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# The impact of video as a self-reflective tool for improvement of teacher feedback practices

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# The impact of video as a self-reflective tool for improvement of teacher feedback practices

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**Master of Education**

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# ABSTRACT

Teacher reflection on instructional practices can improve performance and positively influence student achievement. This qualitative quasi-ethnographic study investigated the impact of self-tracking video technology as a reflective tool for improvement of teacher feedback in a specialist primary classroom. Video provided observational data which was analysed using a checklist and researcher and reviewer annotations. The study concluded that the teacher used non-specific feedback strategies more than specific-feedback to respond to behavioural, engagement and learning issues. Thus, context was identified as an important determinant of effectiveness in feedback. The video technology features enhanced the teacher's reflection and strengthened the collaborative reflective processes.

# DECLARATION

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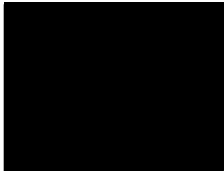
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# 1.   INTRODUCTION

Feedback has been recognized as being among the top ten influences on student achievement, with Hattie and Yates (2014) identifying it as one of the most effective strategies to improve student learning. Timely, effective, and meaningful feedback, according to Hattie and Yates, can double the rate of learning. In earlier research, Hattie (1999) found that feedback can be measured as having the highest effect size on student achievement, particularly if it involves students receiving feedback about a task and how to do it more effectively. Hattie and Timperley (2007) describe feedback as a "consequence of performance" (p. 81), where information relating to a task or process is being provided, with an aim to fill the gap between what has been understood and what is intended to be understood. In a classroom, effective feedback can fill those gaps in a number of different ways: encouraging increased effort, providing the student with motivation, or engagement. In addition, feedback can be given by restructuring the student's understandings, confirming with students that they are correct or incorrect, demonstrating if more information is available or needed, pointing students to directions they could pursue, as well as pointing out alternative strategies to clarify information.

Addressing the importance of feedback in students' learning, the present study analysed the feedback strategies used by a teacher in a primary classroom setting using self-tracking video technology as a reflective tool to guide ongoing improvements in the practice of feedback.

The importance of feedback for effective student learning has been the subject of educational research for several decades (Hattie 1999; Hattie & Yates, 2014; McKeachie, Lin, & Mann, 1971; Myers, Travers & Sanford, 1965; Voerman, Meijer, Korthagen & Simons, 2012; Zahorik, Halbach, Ehrle & Molnar, 2003). Hattie states that "the most powerful single moderator that enhances achievement is feedback." (Hattie, 1999, p. 11), and predicts that "programs that do not capitalise on effective classroom management practices to optimise feedback, will not be successful" (Hattie, 1999, p. 12). In addition, Voerman et al. found that feedback can increase learning, on the condition that the feedback provided, contains sufficient information, enabling the student to recognize what is right or wrong in their performance or understanding. In their 2014 paper, Using Feedback to Promote Learning, Hattie and Yates identify feedback as an opportunity for the individual student to identify progress toward learning, which allows students to make informed choices as to which next step to take to progress in their achievements. Zahorik et al. conducted a study on the effectiveness of teachers and found that more effective teachers gave clear expectations and provided feedback.

When used effectively in the classroom, feedback can have the benefit of creating a supportive community culture. This entails fostering a classroom culture in which students feel comfortable to learn from their mistakes. By responding to students' mistakes in a supportive manner, a teacher can foster a culture where students feel willing to take risks. Dockterman and Blackwell (2014) elaborate that by responding to mistakes with supportive feedback teachers can propel opportunities for student learning and growth. These researchers argue that core values and content-specific skills nurture a classroom culture where students can experience success.

Although research has shown that feedback has a positive impact on student learning, not all types and only the right amount off feedback are effective. Teachers, who praise for the sake of giving praise, decrease its value. Hattie and Yates (2014) find that praise within the classroom can become a problem when it fails to convey any genuine feedback information.

Giving feedback to students on the process they have engaged in, rather than simply praising them for the end product is critical (Dweck, 2010). Dweck explains that teacher feedback that is focused on the process students have engaged in, namely the exertion they employ, the effort they maintain in task focus, the strategies they utilize, the choices they make, and the perseverance they display, generates longer lasting benefits rather than simply praising students for the end product when they succeed in a learning task.

In addition to the nature of the feedback given to students, the amount of feedback received is also crucial for student learning. On this point, Hattie and Yates (2014) allege that the amount of feedback received by most students is often as little as only several seconds per day, which they claim has serious implications for fostering and sustaining learning arising from teacher feedback. A closer analysis of the patterns of classroom interactions has shown that, on average, teachers talk for more than two-thirds of the time (Nuthall, Graesser & Person, 2017). In this regard, Hattie and Yates found some of this talking is delivering instruction and the actual time feedback is given is often very small, and thus is a significant concern. Further research argues that it is not just the amount of feedback that has an impact on student learning, but the quality and whether it is specific and timely.

