Teacher talk
to improve teaching practices

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Teachers talking to one another in the course of the regular school day is a taken-for-granted practice. Teachers engage in conversations with each other in staff meetings, around the photocopier, in corridors and even in car parks. They also engage in formal conversations during professional development, which for most part are structured discussions on specific aspects of teaching and learning.

In recent years, more teachers, both nationally and internationally, have been engaging in such formalised discussions in syndicate teams, curriculum teams and other such collegial clusters aimed at improving teaching and learning (Birchak et al., 1998; Darling-Hammond, 1995; Fletcher, 1999). This move has been recommended by researchers who see these types of discussions as an effective strategy in changing teacher beliefs and practice (Hawley and Valli, 1999).

In order for these discussions to be effective, teachers need to engage in conversations that will compel them to focus on evaluating and improving their own and others' teaching practices. However, analysis of the existing research shows that teachers do not engage in such conversations during such collegial clusters. Therefore, these conversations may not necessarily impact on teaching and learning, and cannot be assumed to do so. Consequently, we need to take a detailed look at what teachers talk about in clusters, and the qualities of these different types of conversations. The purpose of this paper is to outline a kind of talk, "learning talk", that focuses on, and is designed to improve, teaching and learning.

Learning talk

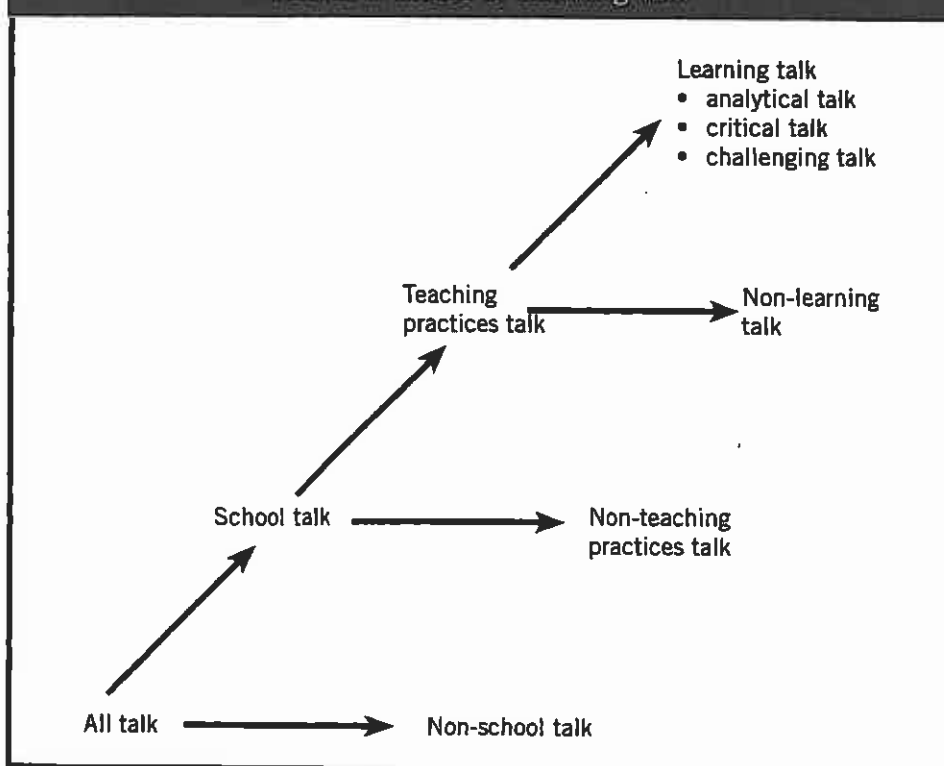This section presents a model of teacher talk (see Figure 1) which categorises the kinds of conversations teachers can engage in, beginning with all possible types of teacher talk and ending with learning talk. There are two key assumptions underlying this model. First, teaching practices can significantly improve student learning if teachers can set aside the many distractions in modern day schooling to focus primarily on their teaching practices and their students' learning. Secondly, a fundamental collective task among teachers is to reflect on and inquire into the effectiveness of their existing practices, and implement alternatives that improve student learning.

