

Support in a mathematics lesson

Jennifer Colloby

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Reading 2

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Ofsted, the school inspectorate for England, suggests that teaching assistants provide important support for up to one-in four primary school children (Ofsted 2003). Jennifer Colloby, a Staff tutor with The Open University, provides a closely observed study of Caroline Higham, a teaching assistant working within the context of a mathematics lesson. Her chapter highlights the involved nature of learning support.

Caroline is employed in a small rural school with just over ninety pupils and four staff including the head teacher. She has worked as a teaching assistant for several years. She has two children who were previously educated at this school. She now works full time, i.e. 35 hours a week. She would eventually like to be a qualified teacher and is studying to complete her BA degree.

Since working at the school Caroline's role has grown, both in the number of hours she is employed and in the nature of her responsibilities. She has responded willingly to these developments. She has responsibility for organising and maintaining the school's reading programme and works closely with the head teacher on this. She enjoys the associated responsibility for children's progress and attainment. She keeps records of the individual children she supports and updates these at the end of each school day and shares them with staff. Caroline's experience has given her increased status in the school. She is invited to and participates in staff meetings.

Parents do seek her out for advice but Caroline knows when to pass them on to teachers. She is compassionate and fiercely loyal to the children. She has commitment, patience and determination.

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Her own work area in the school is welcoming with interesting displays on the walls. Here, she sometimes supports small groups of children or individuals. Her current timetable involves her supporting a group of Year 4 and 5 pupils (9–10-year-olds) each day for their mathematics lesson.

The mathematics lesson

Caroline makes her way to the classroom and greets the class teacher. A quick discussion between them confirms both the plan and objectives for the lesson. For numeracy the pupils are grouped according to ability and she will be supporting a group of four low-attaining pupils.

She counts out pencils and rulers, ensuring that the groups have sufficient supplies. Her preparation for the lesson involved meeting with the teacher earlier in the week (not always easy) so she was aware that the theme was ‘pictograms’. From this planning session she knows which books are needed and hands them out. The pupils are in an extended assembly and arrive late for the lesson. She moves quickly, assisting the teacher in settling the children. She has thought about how she will prompt and encourage children by taking part in the mental warm-up activities. She knows she will need to explain, repeat, assist and encourage her group throughout the whole class activity and group work.

As the lesson begins, she positions herself near her group. Pupils are chanting two, five and ten times tables. This is an animated activity and she joins in. An exploration of mid-way points begins with the teacher asking, ‘What number lies halfway between 20 and 30?’ Caroline’s group offer no answers but she shows an active interest in the lesson, which encourages them in their silent participation. The teacher moves onto the topic of pictograms and talks about conducting a survey on the colour of cars. Pupils volunteer colours such as red, blue, silver, white and gold and the class finds much amusement in the teacher’s drawing of a car on the board. The teacher admits it looks like a submarine and then jokes with the class saying, ‘Don’t criticise and don’t drive one of these particularly on a Thursday morning!’ Caroline laughs and then her group does too.

After 15 minutes of whole class activity the pupils move back to their desks. Caroline goes round the class handing out worksheets. She settles them and then returns to sit with her group. She reminds them what they have to do and Amy is struggling to understand. Caroline explains this again while acknowledging that Beth has progressed to worksheet two. Caroline moves and crouches down beside her. Mistakes are found and Caroline suggests they count together. Beth chants along with Caroline.

As Beth’s confidence grows she returns enthusiastically to her work.

Caroline quickly moves back to Amy, collecting her own chair on the way. Amy is still experiencing difficulties so Caroline moves to the board to make use of the number line as a visual aid. Caroline demonstrates and repeats the activity the teacher did with the class. She checks that Amy now understands by posing questions for her to answer and encourages her to continue.

Caroline moves back to the group. Cassie is not perturbed that Caroline finds mistakes in her work. Caroline encourages her to have another go before shuffling her own chair next to Diana, the quietest member of the group. Diana has made little progress and Caroline explains the task. Cassie asks for help and Caroline moves to her but is aware that Diana is struggling again. Cassie is now trying to work out the quantities represented by the shapes on pictograms and Caroline explains this. Caroline moves back to Diana but is still questioning Cassie on the pictogram. 'I'll come back to you,' Caroline promises Cassie as she turns her attention to Diana and her troubles with the number line. Fifteen minutes have gone by and the teacher calls for the class's attention. Caroline moves back to her chair, positioning herself well to observe the whole class activity. The teacher wants to emphasise the need for accuracy with bar charts as well as explaining the challenge of extension work from the textbook.

It's back to her group for Caroline. She moves her chair to be with Amy ticking answers and asking for Amy's explanations. Amy enjoys talking with Caroline and there is a natural bond between them. Caroline moves her chair next to Beth who hardly seems to notice. Have Beth and Cassie worked out question three? asks Caroline, and turns her attention to Beth's work.

