

MATERIAL DEVELOPMENT FOR EARLY CHILDHOOD EDUCATION THROUGH THE USE OF TECHNOLOGY

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Abstract

Children tend to be more interested and engaged in the learning processes if they are shown and given attractive materials and teaching media. However, it is often found that early childhood education schools do not have many choices of materials or teaching aids. It is mostly because of the lack of fund. The schools tend to think to buy the materials instead of developing them, while it is no doubt that good and attractive materials are mostly expensive. This paper attempts to discuss the ways in developing less-costly teaching materials for pre-school children by utilizing the use of technology. It starts with the discussion about materials needed by pre-school children based on early childhood education standard. It then goes to the discussion about the ways of developing materials from the use of computer technology. The last part of the paper will present examples of materials generated from the internet.

Keywords: teaching materials, early childhood education, development, technology, internet

A. Introduction

Early childhood education is one of government's ways in developing the quality of education in Indonesia. It is an education given to children of 0 up to 6 years old, well known in Indonesia as PAUD. The national education system law 2003 states that early childhood education serves as a starting point in giving education to children in order to prepare them to be ready to go to the elementary schools. Early childhood education is believed to be very important not only in building children's capacity in learning, but also in developing their social and emotional intelligence. Hence, it is a need to conduct the teaching and learning process in such a way that stimulates the children's physical and psychological development.

One aspect that supports a good teaching and learning process is the availability of materials. Children are more excited and easier to be engaged in the teaching and learning process if the teachers make full use of interesting things and objects (Scott & Ytreberg, 1990). Materials here refer to the tools which can help teachers to explain concepts to students in order to convey meaning. Materials can be in any forms, starting from the very simple one such as black/white boards to the very sophisticated one like educational software.

B. Materials for Early Childhood Education

Based on the standard of early childhood curriculum development, the content of teaching and learning for children are divided into two big groups based on children's age. For children of 0 up to 3 years old, the content of teaching and learning gives attention to the development of: self-concept, emotion, society, physic, language and cognitive. While for children of 3 up to 6 years old, the teaching and learning content gives emphasis to the development of literacy, mathematical concept, natural and social science, art, technology, and process skill.

To optimize the quality of teaching and learning process in early childhood education, materials should better be based on the content of learning in order to achieve the expected competence of the learners. Therefore, the schools should provide the teaching aids which support all activities related to children development as stated in the standard of early childhood curriculum.

However, most early childhood education teachers rely heavily on materials from the commercial books and teaching aids provided by schools. Since teaching aids are relatively expensive, schools and teachers just only have very limited types of teaching aids (Khotimah, 2011). This condition may cause the teaching and learning processes are not optimally run.

Among all types of materials needed by early childhood education, some of them can be created or made using the technology, especially computers. Teachers can create a lot of various materials with this tool using particular software, especially when it is connected to the internet. The knowledge of how to optimize the use of computers and internet may greatly help teachers as well as schools to provide various types of teaching aids with low cost.

C. Picture Cards

Picture cards, or often called flashcards, are perhaps the most frequently used teaching aid in the classrooms. The cards are very helpful in introducing and developing students' language competence. They can be created by using **Paint** in Windows program. Teachers who are skillful drawer can utilize this program in creating various pictures under particular themes. Besides **Paint**, there are several other software that can be used in creating drawings, such as **Adobe Photoshop** and **Correl Draw**. The drawings can be made into very big ones for class work, medium size enough to be clearly seen for small group of children, or smaller ones for pair/individual work. The self made drawings then can be printed using regular home or office printer. By doing this, teachers can produce as many drawings or pictures as they like with spending relatively low cost. The materials can be used over and over again and teachers can always add the variety of materials.

D. Board Games

A board game is a game that requires the players to move or place pieces on a marked board according to a set of rules. The board can be made of carton, and it is suitable for almost every subject. Teachers can create board games using the same program as in making picture cards. Teachers can create board games under one topics or combination of some topics. Some instructions or questions to stimulate children can be added in each step on the board. For example, under a picture of three bananas, an instruction can be written like this: *Count the bananas. Go 5 steps if you are correct or move back 1 step if you are wrong.* Instruction like that can be used to introduce or to practice the knowledge of vocabulary about fruits as well as to enhance students' ability to count.

E. Word/Sentence Cards

Using Microsoft Office teachers can create some word cards and even sentence cards. Word cards can be used by children to learn to form sentences. The students are asked to arrange set of words to form a correct sentence and then display it to the class. To display the work, teachers can prepare a board with stapled papers to hold the cards. Fig. 1 is the example taken from Scott and Ytreberg (1990).