Some teachers are already using learning talk, and recognise these theoretical assumptions and the model operating in their everyday professional lives. These teachers are candidates for modelling learning talk for others, who may consider such talk an academic ideal unrelated to their reality.

In this model, the categories of talk become increasingly focused on improving teachers' practices and students' learning as you progress upward from the bottom of the model. The first category at the bottom of the model is all talk among teachers, including talk about schooling and non-schooling matters, such as the weather. That is then categorised as either talk about teaching practices (talk about teaching and learning), or talk not about teaching practices (talk that does not relate to teaching and learning). Talk about teaching practices is further categorised as learning talk, or non-learning talk.

Learning talk is divided into three categories: "analytical", "critical", and "challenging". In brief, talk that analyses the impact of teaching practices on student learning is analytical talk; talk that evaluates the outcomes of that analysis is critical talk; and talk about making changes to ineffective practices by creating more effective ones is challenging talk. Learning talk is therefore talk about teaching which analyses, evaluates, and/or challenges the impact of teaching practices on student learning

FIGURE 1: Model of Learning Talk

Learning talk
- analytical talk
- critical talk
- challenging talk

Teaching practices talk → Non-learning talk

School talk → Non-teaching practices talk

All talk → Non-school talk

outcomes, and/or creates more effective practices to replace ineffective ones.

These three categories of learning talk are an inter-related inquiry process, with every category being a prerequisite of the other two, and of each other. All these categories of learning talk are inter-related. Challenging each other to change an ineffective practice (challenging talk) is dependent on judgments of whether that practice was effective or not (critical talk). This in turn is dependent on how those evaluations were made (analytical talk), which in turn presupposes that teachers are talking about teaching practices (teaching practices talk).

To illustrate the model, consider what happens when teachers begin to talk about school matters. They can talk about teaching practices, for example, describing their lessons, or differences between assessment tools (teaching practices talk). Alternatively, they can focus on factors external to the school that impact on it, such as poverty (non-teaching practices talk).

When teachers begin to talk about teaching practices, they can analyse the student achievement data to see if their practices are contributing to students' learning (analytical talk). Once they analyse their contributions to students' learning, they can evaluate their contributions as being positive or negative (critical talk). Based on their evaluations, they can challenge themselves or each other to change their practices in ways that will enhance their impact on student learning (challenging talk).

What characterises the three categories of learning talk, and how do they operate within the inquiry processes?

Analytical talk analyses evidence of the impact of teaching practices on students' learning outcomes. This involves teachers analysing data selected from classrooms that identify trends about teaching and students' learning. We advocate that teachers collect data from their own classrooms to analyse their effectiveness as teachers. Therefore, analytical talk is evidence-based talk that enables teachers to judge their own effectiveness.

The most useful data for analysis is grounded in teachers' teaching practices, because teachers are likely to be surprised into action by analysing themselves.[1] Some useful data for analysis are samples of student's work; video-tapes of lessons; curriculum materials used in teaching; and students' achievement results (Darling-Hammond, 1998; Robinson, 2000).

Teachers' judgements are going to be more credible if the teachers check the trends they

TABLE 1: Examples of analytical talk

Sample dialogue	Why it is analytical talk
Example one Carol: We should not have taken on board both numeracy initiatives. Teachers complain that they spend less time teaching because they are out of the classroom one day a week. Ali: Is the day out going to benefit students in the long run? Carol: I'm not sure. We need to examine student achievement data before, during and after these initiatives. Maybe it's worth riding through the storm.	Carol and Ali are engaging in analytical talk because they have insufficient evidence for an informed decision and intend to examine achievement data to uncover if the complaints adversely affect student achievement.
Example two John: I'm going back to the way I usually teach this unit. Leanne: Why? John: I tried to introduce interesting hands-on activities but the test scores show that students did badly on the class test. Most did worse on this unit than the last one. Their test scores are also well below the previous year's class test and both cohorts of students have similar achievement levels.	John is engaging in analytical talk because a) he has examined evidence (test scores) b) he has linked the test scores to his teaching method.

