

Teachers talk, talk, and talk

VISIBLE LEARNING – CHECKLIST FOR STARTING THE LESSON

14. The staffrooms and classrooms are dominated more by dialogue than by monologue about learning.

Classrooms are dominated by teacher talk, and one of the themes of *Visible Learning* is that the proportion of talk to listening needs to change to far less talk and much more listening.

Yair (2000) asked 865 Grades 6–12 students to wear digital wristwatches that were programmed to emit signals eight times a day – leading to 28,193 experiences. They were asked to note ‘Where were you at the time of the beep?’ and ‘What was on your mind?’. Students were engaged with their lessons for only half of the time; this engagement hardly varied relative to their ability or across subjects. Most of the instruction was teacher talk, but such talk produced the lowest engagement. Teachers talk between 70 and 80 per cent of class time, on average. Teachers’ talking increases as the year level rises and as the class size decreases! Across the grades, when instruction was challenging, relevant, and academically demanding, then all students had higher engagement and teachers talked less – and the greatest beneficiaries were at-risk students.

Teacher talk also follows a typical pattern: teacher *initiation*, student *response*, and teacher *evaluation* – often referred to as ‘IRE’ (Meehan, 1979). This three-part exchange leads to teacher-dominated talking, supporting the teacher to continue talking and follow the IRE pattern such that it fosters lower-order cognitive learning outcomes (because so often the initiation involves cues to recall facts and confirmation of declarative knowledge), and limits and discourages students’ talking together about their learning (Alexander, 2008; Duschl & Osborne, 2002; Mercer & Littleton, 2007). So little (less than 5 per cent) of class time is devoted to group discussions, or to teacher–student interactions involving the meaningful discussion of ideas (Newton, Driver, & Osborne, 1999), and so often the teacher is off on the next part of his or her monologue before students have responded to the first. Teachers can involve all students in IRE, but it is usually through a choral answer, and many students learn to ‘play the game’ and thus are physically present, passively engaged, but psychologically absent. Teachers love to talk – to clarify, summarize, reflect, share personal experiences, explain, correct, repeat, praise. About 5–10 per cent of teacher talk triggers more conversation or dialogue engaging the student. Please note that this is not how teachers *perceive* what happens in their classrooms, but what *is* happening – as shown by video analysis, class observations, and event sampling.

This dominance of teacher talk leads to particular relationships being developed in classrooms – mainly aimed at facilitating teacher talk and controlling the transmission of knowledge: ‘Keep quiet, behave, listen, and then react to my factual closed questions when I ask you.’ ‘Interaction’ means: ‘Tell me what I have just said so that I can check that you were listening, and then I can continue talking.’ This imbalance needs redressing and teachers may well get independent analyses of their classrooms to check the proportions of the lesson during which they talk to students. Of course, some didactic imparting of

information and ideas is necessary – but in too many classrooms there needs to be less teacher-dominated talk, and more student talking and involvement.

Hardman, Smith, and Wall (2003) have contributed much to the resurgence of interest in classroom observation. They developed handheld devices to continuously record classroom interactions and then used sophisticated software to provide real-time analyses. In one of their studies, for example, based on 35 literacy and 37 numeracy classes in the UK, 60 per cent of each lesson was a whole-class session, with mostly closed questions (69 per hour), evaluation (65 per hour), explaining (50 per hour), and direction (39 per hour); 15 per cent of teachers never asked an open question. As regards students, they most commonly answered a teacher question (118 per hour), gave a choral response (13 per hour), or gave a presentation (13 per hour), and only in nine times per hour did they provide a spontaneous contribution. When highly effective and other teachers were compared, the former had more general class talk and less directive talk.

The more important task is for teachers to listen. Parker (2006) considered listening to involve humility (realizing that we may miss something), caution (not giving voice to every thought that comes into our minds), and reciprocity (understanding the student's perspective). Listening needs dialogue – which involves students and teachers joining together in addressing questions or issues of common concern, considering and evaluating differing ways of addressing and learning about these issues, exchanging and appreciating each other's views, and collectively resolving the issues. Listening requires not only showing respect for others' views and evaluating the students' views (because not all are worthwhile or necessarily leading in the best directions), but also allows for sharing genuine depth of thinking and processing in our questioning, and permitting the dialogue so necessary if we are to engage students successfully in learning. The listening can inform teachers (and other students) about what the student brings to the learning, what strategies and prior achievement he or she is using, and the nature and extent of the gap between where he or she is and where he or she needs to be, and provides opportunities to use the student's 'voice' to encourage the most effective ways of teaching him or her new or more effective strategies and knowledge to better attain the intentions of the lesson.

