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What Counts as Comprehension in Teacher Practice?

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Abstract

Comprehension is generally considered to be an essential skill required in all learning areas. The Australian Curriculum argues that much of the explicit teaching of literacy occurs in the English learning area, and is strengthened, made specific and extended in other learning areas as students engage in a range of learning activities with significant literacy demands (ACARA, 2012, p. 9). This has important ramifications for all teachers because they are charged with the responsibility of ensuring their students acquire the literacy skills necessary for success in the discipline areas. Despite this, comprehension means different things to different people. This paper reports on an action research project investigating teacher and student understandings of comprehension in the middle school years. Specifically it asks the question: What counts as comprehension in teacher practice? After considering teacher and student perceptions of what comprehension is in different subject areas in Years 5, 7 and 9, strategic professional development seminars have been developed and implemented. These seminars are aimed at introducing teachers to current ideas about comprehension and providing them with practical, achievable strategies to use in the classroom.

Keywords

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What Counts as Comprehension in Teacher Practice?

Susan Byers, Pauline Jones and Lisa Kervin

ABSTRACT

Comprehension is generally considered to be an essential skill required in all learning areas. The Australian Curriculum argues that much of the explicit teaching of literacy occurs in the English learning area, and is strengthened, made specific and extended in other learning areas as students engage in a range of learning activities with significant literacy demands (ACARA, 2012, p. 9). This has important ramifications for all teachers because they are charged with the responsibility of ensuring their students acquire the literacy skills necessary for success in the discipline areas. Despite this, comprehension means different things to different people. This paper reports on an action research project investigating teacher and student understandings of comprehension in the middle school years. Specifically it asks the question: What counts as comprehension in teacher practice? After considering teacher and student perceptions of what comprehension is in different subject areas in Years 5, 7 and 9, strategic professional development seminars have been developed and implemented. These seminars are aimed at introducing teachers to current ideas about comprehension and providing them with practical, achievable strategies to use in the classroom.

Introduction

The interest in the research question has evolved through professional discussions with staff at the participating school about the difficulties students experience in understanding the 'deeper concepts' of content in the curriculum, and the perceived lack of strategies teachers have for teaching these understandings, within a crowded and content driven curriculum. The general capabilities of the Australian Curriculum state that 'literacy is not a separate component of the Australian Curriculum and does not contain new content' (ACARA, 2012, p. 9), yet teachers expressed uncertainty about how to meet the literacy needs of their students, while still covering the required content of the syllabus. Specifically, confusion existed amongst teachers about where teaching comprehension was positioned as an instructional strategy within the teaching of content area curriculum, and its place as part of the curriculum or academic discipline in middle years classrooms.

The teaching of comprehension within discipline specific subject areas in middle school classrooms can be viewed as 'problematic in relation to subject knowledge as it is neither a school curriculum subject, nor part of a recognised academic discipline' (Poulsen & Avramidis, 2003, p. 547). Additionally, instruction in literacy, specifically comprehension, can be considered 'as an instructional add-on, rather than a way to promote students' understanding and retention of content' (Ness, 2009, p. 157). The project has examined, in part, this perception and the impact it has upon student learning. 'The best teachers are mindful that teaching is judged by successful learning and that learners will inevitably and appropriately influence the effectiveness of the art we practice' (Tomlinson & McTighe, 2006, p. 13).

Even the literature has varying conceptions of comprehension. Snow (2002) defines comprehension as ‘the process of simultaneously extracting and constructing meaning through interaction and involvement with written language’ (in Ness, 2009, p. 143). Harvey & Goudvis include constructing meaning, monitoring and enhancing understanding, acquiring and actively using knowledge, and developing insight in their definition of comprehension (2007, p. 14). Comprehension is a complex, cognitive process that requires active learning and multiple higher-level processes that form a specific pattern of relationships (Hannon, 2012). It is ‘the interaction of the reader’s knowledge of the topic and textual form at hand and the new information (knowledge, feelings, attitudes) that the text presents’ (Spiro in Kelly & Topfer, 2011, p. 11).