TABLE 2: Examples of critical talk

Sample dialogue	Why it is critical talk
Example one Joanne: (looking at a video of a colleague taking a six-year observation survey) Have you noticed that he prompts the child every time the child pauses? Leilani: Yeah. He's not supposed to do that. We should show him this video and ask him whether he's aware of what he's doing. We might need to explain to him the reason for not prompting.	Joanne and Leilani are engaging in critical talk because they have evaluated the teacher's practice of taking the six-year observation survey as ineffective, based on the video evidence.
Example two Karen: I didn't teach this unit very well. Rena: What makes you say that? Karen: I expected some students to understand the unit quickly, but they couldn't explain an important concept when asked. The deputy principal observed my teaching last week and said that I don't check for understanding before moving on.	Karen and Rena are engaging in critical talk because a) Karen has evaluated the impact of her teaching practice (ineffective) based on feedback from the deputy principal and reflections on her lesson. b) Rena has asked Karen for evidence for her evaluation.

have found against recognised evaluative standards that are relevant beyond the local context (Timperley, Robinson, and Bullard, 1999), i.e. compare their results with those of a larger cohort such as national norms.

Table 1 provides examples of analytical talk.

Critical talk evaluates the impact of teaching practices on student learning, based on the information from the analysis. The outcomes of the analyses become the criteria to evaluate the effectiveness of teaching practices. Therefore analysis becomes worthwhile only when teachers openly disclose their teaching practices, and their beliefs and theories underpinning their practices, in healthy learning debates.

Table 2 provides examples of critical talk.

Challenging talk is about making changes to existing practices, based on previous analysis and critique. Challenging talk includes both talk about eradicating mediocre and poor teaching practices, and talk that invents new teaching practices more likely to raise student achievement significantly. Teachers thus provide each other with both pressure and support to change their ineffective teaching practices, so as to improve student outcomes. Both these dimensions require a sophisticated process of inquiry.

The first dimension of challenging talk is necessary because teachers need support to stop using ineffective teaching practices. Often teachers continue ineffective practices because they do not know what to replace them with. Hence the second dimension of challenging talk involves teachers inventing new practices that significantly improve learning outcomes for students. Invention is about trying things until something works. An effective way of inventing new teaching practices is an iterative [repetitive] process of collecting data about the issue, testing one's own understanding with that data, and inventing new practices based on that data (Timperley and Robinson, 2001).

To invent teaching practices, the iterative process starts with evidence about current practices and learning outcomes, inquires into reasons for using them and their impact on student learning, and ends with improvements to existing practices or trials of new practices.

Table 3 provides examples of challenging talk.

The value of learning talk

What is the value of engaging in learning talk? Three New Zealand studies demonstrate how engaging in aspects of learning talk has significantly contributed to changing teacher beliefs and practice, and improving student achievement. In these examples, as part of the intervention, teachers had to engage in learning talk with an external agent and/or each other.

Timperley and Robinson (2001) conducted a study on challenging and changing teacher schema to improve schooling.[2] At the beginning of their study, teachers attributed their students' low achievement to factors external to their practices and their schools, such as home circumstances, for example: "the children arrive at school with no skills" and "with their [the students'] backgrounds, we cannot expect much progress in the first year" (p. 282).

In the intervention, an external agent presented the teachers with discrepant classroom data,[3] helped them to analyse it, and presented them with alternatives. These conversations resulted in a reversal of thinking among teachers. At the start of the research, 87 percent of the reasons given for low student achievement were external to the school. By the end, 87 percent were school-based reasons, including one who stated graphically, "Because we don't know how to reach them" (p. 294).