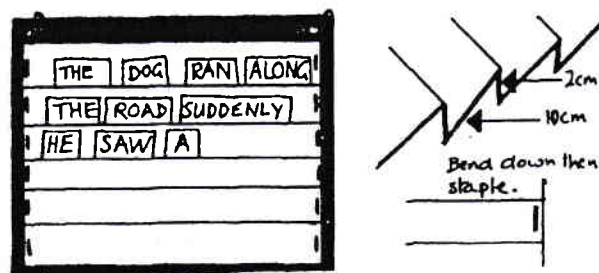


Fig. 1 Word Cards Display

F. Students' Worksheet

It is very common that teachers asked the students to buy some commercially published students' workbook, while actually they can create these kinds of materials by themselves. All they have to do is to identify the competencies the students should accomplished then decide the right activities to be created using their computers. For example, the students are expected to be able to

color things according to the teacher's instruction, and then the teachers can create or draw some uncolored pictures using computers and then print them out. The materials can be saved and re-printed to be re-used for the future.

G. Small Books

Children like to hear stories. Teachers can create small books containing their own stories accompanied by some pictures using Microsoft Office. The books can be in any topics like numbers, fruits, color, food, even in the form of children stories. These materials are then printed out and can be copied for each student to have. They can also be re-produced for the future use.

H. Generating Materials from the Internet

Materials mentioned above are not only able to be created by using computer software but are also able to be generated from the internet. For teachers who are not very skillful in creating their own drawings, they can simply download those kinds of materials from the internet. Internet is undoubtedly a great source for everything and by utilizing it optimally teachers' job may become much easier. Pictures cards, board games, word cards, various students' worksheet, and even small books are all able to be found and downloaded from the internet. However, it is actually not easy to find the right sites for teachers to be able to download suitable materials for their students. This paper tries to help giving useful information about sites the teachers can visit to enrich their materials for teaching children.

I. ESL Kids Lab (<http://www.eslkidslab.com/flashcards/index.html>)

This site has hundreds of downloadable flashcards or picture cards. These flashcards are very helpful in introducing and practicing new vocabulary. The flashcards are in PDF printer-friendly format and available in two varieties of size: small size, 4 pictures in a single page, or big size, one picture in a page. The flash cards are arranged under particular topics such as alphabet, fruits, body parts, shapes, greetings dialogue, animal, family, and many others.

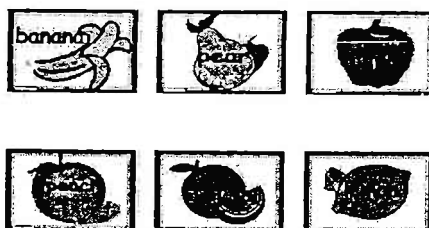


Fig. 2 Example of Flash Cards

J. Free Ready to Print Children's Picture Books (www.kidsenglishbooks.com)

This site gives the visitors free printable children's books which are very helpful as a teaching aid in the classroom and even at home. Teachers can simply print the small books and read them to the students and even teach them how to read with these attractive and simple books. Each book has a matching audio narration mp3. Teachers can also read the books online with the online reader.



Fig. 3 Example of Picture Book

K. PBS Kids Go (<http://pbskids.org/go>)

Besides interactive games, film clips, PBS Kids Go also provides various downloadable materials especially for students' work sheet such as coloring page, cut and paste sheet, connecting the dots sheet and many more. Fig.4 gives an example of the activity of identifying animals' footprint as well as recognizing their homes.



Fig. 4 Example of Students' Worksheet

L. Conclusion

These types of materials as well as the sites suggested here are hoped to be able to give some insight for teacher of young learners. They are actually based on personal experience of teaching English to children. That is why the materials presented here are mostly related to the development of children's language capacity. However, teachers of young learners should be very creative and thoughtful to make full use of the information from this paper in order to improve their quality in teaching young learner not only for language competence but also for other competencies expected from young learners at low costs. Adaptation and development are strongly suggested to create various and numerous teaching materials. Further exploration and experiment are needed to get the more real and appropriate result.

References

- Departemen Pendidikan Nasional. 2007. *Kerangka Dasar Kurikulum Pendidikan Anak Usia Dini*. Jakarta: Departemen Pendidikan Nasional.
- Khotimah, Khusnul. 2011. *Hakikat dan Prinsip-prinsip Pendidikan Anak Usia Dini*, (Online), (<http://blog.elearning.unesa.ac.id/khusnul-khotimah/hakikat-dan-prinsip-prinsip-pendidikan-anak-usia-dini>), retrieved on May, 4th 2012.
- Scott, Wendy A. & Ytreberg, Lisbeth H. 1990. *Teaching English to Children* (Neville Grant, Ed.). New York: Longman.