Teachers value comprehension and consider it intrinsic to the effective understanding of their subject, but may ‘not understand the active reading components that are the critical foundation of reading comprehension’ (Ness, 2011, p. 100). Teachers do not necessarily see the fit between comprehension, literacy and their own subject area. The project aimed to identify the understandings teachers and students have of comprehension in the context of the middle years classroom across curriculum areas. Importantly, the project aimed to contribute to two key goals in the school management plan by:

- building the capacity for teachers to implement a cohesive school wide approach to improving literacy, and
- encouraging a professional and collegial learning environment that fosters a culture of professional dialogue and sharing both within faculties and schools and across the whole school.

The direct link of the action research to the School Management Plan identifies the importance the participant school has placed upon whole school literacy practices and of the need to continually develop the professional understandings of literacy by teachers across curriculum areas.

The action research process

This project uses an action research methodology. ‘Action research captures the important elements of a systematic research process in the context of the everyday work of teachers’ (Kervin, Vialle, Herrington & Okely, 2006, p. 193). It is a participatory process, which provides opportunities for educators to reflect upon and improve practices as a means to bring about change. Adopting the action research spiral of Kemmis and McTaggart (1988, p. 11), the project will move through four stages of planning, acting observing and reflecting during 2012. The research team meet on a regular basis and this time provides opportunities for discussion, professional reading and reflection, as well as planning for staff professional development seminars. Team meetings are interspersed by four staff professional development seminars throughout the year.

To answer the question ‘What counts as comprehension in teacher practice?’ the following questions will be explored:

- What do middle school teachers consider comprehension to be in their practice?
- What do middle school students consider comprehension to be in their coursework?
- What counts as comprehension in teacher practice in the middle years of schooling?
- What counts as comprehension in students’ views in the middle years of schooling?

Emerging themes and understandings will inform the professional development seminars.

Data will be analysed using a constant comparative method by categorising data into emerging and evolving themes. As part of the process, team members will keep reflective journals, to record their thoughts, experiences and approaches to the teaching of comprehension throughout the project.

Project aim

For literacy practices in the middle years to develop, and for student outcomes to improve, it is necessary to identify current practices, and to build upon these while raising awareness and understandings of comprehension strategies. For this to occur, we must first know how teachers and students define comprehension, and what they consider comprehension to be in their classroom.

It is anticipated that members of the team and teachers will develop a common language of comprehension that will encourage collegiality and pedagogical conversations. Teachers across subject areas will develop a coherent approach to the discussion of the role of comprehension and literacy within their subjects (Wray, 2001, p. 17). The common language will flow on to the classroom, as teachers begin to explicitly state and teach comprehension strategies to students. The professional development seminars will, importantly, fill gaps in teacher knowledge of comprehension, and provide them with practical, achievable strategies to use in the classroom.

The school context

The project site is a South West Sydney T – 12 independent school. The larger school is divided into three schools, each with its own Head: the Junior School caters for students in Transition (pre-kindergarten) to Year 4; the Middle School caters for students in Years 5 to 9; and the Senior School, for students in Years 10 to 12. The school uses a modified middle school model for teaching, in which specialist teachers teach Year 5 and 6 students for a number of subjects, and students remain with their class teacher for core subjects such as English and Mathematics. The Middle School will be the focus of the research, specifically Years 5, 7 and 9. These year groups were selected as they are key transition points in students' school trajectory; that is, they are key points where the complexity of text demands increases significantly. Further, these year groups are involved in NAPLAN, thus allowing for comparison of student understandings across years of schooling.

Participants

The action research team initially comprised four middle school teachers (Science, Geography, English and Primary) with the Learning Support Co-ordinator as team leader. Teaching experience ranged from five years to more than twenty-five years. Each teacher expressed an interest in pedagogy and comprehension and was enthusiastic about participating in the project. Due to unforeseen circumstances, both the Science and Geography teachers reluctantly withdrew from the project at the beginning of 2012. The English teacher had also transferred to the History Faculty. Despite the changes to the team, the project continued.