A second study by Symes, Jeffries, Timperley, and Lai (2001) evaluated a school-based approach to literacy professional development, involving a resident literacy expert at Viscount school in Mangere. Initially, teachers believed that low student achievement was due to factors beyond their school's control, such as family upbringing. A resident literacy expert was employed to work with these teachers on a structured programme of more effective literacy teaching. Her role was also to "confront them [teachers] and deal with their areas of weakness" (p.5). Student achievement data was used to monitor the effectiveness of her input. After two months of being on the programme, preliminary tentative evaluations on student achievement suggested improvements in students' reading.

Finally, professional development and research by Phillips, McNaughton, and MacDonald

TABLE 3: Examples of challenging talk	
Sample dialogue	Why it is challenging talk
Example one Irene: (discussing next year's budget during a staff meeting) It looks like we're planning to allocate the same amount of money to this literacy programme. Max: Should we be still be using this programme? Students have not progressed in the three years that the teachers have been using it. Look at the reading levels over the last three years. Irene: But we aren't implementing the programme correctly. Most of us choose what components we want to do. If we stick strictly to the programme, we should get the same gains other schools using the programme are getting.	Irene and Max are engaging in challenging talk because a) Max is challenging his colleagues to discontinue a literacy programme based on the achievement data that shows the programme is ineffective. b) Irene is challenging her colleagues' practice of not following the programme correctly, which could have influenced the achievement results. c) Irene is also suggesting a better practice, strict adherence to the programme, that should positively influence student achievement.
Example two Christian (looking at Kim's teaching plan): You asked me why your six year olds have low reading levels. Look at your teaching plan. You don't actually get them to read. Instead, they do a lot of word games. Kim: What do you think I should do? Christian: You might need to stop using word games so often and get students reading more in class. You could also ask students to keep a reading log and give them gold stars every time they complete three books.	Christian and Kim are engaging in challenging talk because a) Christian is challenging Kim to stop using an ineffective practice (word games) because that is the possible cause of the low reading levels. b) Christian is inventing a new practice (reading in class and a reward scheme) to replace Kim's ineffective practice. c) Kim has invited Christian to critique her teaching. d) Kim has asked Christian to help her invent a new teaching practice to replace her ineffective one.

(2001) focused in part on a literacy programme to raise Year 1 student literacy across eight schools in Mangere and Otara. This is the most comprehensive study of the three, and shows the strongest links between all components of learning talk and improved student achievement. The conversations in this programme involved a series of challenges to teachers' practices in reading and writing, which were getting poor results. An expert teacher, Gwenneth Phillips, led the challenging process with teachers, and insisted that change happen through critical dialogue and not written manuals. The collegial talk focused on students' reading and writing achievement data, followed by structured in-class teaching support from the expert teacher, then by further scrutiny of student achievement data. Results revealed a shift in Year 1 reading and writing levels, from well below national averages to close to national averages.

A common thread to the three studies was that these interventions involved an "expert" who focused the teachers on student achievement, supported them in critiquing and challenging their current beliefs and practices, and required them to adopt new practices to improve teaching and learning. All three interventions were successful, highlighting the potential of using learning talk to improve practice.

The challenge

While the three studies suggest that engaging in learning talk can change practice and improve student achievement, it is not always easy to engage in learning talk in schools. There are three primary challenges facing teachers who wish to engage in such talk.

1. School culture

Talking to improve practice via analysis, critique and challenge goes against the typical school culture, where teachers do not create conflict, inquire into the beliefs of their peers, or challenge them (Ball and Cohen, 1999). Typically, teachers politely reinforce each other's practices regardless of their effectiveness. Such culture is contrary to learning talk, which advocates analysis, critique, and challenge of teaching practices to improve student outcomes.