To be effective, teacher feedback needs to be targeted. Targeted feedback guides students in taking specific actions that can help them achieve targeted learning standards (Brookhart, 2008). Targeted feedback can enable students to feel empowered to take control of their own learning, which involves exercising the "motivational factor" (Brookhart, p. 2). To develop self-regulation in learners, it is necessary for feedback to be focused on encouraging students to take more and more responsibility for their own learning, to critically reflect on their learning and to independently complete tasks

(Hattie & Yates, 2014). These researchers add that feedback should guide students towards being able to learn autonomously, and to learn to manage their time and approaches with increasingly less support from the teacher (Hattie & Yates). The research cited here would suggest that once students feel they understand what to do, and why, they are more likely to use the advice given by the teacher to plan and execute steps for improvement with decreasing levels of support from the teacher.

Providing meaningful feedback that is appropriate to students' cognitive developmental stage and which supports them to persevere and take responsibility for their own learning as self-regulated learners (Askew, 2000, Hattie & Yates, 2014, Hawe, Dixon & Watson, 2008), is critically dependent on the feedback strategies used by teachers. Adoption of a growth mindset culture (Dweck, 2010) in the classroom provides a mechanism for encouraging learning through the use of effective feedback strategies. Furthermore, feedback, given by the teacher, without being meaningful and addressing the child's developmental stages, is worthless according to Hattie and Yates. Therefore, a teacher must employ processes to gain awareness of the feedback strategies that he or she employs, and then evaluate the quality of the feedback, to foster high quality teaching in their own practice, to potentially influence improvements in students' learning.

Teachers' capacity for providing effective feedback is fundamental to supporting Western Australia's High Performance-High Care 2017 strategic educational goals (Department of Education, 2016, p. 2). The capacity for teachers to provide effective feedback is implicit in two of the four priorities, namely "success for all students", and "high quality teaching" (p. 2). Thus, Western Australia's Classroom First Strategy (Department of Education, 2017b) requires that teachers have the capacity to make informed judgments to develop and empower high performance in their own practice, as well as for their students' learning outcomes. This requires that teachers regularly reflect on their practices and use critical self and or peer-to-peer appraisal strategies to evaluate their delivery of content and their pedagogical understandings. Liang (2015), argues that "classroom observation of teaching is a process involving educator observers who review an instructor's performance, with the purpose of providing constructive feedback for teacher development" (p. 236), allowing teachers to reflect on their teaching pedagogies. Richards (1995) identifies the term, "Reflective teaching" (p. 1) and argues that one way for educators to move towards a higher level of pedagogical awareness, is through observing and reflecting on their own teaching, using observation and reflection as a way of developing their instructional techniques and practices. To build teacher capacity, Liang argues that teacher professional development is essential and that it should involve a process of identifying weaknesses and taking actions for improvement. Both, teacher reflective practice and professional development are widely promoted in the research literature as levers for fostering student success and sustaining

high quality teaching. Bartlett (1990) notes that teachers, who are asking reflective "what and why" questions, are more empowered. He further states that:

> the degree of autonomy and responsibility we have in our work as teachers is determined by the level of control we can exercise over our actions. In reflecting on the above kind of questions, we begin to exercise control and open up the possibility of transforming our everyday classroom life. (p. 267)

Evidently both reflective practice and professional development are implicit in the Department of Education's goals, as stated in High Performance-High Care goals (Department of Education, 2016) and Classroom First Strategy (Department of Education, 2017b).

This study aimed to use video cued reflection to identify and improve teacher feedback strategies in a primary classroom. The significance of the study is twofold. First, while there is significant research literature on feedback strategies (Askew, 2000; Dean & Marzano, 2012; Harks, Rakoczy, Hattie, Besser & Klieme, 2014; Kluger & DeNisi, 1996) there is little research on which strategies are the most effective ones. Second, currently research on the use of video as a tool for reflection to improve teaching practice and positively impact student engagement in the primary classroom context is very limited. The study sought to address these gaps in the research literature, from the perspective of a teacher-as-researcher.

The study sought to address the following research question:

- How does the use of video as a self-reflective tool impact on the quality of teacher to student feedback?

Subsidiary research questions were:

- Which types of strategies are used by the teacher to give feedback?

- How does video cued reflection enhance teacher feedback practices?

Employing a qualitative research approach, Activity Theory (Vygotsky, 1934–1987) guided the analysis. This theoretical framework enabled the researcher to investigate the range of feedback strategies employed in the classroom and to evaluate their effectiveness, with a specific focus on process orientation, using the triadic framework of subject-object-tool.