The team meets before school on a regular basis. Each meeting involves reflection on each member's unfolding experiences around the notion of curriculum comprehension, as well as a professional learning component from the team leader on an aspect of comprehension. The team works collectively to discuss and analyse seminars, student work samples and teacher reflections. Planning for future seminars occurs during the meeting also. The ALEA Teacher Research Grant 2011/12 has provided funds to release teachers for team planning days, which have allowed teachers to prepare professional learning for their colleagues.

One of the first tasks for the team was to gather information from Year 5, 7 and 9 teachers and students about their understandings of comprehension and how comprehension is taught in different curriculum areas (Appendix 1).

Using the data collected, targeted professional development was then developed and implemented with teachers to address the gaps in their knowledge of comprehension and its application in their teaching practice. The practices and understandings identified, or not identified, have informed the scope and focus of teacher professional development. Professional development, embedded in the school context and providing practical and relevant strategies, enhances pedagogy and encourages professional learning communities that benefit teachers and students (Cantrell, Burns & Callaway, 2009; May, 2007; Misulis, 2009; Poulsen & Avramidis, 2003; Reed, 2009). Initially all teachers of Year 5, 7 and 9 were to be involved in the professional development sessions, but as the project continued, it was evident that some faculties were more prepared to be engaged than others.

Student understandings of comprehension

A questionnaire was given to students in Year 5, 7 and 9, and to teachers of these students. Students were asked questions about their understanding of comprehension, which subjects they used comprehension in and which subjects their teachers assisted them in comprehension. Fifty-six students (or 28%) of the student cohort from Year 5, 7 and 9 responded. Table 1 shows responses to student questionnaire.

Table 1 Student responses to comprehension questionnaire.

	<i>I use comprehension in these subjects</i>	<i>My teacher helps me with comprehension in these subjects</i>
Subject	% response	% response
English	84	80
Science	53	28
Mathematics	39	32
Geography	43	28
History	64	52
Creative Arts	28	18
Design and Technology	30	14
Music	32	25
PDHPE	55	48
Languages	35	41
HSIE	25	30

Students were asked if they found comprehension easy, difficult or if they were unsure of their ability. Thirty-nine per cent of surveyed students said they found comprehension easy, while 12% found it difficult. Interestingly, 48% were unsure of their ability in comprehension.

Student definitions of comprehension were particularly interesting. Analysis of the student definitions of comprehension may shed some light upon why close to half of the students were unsure of their ability on comprehension. Responses to the question ‘I think comprehension is ...’ were many and varied. Many considered comprehension to be reading and writing, saving information or copying down answers. Some students answered with responses such as boring, creative, punctuation, pronouncing words, getting things right, while others considered comprehension be the domain of ‘smart people’ or something that

makes mum proud. Only 16% of students mentioned the word ‘understanding’ in their response, with most of these being vaguely worded as ‘understanding something’.

The student responses indicate that the language of comprehension and the strategies taught in junior years of school may not be being used within the middle school classroom. Students indicated that they use comprehension mostly in English, and therefore do not see how comprehension applies across curriculum areas.

Teacher understandings of comprehension

Teachers were asked to define comprehension as it applies to their subject area, whether or not they specifically teach comprehension strategies, what strategies they taught and their effectiveness, any specific weaknesses they perceived students to have in comprehension, as well as their own confidence in teaching comprehension. Teachers were also asked in which areas of comprehension they would like further professional development. Thirteen teachers (or 28%) who have teaching responsibilities for Year 5, 7 and 9 responded. Responses were evenly spread across the humanities and the sciences.

When asked if teachers specifically teach comprehension strategies to their students, seven responded yes, while one said no. Five of the teachers surveyed said they sometimes taught comprehension strategies in their classes. When asked how confident they were about teaching comprehension strategies, three were very confident, while one was not confident. Nine of the teachers said they were confident teaching comprehension strategies in their class.