2. Lack of evidence and standards

Traditionally, New Zealand teachers' professional development discussions are commonly held without referring to and comparing "records of teacher practice" (Ball and Cohen, 1999, p.21). The way of the past was to gather and store rich data, such as

student work samples and test results, in classrooms, files, and more recently in computer databases. In professional development, such data was not put on the table to be compared by teachers during professional development conversations. Without such comparisons, no standards could be set on what was good practice. Therefore, professional development conversations tended to be about teaching and learning situated outside the teachers' own classrooms. Teachers were left to set their own standards.

Without any data to examine, teachers cannot engage in analysis of their impact on student learning, a key component of learning talk. Likewise, without any standards of work, teachers cannot evaluate or challenge each other's practice (key components of learning talk), because standards can vary greatly between teachers, and therefore no meaningful comparisons between teachers can be made.

3. Focusing on peripheral issues

A great deal of teacher talk focuses on issues peripheral to their core task of teaching, such as raising student self-esteem (Ball and Cohen, 1999; Robinson, 2000; Timperley and Robinson, 2001). Although talking about issues peripheral to teaching is necessary, this kind of talk should not be the primary focus of conversations about schooling.

Why do teachers engage in peripheral talk? One explanation is that the introduction of self-managing schools placed teachers in direct contact with operational decision-making, which is influenced by the competitive elements of new managerial and market strategies in the New Zealand educational community (Fiske and Ladd, 2000). The school-based decision-making focuses on programmes, products and associated management processes, and not on teaching practices and student learning outcomes. Consequently, school-wide learning is diverted from creating more effective teaching practices. Teachers are caught up in discussions that do not focus on analysing, evaluating and challenging teaching practices, the core business of schools, and key components of learning talk.

School culture, a historical lack of focus on evidence and standards, and focusing on peripheral issues all make it difficult for teachers to engage in learning talk. While we acknowledge these difficulties, we must transcend them in order to create more effective practices that improve teaching and learning. The next section deals with how we might address these challenges.

The need for expert support

Earlier in the article, we described three studies that demonstrate how learning talk has contributed to significant changes in teacher belief and student achievement. In all these studies, it was only after expert support was provided that teachers in these studies began engaging more fully in learning talk. This suggests to us that such support is necessary to ensure that teachers achieve the level of inquiry required to eradicate ineffective teaching practices and invent more effective ones. Moreover, this suggests that through the use of expert support, the challenges outlined in the previous section can be transcended.

Such expert support, however, must take into account the fact many teachers find the combination of collegial learning talk and expert support difficult. Teachers are likely to experience a range of uncomfortable emotions, such as inadequacy, as they learn to talk analytically and honestly about their practices, receive critical feedback, and make changes. Expert support agents need to help teachers deal with these emotional demands. Empathy for teachers, mutual respect, and a focus on the practice rather than the teacher are all necessary to support teachers in using learning talk.

Conclusion

The impact of learning talk on student learning requires a balance between teacher-led reflection and inquiry, and expert support. At one level, teachers have to become powerful change-agents of their own core business. They have to take ownership of their contribution to student learning outcomes, and confront their ineffective ways of operating. At another level, teachers need expert support in developing this kind of talk, and inventing teaching practices that will significantly raise student achievement. Achieving this balance will result in teacher talk that will significantly change thinking and practice, and create better learning outcomes for students.

Note

The motivation for exploring learning talk among teachers came from the clustering of teachers, senior teachers, principals, and parent-board members in Mangere and Otara as part of the *Analysis and Use of Student Achievement Data (AUSAD)* schooling improvement initiative.

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Notes

1 Timperley and Robinson (2000), in a study that challenged and changed teachers' schema, argued that teachers testing their own contribution to student learning is a key to improved student learning outcomes.

2 Schema is an abstract but organised set of ideas that reflect an individual's understanding of a phenomenon, situation or event (Gage & Berliner, 1992).

3 The classroom data in this study was diagnostic test information.

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