One of the difficulties of so much teacher talk is that it demonstrates to students that teachers are the owners of subject content, and controllers of the pacing and sequencing of learning, and it reduces the opportunities for students to impose their own prior achievement, understanding, sequencing, and questions. Burns and Myhill (2004) analysed 54 lessons from Years 2–6 UK students (after the introduction of national standard assessment tests, or 'SATs') and reported that, 84 per cent of the time, teachers made statements or asked questions. There was far more telling than listening, far more teachers than students in action, and the most prominent engagement was compliance and responsiveness to teacher demands. For most of the classes that were observed, interactions and questions were factual or giving directions. English (2002) reported an average of three student utterances in a literacy hour, and most interactions were like table tennis: back and forth from teacher to student to teacher. Students seem to come to school to watch teachers working!

Note that if we invite teachers to 'shut up', the message is not then about allowing the students to engage in busy work (or worse, to complete worksheets); rather, it is about productive talking about learning.

Bakhtin (1981) made a very useful distinction between 'monologic' and 'dialogic' talk. The monologic teacher is largely concerned with the transmission of knowledge, and

remains firmly in charge of his or her goal, uses a recitation/response/response form of discussion with students, and checks that at least some of the students have acquired at least surface knowledge. The aim is to ensure that students, as far as possible, gain the knowledge desired by the teacher. In contrast, dialogic talk aims to promote communication with and between students, to demonstrate the value of the views of the students, and to help participants to share and build meaning collaboratively. In the former, whole-class talking by the teacher dominates and questioning usually invokes no more than three words – or less than 5 seconds' response by students 70 per cent of the time (Hardman et al., 2003). Students learn that the teacher's voice and views dominate, and this is the model of knowing that is communicated and realized by those who succeed in this model. Mercer and Littleton (2007) have documented these classrooms, which are dominated by recapitulations (reviewing what has gone before), elicitation (asking question to stimulate recall), repetition (repeating student answers), reformulation (paraphrasing a student's response to improve it for the rest of the class), and exhortation (encouraging students to think or remember what has been said earlier).

Consider what we do (as do children) in regular conversation: we have conversations with others that are negotiated, participatory, and meaning-making – both one-on-one and with peers – and there is often as much listening as there is talking. But in the class, talk is typically controlled by the teacher, who provides explanations, corrections, and directives; the student responses are brief, reactionary, and certainly rarely conversational. Mistakes are so often seen as embarrassing, and teachers strive to minimize public errors to avoid the child 'losing face'. Teachers therefore lose major opportunities for exploring these errors and misconceptions collectively.

Alexander (2008) has documented the dialogic classroom, which has a powerful effect on student involvement and learning, noting how teachers begin to probe children's thinking and understanding, in which students ask questions (more than teachers ask them), and in which students comment on ideas. The essential features are defined as: collective (doing learning tasks together); reciprocal (listening to each other, sharing ideas, considering alternatives); supportive (exploring ideas with no fear of negative repercussion from making errors); cumulative (building on own and others' ideas); and purposeful (teachers plan with clear learning intentions and success criteria in mind). Dialogue is seen as an essential tool for learning, student involvement is what happens during and not 'at the end' of an exchange, and teachers can learn so much about their effect on student learning by listening to students thinking aloud. This involves the effective use of talk for learning, in contrast to the ineffective talk for teaching that features in many classrooms.

Questions

VISIBLE LEARNING – CHECKLIST FOR STARTING THE LESSON

15. The classrooms are dominated more by student than teacher questions.

Teachers ask so many questions. Brualdi (1998) counted 200–300 per day, and the majority of these were low-level cognitive questions: 60 per cent recall facts; 20 per cent are procedural. For teachers, questions are often the glue to the flow of the lesson, and they see questions as enabling, keeping students active in the lesson, arousing interest, modelling enquiry, and confirming for the teacher that ‘most’ of the students are keeping up. But the majority of questions are about ‘the facts, just give me the facts’, and the students all know that the teacher knows the answer. Teachers are most able to choose students who do or do not know the answers and use this decision about whom to ask to maintain their flow of the lesson. Students are given, on average, one second or less to think, consider their ideas, and respond (Cazden, 2001); the brighter students are given longer to respond than the less able, and thus those students who most need the wait time are least likely to get it. No wonder there are a lot of students in every class hoping not to be asked these questions! More effort needs to be given to framing questions that are worth asking – ones that open the dialogue in the classroom so that teachers can ‘hear’ students’ suggested strategies.