While teachers stated they were confident teaching comprehension strategies and did teach them, when asked to define what comprehension was in their subject area, teachers were not always able to articulate their understanding. For example, a science teacher commented that *‘scientific literacy is very important for all students. Science involves a lot of reading and understanding of concepts. Without that basic understanding, learning science is very difficult,’* while a geography teacher defined comprehension as *‘understanding geographical terminology as well as various processes and other information’*. Most responses included understanding, making meaning, and developing deeper understandings of content. Some responses focused upon decoding.

It is the question about comprehension strategies teachers use in their classrooms that surprised the research team. Teachers gave varying responses, such as identifying sources of information, underlying key facts and using prior knowledge, with strategies commonly identified linked to questioning and vocabulary development. While most responses mentioned strategies such as predicting, vocabulary development and summarising, many put the onus back upon the student, relying on the students to ask questions to clarify their understanding, rather than the teacher providing the strategies to do this. Others said they used strategies such as reading around the room or writing up answers. Only one of responses discussed explicit teaching of comprehension strategies. The implication of this may be that the teachers themselves are unsure of what comprehension strategies are. It appears that currently, teachers are assessing comprehension, but not necessarily teaching students how to comprehend the content included in classroom lessons. These responses are telling, and certainly provide the basis for further teacher professional learning.

Teachers were asked what they perceived as specific weaknesses in comprehension demonstrated by their students. Overwhelmingly, teachers noted difficulties with identifying relevant information, vocabulary, inferential comprehension, using all of a text (and not just printed words), and an overall lack of content knowledge. Teachers reported that when combined, these difficulties also led to a lack of student engagement and motivation within the subject.

Interviews with teachers provided a deeper insight into teacher understanding of comprehension and the strategies used by teachers. A Year 5 teacher stressed the importance of comprehension as ‘cross-curricula and fundamental to everything’. Strategies used by this teacher include linking prior knowledge to student learning, as well as teaching how to skim and scan, develop vocabulary and teach summarisation skills. Another Year 5 teacher emphasised the need to value what students bring to the lesson, as understanding of context and content deeply influences the meaning students make of concepts covered in class.

A Year 7 teacher, who teaches Mathematics, Biblical Studies and Stage 3 English, defined comprehension as the process of understanding a text that is read, or the process of constructing meaning from a text. He emphasised the construction process and the need to simultaneously extract and create meaning to bring about understanding. When asked about strategies used in the classroom, he discussed the need to explicitly teach the vocabulary required in the content, as a means to bring about deeper understanding of content. This was especially so in Mathematics.

Another teacher, responsible for Year 7 and 9 English and History, discussed his observations that middle school students possess the comprehension strategies required to interpret content, but were reluctant to use them. His comment ‘students have a demand for knowledge but not the quest for knowledge’ perhaps reflects student prior learning that focused on more literal forms of comprehension, rather than developing skills in inference and identifying relevant information. He wondered if this may also reflect the thinking of a ‘now’ generation, who, through technology, demand information immediately rather than engaging in practices requiring searching. He commented also that students experienced difficulty applying comprehension strategies in History, especially in higher order thinking and inference tasks. As with other teachers interviewed, this teacher stressed the importance of vocabulary knowledge of the content as a means to bring about deeper comprehension of the content taught.

Emerging themes

From the online questionnaire and interviews, a number of themes emerged. It appeared that both teachers and students were unsure of what comprehension was, especially beyond English. Confusion existed as to the difference between a comprehension strategy and a comprehension skill. There also appeared to be a lack of common language between teachers and students about comprehension.

As part of the questionnaire, teachers were asked to identify areas in which they would like to receive additional learning, as part of an ongoing professional learning programme. Areas identified by teachers focused upon improving student understanding of content, linking comprehension to subject content, inference, and asking and answering questions.

