

TMA 02 - Supporting children's mathematical, communication, language and literacy development

Introduction

The two activities that I have chosen to discuss are Communication Language and Literacy, to be able to retell the main parts of a story and to write about significant incidents from the story and for Mathematical development, to be able to recognise coins of different value up to twenty pence. Both activities take place in a year one class and are adult led. The activities are guided by the National Numeracy Strategy (NNS) Solving Problems, National Literacy Strategy (NLS) Fiction and Poetry: Stories from fantasy worlds and Programmes of Study (POS). Ma2 Number and Algebra & En1 Speaking and Listening, En2 Reading and En3 Writing. (Dfee 1999). (Please see Appendix A for lesson plan.)

Mathematical learning

The mathematical learning experience took place in the classroom shop in a small group of four and lasted approximately 20 minutes. Chapter 15 states how 'Young children do not learn most effectively in large groups' (Devereux and Miller, 2004, p.146). I supported the lower ability group so it was important that the activity did not last too long to prevent them from becoming bored or stressed. The aim was to recognise coins of different values up to twenty pence. First we went over the coins to make sure they knew what each one represented. Then the children had to find answers to simple number problems e.g. 'I want to buy something for 1p and something for 5p, how much will it cost altogether?' The children wrote their answers on a whiteboard and used a selection of coins to help. (Please see Appendix B for worksheet). We completed the practical side of the activity before going on to completing a worksheet. As Linda Pound explains in chapter 15 'mathematics is an essential element of young children's learning' (Devereux and Miller, 2004, p.145).

The activity relates and builds on the children's previous learning and the planning was based on the children's summative assessments. This is looking back on children's work to see what they have achieved and planning accordingly to their next stage of development. Their previous encounter with money problems when observed showed that they:

- ➔ Could recognise some coins but not all
- ➔ Confused 1p and 2p coins as being the same
- ➔ Did not understand their value

Through engaging in these activities and having an adult present to support is building on the children's learning all the time by challenging children's thinking, this also builds on their Zone of Proximal Development (ZPD).

Reflection on Learning

As a teaching assistant I supported the children in their learning and asked lots of open questions. The Open University states how 'open questions offer the benefit of allowing adults to have a greater insight into children's thinking'. (Study Topic 7, 2004b, p.21). This built on the children's ZPD. This was clear from the notes taken during my formative assessment which showed that the children:

- ➔ Recognised different coins up to the value of 50p
- ➔ Understood the value of each coin e.g. 10p, 5p
- ➔ Able to use mathematical vocabulary involved such as adding, subtracting, total, change, altogether
- ➔ Able to solve real life problems

The practical side of the activity offered the children a meaningful learning experience; I believe that through this practical application children learn more because they are 'doing, seeing and touching' rather than filling out worksheets alone. Study Topic 7 states that 'children need opportunities to develop mathematical processes and concepts through meaningful experiences to consolidate their learning before being required

to record in writing'. (The Open University, 2004b, p.24). The activity fostered creativity because it allowed the children to engage in an activity which was relevant to their learning and use their imaginations when buying different items from the shop and gave them control of their own learning when identifying problems. It also offered the opportunity to discuss with one another the outcomes. Devereux and Miller stated that 'creativity can be seen as always involving some sort of collaboration or thinking together'. (Chapter 11, 2004, p.109). I learned that making maths fun makes it easier for children to learn, not only does it give them more confidence but makes learning more memorable, study topic 7 states that 'the chemistry of the brain changes when learning in enjoyable, making the brain more receptive to learning' (The Open University, 2005b, p.16).

Having the children in a group gave them the opportunity to work together to solve real life problems, study topic 7 explains how 'peer support has been found to have a beneficial effect on mathematical thinking' (The Open University, 2004b p. 26). I have learned that learning from each other and learning from exploration will support all learning.

Observing the lesson and looking at the children's completed worksheets showed me that they understood and learned about real life problem solving. (Please see Appendix B for completed worksheet). They used either blocks or put the number in their head and counted on with their fingers to find the answer to the problems. As Devlin reminds us mathematics is not only about number but 'about life'. (Chapter 14, p.137). A good extension activity for the children would be for them to recognise and appreciate the value of all coins and to introduce the pound. Such activities could be used on the interactive whiteboard with appropriate maths games such as 'money counts' which is in line with the National Numeracy Strategy.