Rich Mayer and colleagues (Mayer, 2004, 2009; Mayer et al., 2009) have an interest in using questioning in classes to promote active learning such that students attend to relevant material, mentally organize the selected material, and integrate the material with prior knowledge so that they advance in their knowing and understanding. Mayer et al. noted the positive effects from asking students to answer adjunct questions while reading a text, asking questions at the end rather than beginning of the learning, teaching students how to ask questions during learning, asking students to take a practice test, and encouraging students to explain aloud to themselves as they read a text. They conducted a series of studies on the effect of immediate response to feedback – in their case, in large lecture halls. A personal response, or ‘clicker’, involves teachers asking questions and asking students to vote using handheld clickers; in a matter of seconds, a graph is shown indicating the correct answer and the percentage of students voting for each alternative. The effect size from adjunct questions was 0.40, which shows that there can be important gains from only a small change to the typical lecture. Mayer argued that this gain (from immediate feedback) was likely to be due to students paying more attention to the lecture in anticipation of having to answer questions, and mentally organizing and interpreting learning knowledge in order to answer questions. He also argued that students were developing meta-cognitive skills for gauging how well they understood the lecture material and for how to answer exam-like questions in the future. He suggested that it helped students to adjust their study habits to be in tune with the teachers’ likely exam questions, and increased their attendance and thus exposure to ideas. It may be that another important reason is involved: the teacher teaches differently, because he or she needs to think before the class about the optimal questions for the intentions of the lesson, think about common mistakes that students are likely to make, and thus become more responsive to gaining feedback about his or her own teaching.

Teachers need to talk, listen, and do – as do students

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16. There is a balance between teachers talking, listening, and doing; there is a similar balance between students talking, listening, and doing.

It may be that monologue and dialogue forms of discourse are not opposites; the art lies in knowing when to engage in monologue and when in dialogue. What are the optimal proportions? It is difficult to find evidence to defend the optimal balance and the best example is probably the Paideia research.

The Paideia program is one of the more successful programs with which I have been involved (as both user and evaluator). Paideia aims to move the attention of teachers more towards process and skills than only content, and involves a balance of three modes of teaching and learning: didactic classes in which students learn concepts and curriculum content; coaching labs in which students practise and master skills introduced in the didactic classes; and seminars in which Socratic-type questioning leads students to question, listen, and think critically, and coherently communicate their ideas along with other group members (Hattie et al., 1998; Roberts & Billings, 1999).

The program was introduced into 91 schools in one US school district. Schools that had most implemented Paideia had a more positive school and class climate (for example, $d = 0.94$ for satisfaction and 0.70 for lack of friction between those schools that fully implemented the program or had a high level of implementation compared to those with no or little implementation); students in these schools believed that they were more independent ($d = 0.81$) and task-oriented ($d = 0.67$), and there were enhancements in rule consistency ($d = 0.36$) and rule clarity ($d = 0.36$). Students in Paideia classes had lower levels of self-handicapping and lower use of social comparisons, and they had greater respect for others' ideas even if they disagreed. They were more likely to work as a team, to listen to the ideas and opinions of others, and to take responsibility for their own actions. Most importantly, there were positive effects on reading and maths outcomes over the five years of implementation, as show in Figure 5.1.

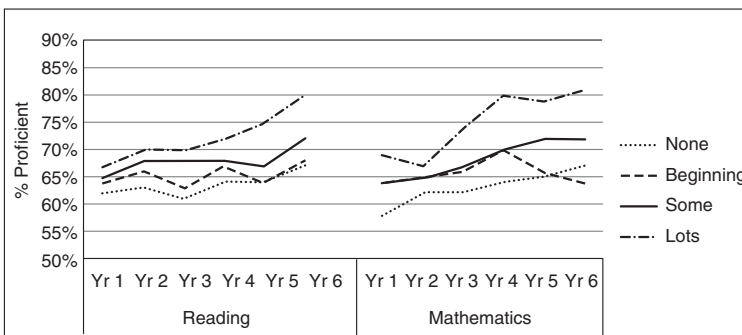


FIGURE 5.1 Percentage proficiency in reading and maths in relation to the degree of implementing Paideia across five years