Staff professional learning

The first of four professional learning seminars was held during in Term 2. All teachers of Year 5, 7 and 9 were invited to attend. Teachers were also asked to bring with them a sample of student work that demonstrated comprehension in their subject area.

In the initial session, there was lively discussion surrounding the literacy general capabilities of the Australian Curriculum. Teachers became more aware that literacy was the responsibility of all teachers and not the domain of primary, English or learning difficulties teachers. Discussion centred on the responsibility teachers have for teaching the subject-specific literacy of their learning area, the need for a clear understanding of the literacy demands and opportunities of their learning area, and developing literacy appropriate to

each learning area which can be embedded in the teaching of the content and processes of that learning area (ACARA, 2012, p. 24).

Many teachers expressed concern that incorporating literacy strategies would take away from the content they must teach in order to meet syllabus requirements. It is hoped that future professional learning seminars will provide teachers with the means to 'attend to the literacy demands of each learning area to ensure that students' literacy development is strengthened so that it supports subject-based learning' and also, 'identify the general level of expected language and literacy skills for each year level that they are teaching, so to plan how to teach specific language and literacy knowledge and skills essential to students' understanding of learning area content' (ACARA, 2012, p. 24).

Discussion also centred upon defining comprehension, identifying differences between comprehension strategies and skills, and the analysis of student work samples. Most teachers agreed that comprehension was making meaning of subject content, but how this could be demonstrated in different curriculum areas prompted lengthy discussions. The literature provided numerous definitions, making it difficult for teachers to come to a clear understanding of what comprehension means in their subject area.

Following from the discussion surrounding definitions of comprehension, differences between comprehension strategies and skills were examined. It was at this point that the teachers became aware that a common language of both literacy and comprehension did not exist across the middle years subject areas in this school. This was especially evident when the student explanations of comprehension were reviewed. Comments were made as to how we can ask students to define comprehension when we ourselves are not truly able to. Many realised that further learning about comprehension strategies was required by teachers in order to provide students with the necessary knowledge about comprehension to bring about deeper learning of syllabus content. There was confusion about the differences between comprehension strategies and skills. Using Paris in Kelly and Topfer, (2011, p. 12), skills were described as free of any given setting, clear component steps and standard procedures for application that can be practised in simple settings then applied to a range of textual and pedagogical contexts. Strategies are taught through lots of talk about application to a given setting, with students gradually guided to applications in a given setting.

The student work samples provided by the teachers raised the interest of the research group. Almost all teachers brought along an examination paper as an example of comprehension in their classroom. Unknowingly, it may be the emphasis teachers place on assessment of learning, students relying on memorisation of facts, and text and question answering tasks, that has limited the students' understanding of what comprehension is. However, some faculties did consider examples beyond the examination responses and provided some insightful examples of student comprehension. Of particular note was work from a Year 9 Science student, and her initial responses to a yearlong science research project. Here, the student was required to explain the reasoning behind her choice of science project, guided by questions such as what the student knows about the topic, what factors may affect the area of study and what is already known about the chosen area of study. Her responses indicated evidence of prior learning, a connection to her own experiences on a farm and an understanding of the technical vocabulary associated with dairy farming.

As in any action research, there is always some resistance to involvement and change. To address this, the second seminar involved teachers from the History, Science and Personal Development/Health/Physical Education (PDHPE) faculties, as well as Year 5 teachers. Other teachers also attended, as they were very interested in the professional learning surrounding comprehension and their practice. Prior to engaging in specific tasks, the

group examined disciplinary literacy and the increasing levels of specialisation of teaching and learning required in order to develop deeper comprehension of subject content. Consideration was made of the model of literacy progression, where a pyramid structure represents the increasing specialisation of literacy skills in the secondary classroom. Discussion centred upon the intermediate level of literacy represented in the model which included literacy skills common to many tasks, including generic comprehension strategies, common word meanings, and basic fluency, (Faulkner, Oakley, Lopes & Solosy, 2012; Shanahan & Shanahan, 2008), as it was here that teachers reported experiencing the greatest difficulty balancing comprehension strategy instruction and covering the required syllabus content.

