of regulatory language attempted to control Child B's actions by highlighting his errors to https://assignbuster.com/early-literacy-and-numeracy-development/ communicate information by guiding and giving the correct information to

Child B.

Literacy practices are important to everyday lives of children and it does not take place in isolation to other social practices and interactions with adults and peers (Makin, Diaz & McLachlan, 2007). Conceptualisations about literacy must take account of the social practices which include listening speaking, writing, viewing and critiquing (Makin et al., 2007). From the observations the children were engaged in speaking, listening to others, as well as writing of the numbers symbols and words.

According to Vygotsky, he emphasized that learning occurs through social interaction and he viewed that language is an important tool for communicating with the world (McLeod, 2014). Through the interaction between the children and the teacher, the children developed number sense and picked up literacy skills.

Lesson Plan – Enhancing this learning situation with a new literacy and a new numeracy outcome in the same lesson plan

Lesson plan for the five years old

Literacy The children will be Objective able to:

• Use words in the proper sentence structure

- Write number symbols
- Copy writing

or spell out

three letter

word such as '

ten'.

Response to

questions and

answer

appropriately

•

Numerac The children will be

y able to:

s

- Objective Use or
 - Use one to one

correspondenc

е

• Counting in

sequence from

1 - 10

• Compare long,

short and

same using

the children's

names and

more or less.

Answer

questions to

demonstrate

an

understanding

of " How

many" objects

up to 10.

Social The children will be Objective able to:

S

• To be able to

build up their

self-confidence

by giving them

opportunities

to present in

front of the

class

individually or

in groups.

- To be openminded and be
 - receptive to

suggestions

Introducti • Introduce the

on counting

number book

titled Ten

Black Dots by

Donald Crews

to the

children.

• Read the story to the

children.

• Teacher to

give out strips

of paper with

the children's

name written

on it.

• Using the

cooperative

learning

strategy,

round table,

each chair is

labelled from

- one to ten and
- children will go
- to the number
- after they
- counted the
- letters on their
- names.
- Teacher will
 - have a
 - discussion on
 - whose names
 - are long, short
 - or they are the
 - same.
- Main Read the story
- Activity to the children
 - again. This
 - time, teacher
 - will
 - demonstrate
 - the story by
 - stopping with
 - each picture
 - and counting
 - the black dots.

Teacher to ask

questions such

as, " How

many dots do

you need to

make the eyes

on a fox?

• In a large

group, teacher

to ask

questions and

have them to

demonstrate

on the board.

• For

example,

- teacher
- will have

a picture

card with

two

missing

dots on

the eyes

of a dog

missing
dots on
the
balloons.
Encoura
ge the
children
to come
forward
to
complet
e the
pictures.
Then,
have the
children
to
respond
by
asking, "
Which
one has
more
dots?
How do

you

know?"

- Then, children
 - to take turns
 - to paste the
 - correct
 - number
 - symbol to the
 - number of
 - dots on the
 - board.
- Teacher to
 - encourage the
 - children to
 - come out with
 - creative ideas
 - how on the
 - dots can turn
 - into based on
 - the number of
 - dots given.
- A book with
 - five pages,
 - including the
 - cover and
 - back of the

book will be

provided for

children

• Then, in pairs,

children to

create their

very own story

about the 10

black dots.

Using their

creativity, they

will design

their cover

page with the

title and their

name on the

front.

• Children will

use black dot

stickers to

make their

own story

through

drawing and

- they will write
- their story line

on each page.

For example, "

1 one dot can

make a clock."

They will have

to through the

numbers in

sequence. For

those children

who are still

developing

writing skills,

they are

encouraged to

write the

number words

and symbols.

Closure • Once

completed,

using round

robin, children

will take turns

to read their

story to the

class.

- At the same time, their peers will share their thoughts about their friend's story on how they feel about it and the teacher will record the responses in LEA. This forms part of their peer assessment.
- The teacher

will then

- document the
- responses and
- leave the
- children's
- story at the
- learning area
- for children to

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revisit their

work.

<u>D iscussion with numerous links to the readings to justify the literacy and</u> <u>numeracy content in your lesson plan</u>

In the lesson plan, cooperative learning strategy is used as to get the children create interest in learning. Cooperative learning strategy does benefit the young children as it encourages group processes, foster social and academic interactions among peers and rewards successful group participation (Lyman & Foyle, 1988). Linking back to Rogoff's three focus of analysis, the cooperative learning strategy helps the child to move from being aware of him or herself to becoming aware of other children. In one of the research findings, it had shown that cooperative learning activities do improve children's relationship with peers, especially from different culture. When children begin to work on task, cooperation can open up opportunities for sharing ideas, learning how others think and react to problems and practising oral language skills in small groups (Lyman & Foyle, 1988). It also promotes learning dispositions and positive feelings towards school, teachers and peers. John Dewey also believed that children learn best for highlighting the positive social value of education and the importance of educators where educators listened to the children then facilitate them through activities (Hill, 2012).

Based on the lesson plan, a story book is used to enhance the learning situation with a new numeracy and literacy outcome. Early childhood educators have been increasingly recognized the potential of using storybooks and picture books to introduce mathematics learning for children even though the children may not immediately relate it with math concepts and ideas (Flevares & Schiff, 2014).

Taking in from Vygotsky's sociocultural perspective, some books have created a space for interaction and sharing or ideas presented by or analysed through the illustrations and text Flevares & Schiff, 2014). Bringing in shared literature mathematics engages and socializes children into literacy aspect of shared reading and learning and the books can also be a springboard to address math concepts both at school and at home Flevares & Schiff, 2014). In the lesson plan, children not only learn about numbers, they also learned to identify high frequency words, number words as they read and as well as practicing their writing skills.

van den Heuvel-Panhuize and Elia (2012) have furthered explained that children's books have an important role in teaching mathematics as the authors either refer to children's books as a learning setting in which children can come across mathematics or as a tool that enhances to the learning of mathematics. In another study, it supports the idea that reading picture books to children has a lot of potential for mathematical ideas to children even without any prompting or any instructions (van den Heuvel-Panhuizen, van den Boogaard, & Doig, 2009). With reference to the lesson plan above, the storybook sets as a basis to introducing one to one correspondence, number sequencing and as well as reading and listening skills. Howard Gardner appealed multiple intelligences are used concurrently and it balance each other as individuals developed skills (Brualdi, 1996). In the lesson plan, several intelligences are observed:

Mathematical intelligence is seen where children used their logical thinking skills to work on number sequencing and one to one correspondence; Linguistic intelligence is used when children practice their speaking skills during the sharing session, writing their story, number words and symbol.

Interpersonal intelligence is observed as the children work together, giving ideas objectively, creating their story and as well as intrapersonal skill where children build up their confidence level and speaking skills during their sharing session.

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