Communication, Language and Literacy Learning

The literacy learning experience took place within the classroom. The adult led activity involved the reading of a book called 'Peace at last' to the whole class and then to write the beginning, middle and ending of the story depending on child's ability. (Please see Appendix A for lesson plan). According to the Open University, 'through everyday interactions, adults can use books to provide children with the basic rules for learning about literacy'. (Study Topic 6, 2004a, p.15). The learning objective was to retell the main parts from a story and to write about significant incidents from the story. The session started with discussion of the front cover and talking about the author and illustrator. This gave the children the opportunity to predict the content and type of book. We talked about what might happen throughout the book and what type of characters we might see. A pointer was used to help the children follow the text as the book was read out loud. The introduction to the book was read next to encourage the children to want to read it. I went on to read the book stopping at relevant points to allow the children to predict what might happen next. The children were asked lots of questions to draw them into discussion. They were keen to participate in the reading. The children were encouraged to participate in the story by performing various actions and sounds to mimic the events in the journey.

This activity relates and builds on the children's interests and previous learning in the area of Communication, Language and Literacy. The children's previous development in this area is based on observations, recordings and assessments. Through these assessments the children's previous areas of development were:

- To begin to read and write independently
- Begin to use language and actions to explore and convey situations, characters and emotions
- Begin to describe events and experiences

Reflection on Learning

Upon reading the book to the class I stopped at various points in the book to ask questions (please see Appendix C for question sheet & completed worksheets), this was to draw and encourage the children into the session to discuss and respond to what was being read. As stated in Study Topic 6 'the adult role is important in drawing children's attention to print and helping them to associate it with their own word, ideas and experiences'. (The Open University, 2004a, p.15). Even though the activity was adult-led it provided opportunities for the children to join in and have fun and it maintained their interest. Having fun is one of the best ways to learn. The Open University believed using play scenarios for literacy are helpful ways of encouraging children to act in literate ways'. (Study Topic 6, 2004a, p.30). Children of mixed abilities were engaged through the carefully chosen materials and good questioning. Their play was collaborated by having the opportunity to cooperate with others and to be a part of a group, this required social interaction. Through play children can refine and develop their language skills in 'risk-free' situations. (Study Topic 6, 2004a, p.30).

This type of play involved was typical to role-play. They were various types of play involved such as physical, socio-dramatic and communication play e.g. play acting the scenes out. Study Topic 6 states that 'oral storytelling during imaginative or socio-dramatic play allows children to rehearse stories and language heard in other contexts'. (The Open University, 2004a, p.31). Creativity and play are very interlinked. Study Topic 13 says how 'creativity is one of the engines that drive and sustain play'. (The Open University, 2005, p.17).

The children continued to show further development of their literacy skills, this was evident from observing the children's writing. The children engaged in word level work and produced some writing. They were able to retell main parts of a story and write about significant events. Through this shared reading the children learned to apply phonological knowledge to spell words accurately and their literacy development was supported by reading, demonstrating, interacting, scaffolding and talking about the story. Once the children had read and discussed the book

they had the confidence to go to their tables and write some sentences about the story. During this formative assessment I was able to determine that the children were showing development in the areas of re-ordering sentences and predicting words from previous text.

The children's learning could be expanded in this area by providing other literacy props such as puppets and music or instruments to re-enact the story. 'This approach enables children to share their knowledge with other children, while adults support and extend their learning that takes place, while also meeting the requirements of the National Curriculum'. (Study Topic 6, 2004a, p.31).

Conclusion

In conclusion I have learned that the best way to support children in these areas is to provide an environment where play is well planned. Literacy learning in Key Stage One needs to be carefully planned, with consideration for creative development. Even though the literacy curriculum is structured it is important to allow for activities that allow for play and that are fun relevant and motivating for every child. It is through play that children can deepen their learning and is important to a child's development and learning. It is not just physical but also involves cognitive, creative, emotional and social aspects.

The importance of using summative and formative assessments is vital to ensure practitioners can identify and prepare for the next step in children's learning.

References

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