The seminar focused on practical in-class tasks, linked to the upcoming units of work in Term 3. Teachers worked through activities that would provide them with the tools to incorporate comprehension strategy instruction in the syllabus content. Strategies focussed upon included inference, connecting with and activating student prior knowledge, vocabulary development and questioning. While the strategies addressed were generic in nature, they will form the basis for discipline specific comprehension tasks within each teacher's classroom. Each teacher has been asked to attempt one or two of the strategies discussed in the coming weeks. The completion of a reflection task about the strategies used and the impact these had upon student learning and their teacher practice will form the basis for future professional learning through the year.

Teacher reflections

Members of the research team have kept reflective journals throughout the project. The professional growth in their understanding of comprehension strategy instruction has been significant. Team members are being more explicit in their teaching and have a heightened awareness and more focussed approach to the literacy needs of students in their classroom. Team members are also sharing their newfound knowledge and skills with faculty partners, which, in turn, are bringing about changes in practice across some classrooms.

One of the significant changes to my teaching practices since joining the team is the conscious decision to be more explicit in the instructions I give to students. I have realised the importance of breaking things down for students who find language-based learning a challenge. I have noticed that being very specific in giving instructions also benefits the more capable students as well. Another noticeable change to my teaching has been the emphasis I now place on addressing the gaps in students' vocabulary. This dramatically affects students' learning and understanding. (Year 5 teacher)

I have become more aware of the need to draw analogies with my students' own experiences and linking these to the content, so I can activate their prior knowledge and make the content relevant to them. (Year 7 and 9 teacher)

Future staff professional learning

Professional learning seminars will continue to be framed by teachers' needs and the continued analysis of classroom practice through participant's reflections and students work samples. These will guide the professional learning process. Further focus will occur surrounding the literacy general capabilities in the Australian Curriculum, specifically those that centre upon comprehension. Learning will consider 'comprehending texts through listening, reading and viewing using strategies for reading and viewing texts, including using applied topic knowledge, vocabulary and visual knowledge, listening for information and to carry out tasks and participate in discussions and using strategies for comprehending spoken, written, visual and multimodal texts, including retrieving literal information and making inferences' (ACARA, 2012, p. 14).

Conclusion

This project began with teachers wanting to know how to best meet the literacy needs of their students in middle years classrooms. The initial phases of the project have focused upon teacher identified needs in learning about and applying specific comprehension strategies in the context of specific subject areas, in order to make a positive difference in student learning and understanding of syllabus content. It has been important to empower classroom teachers with knowledge and understandings of comprehension strategies, and provide them with the tools to successfully implement these in their classroom. As the project continues through 2012, it is hoped that the benefits of this professional learning is reflected in the learning outcomes of the students in these teachers' classes.

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Appendix 1

Teacher Questionnaire

Please define comprehension as it applies to your subject area

Do you specifically teach comprehension strategies to your students in your class?

Please list some of the comprehension strategies you use in your classroom

Which strategies do you find most effective?

Are there any specific weaknesses in student comprehension that you can identify from your classes?

I am very confident/confident/not confident teaching comprehension strategies in my class

I would like to learn more about the following in comprehension

Linking comprehension to subject content

Asking and answering questions

Summarising

Paraphrasing

Inference

Connections to prior knowledge

Prediction and visualisation

Multimodal

Other (please specify)

Student Questionnaire

I use comprehension in these subjects

My teacher helps me with comprehension in these subjects

I find comprehension

Easy

Difficult

Not sure

Susan Byers has taught in government and independent schools and is currently the Learning Support Coordinator K–12 in an independent school. Her passion is the teaching of literacy, especially comprehension. She has a Master of Teaching Special Education and is completing her Doctor of Education at the University of Wollongong. Susan is the recipient of the 2011/12 ALEA Teacher Research Grant.

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