The teacher passes by and Cassie is eager to tell him she has finished the first work sheet. Caroline does not confirm this but neither does she express surprise to Cassie. Amy and Diana are on their feet bringing their worksheets to be marked. Diana has her arm round Caroline as she marks her sheet. It's congratulations all round. Amy and Diana have done well and are told to get out their exercise books and find page 31. Cassie is now on her feet but Caroline asks her to sit down and moves close to her. Two boys have arrived and are asking Caroline about page 31. They are Peter and Jonathan whom Caroline has supported since Year 1 in a range of subjects. Caroline quietly explains that they should speak to the teacher today, and adds she is looking forward to working with them later. Off they go and Caroline returns her attention to Cassie. Cassie can now begin to work from the textbook and Caroline kneels by Diana who is looking at a bar chart in the textbook.

The teacher asks the class to listen to two boys at the board who want to conduct a quick survey on favourite subjects. Caroline remains kneeling and tells Diana to think of her favourite subject. Caroline expresses delight that it's maths. The pupils are voting and Caroline reminds Cassie to vote.

Cassie won't be voting for maths or science! Amy is not listening and Caroline reminds her to do so. Diana claims she is now 'going slow' because she doesn't want to do any more of the bar chart. The teacher is explaining to the class about 'scaling the axis' on a bar chart but Caroline is absorbed with Diana who further claims not to have 'a Friday' on her chart. 'Friday' is found and Caroline moves on to Amy to discuss her answers to questions from page 31. Amy can explain her answers well and Caroline shows she is pleased with her understanding.

The door to the classroom opens and two men enter. They see Caroline and move to her thinking she is the teacher. They explain that they wish to test the electrical equipment in the classroom. Caroline quietly directs them to the teacher. She returns her attention to Amy and finishes discussing her work. She then moves to Beth who has done very little. The teacher tells the whole class to close their books and look his way. Caroline ensures her group does so and sits down.

The teacher is explaining on the board about labelling the axis for the bar chart on favourite lessons and Caroline is watching him. A mobile phone rings! It belongs to one of the men who are checking electrical equipment and the teacher comments on this. Caroline smiles but continues to watch the board and the interruption by the phone passes almost without notice.

All pupils are now finishing off their work. The group have to think of their own title for the 'favourite lesson' bar chart and this causes difficulty for Beth. Caroline offers assistance suggesting words that could be used. Diana asks her how to spell 'favourite' and Caroline asks, 'How does it start?' Diana begins to sound it out and Amy joins in. Caroline is encouraging Diana who is responding well when Amy recognises the word is already written on the board. Caroline congratulates them both—but for different reasons.

Caroline returns her attention to Beth who is having difficulty choosing a scale for the bar chart but she wants Beth to choose it. Together they start to count to ten in twos but the teacher now tells the whole class to close their books, as it's nearly the end of the lesson. Caroline quietly continues with Beth until ten is reached and then ensures the other three have packed away. Beth is talking to Caroline about today's work and Caroline asks both her and Cassie if it was hard. Cassie replies that she knew the work would be 'more serious' in this class. Caroline senses the enjoyment and achievement of this group of pupils (including Beth), tells them well done and they go off to playtime.

Over a cup of tea in the staffroom Caroline advises the teacher of her group's progress. She reports they worked well, concentrating and trying hard to complete the task. Caroline is pleased with their use of vocabulary and will update their individual records later. Together they decide that Caroline will

support this group tomorrow to complete the week's work but now it's nearly time for the literacy hour.

Conclusion

What is it that teaching assistants do when they provide learning support to children and classroom support to teachers? Caroline's practice provides insights into the complex nature of the role. It is a many-sided mix of personal and professionally acquired skills. She has to be confident about her own subject knowledge to effectively support learning so enabling her to connect with the plan of the lesson and its stated objectives. Her links with individual children and groups—explaining, questioning, prompting and reminding them of what it is they are meant to do, keep them focused on the planned lesson. Caroline also links with the class as a whole, always aware and reacting to spontaneous changes to the lesson plan.

Caroline mediates between 'her' children and the demands of the teacher-led, larger classroom experience. She enables learners to engage with the learning objectives of the lesson by prompting children when they need to be involved in a whole class activity. She also mediates between learners and their sense of achievement by ensuring her children can access the tasks through her additional explanations, encouragement and support.

With regard to spontaneous requests from children, she reacts by reinforcing, redirecting and consolidating the links between knowledge and understanding. She also adjusts to unforeseen events in such a way that the classroom continues to be a productive learning environment. Finally, she supports the teacher's management of the teaching and learning within the classroom in such a way that children can model her attitude and behaviour.

This sweep of 'mediating' support skills exhibited by Caroline is part of a repertoire of skills that might be drawn upon by a teaching assistant. However, perhaps they tend to be taken for granted. This close description of practice suggests they are very important for the effective support of both children and teachers.

Reference

Ofsted (Office for Standards in Education) (2003) *The National Literacy and Numeracy Strategies and the Primary Curriculum*, London, HMSO.