The study was located at a Perth primary school involving 23 students in a Year 2 specialist Health classroom. Weekly one-hour lessons were recorded over a period of six weeks. The self-tracking video technology (i.e., a robotic tool that tracks movement and supports a portable videoing device such as an iPad or a mobile telephone) was used to unobtrusively film classroom interactions between the teacher and students. During the study period the teacher engaged in structured video-cued reflection to identify and evaluate the feedback strategies that were being utilised, and to introduce improved feedback strategies based upon the reflective analyses. The video-cued reflection provided an opportunity for self-directed professional learning, where observation of verbal and nonverbal or embodied cues became accessible for the teacher to review. In Raingruber's (2003) terms, the researcher was able to identify the "moment-by-moment interaction patterns, shifting nuances, and multivalent meanings . . . because of the access to nonverbal influences afforded by videotaping" (p. 1165). Video data allowed the researcher to capture temporal, relational, emotional, and spatial meanings, in keeping with the focus on Activity Theory (Raingruber, 2003).

The use of video footage to reflect on classroom practices enabled the teacher-as-researcher to be drawn back into the experience, allowing her to grasp several aspects of the situation, to identify subtle influences, and to notice relevant elements of how feedback is given quickly. The video footage was analysed to assess the type, nature and frequency of the feedback provided to students and to determine whether the feedback given was effective, meaningful and process oriented. The study maintained a focus on teaching practice, excluding the impact feedback has on student learning and behaviour.

Although the study was limited to one teacher in one classroom setting, it provided insights that could be potentially useful for similar primary education contexts. The study revealed potential benefits of engaging in video-cued reflection using self-tracking video technology in the classroom. This strategy also revealed its usefulness for self-driven, personalised professional learning for teachers. These combined contributions instil the value for teachers to constantly reflect on their own practice and to assess how well they are getting through to their students, whilst searching for ways to update and improve their practice.

The potential limitations related to the study arise from four issues:

- The researcher and the teacher are the same person.

- The length of the research study was limited to six weeks.

- The results and findings of the research are confined to only one classroom in one school and cannot be generalised.

- Having only one researcher working on the study allows for researcher bias and could therefore have been seen as a limitation to the validity of the study.

By inviting an independent reviewer, the researcher took precautions to minimize the bias. These limitations could have generated doubts as to the reliability of the findings from the study. The researcher was aware that a quasi-ethnographic style of research is a process which analyses data found in a situational activity, located in its natural setting, and consequently the results would be interpretive of the teacher in situ. However, as Bell (2010) suggested, the study refrained from making "assertions which cannot be validated" (p. 15); nevertheless, the findings will be relatable in a way that will let teachers in similar settings recognise problems and, possibly, guide them towards ways of solving similar problems in their own contexts.

The introduction provided an overview of the research. It addressed the significance of the study and presented the questions that guided the research. The second chapter is a review of the existing literature. Here the researcher presents a discussion on current literature relating to feedback and self-reflection strategies and relates this to the objectives of the present study. Chapter three presents the methods applied in the research and provides a rationale for its suitability. The fourth chapter analyzes the data that was collected, followed by chapter five in which the results and findings of the study are discussed and evaluated. The appendices and a list of references are supplied at the end.

# 2.   LITERATURE REVIEW

Although research studies over the last two decades have shown that feedback is a key element in learning and teaching, limited research has been undertaken on students' perceptions of feedback and the contribution feedback makes to their learning. In the context of student learning, Hattie and Timperley (2007) define feedback as a process of passing on information relating to one's performance or understanding a teacher, peer, book, parent, or one self. Winne and Butler (1994) define feedback as "Information with which a learner can confirm, add to, overwrite, tune, or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and strategies" (p. 5740). The consistent themes from these definitions are that feedback involves a communication process that should clarify expectations; feedback should facilitate performance; and feedback should assist learners when they are having difficulties achieving learning outcomes.

Hattie and Timperley (2007) explain that the purpose of feedback is to reduce the discrepancies between the students' existing understanding or performance and the understanding or performance that is expected. Researchers have argued that effective feedback is necessary to support students' learning. To be effective, feedback must be both appropriate and timely and suited to the needs of the situation (Poulos & Mahony, 2008; Yeager, Paunesku, Walton & Dweck, 2013). Collectively these researchers claim that if feedback is not given effectively, despite being well-intended and with the aim of motivating students, it can have an inverse effect and cause harm.

Although the literature on feedback is extensive, much of the findings in current research seem to not directly apply to teacher feedback during learning (Van den Bergh, Ros & Beijaard, 2013). These researchers argue further that researchers have not yet reached consensus about how feedback in the context of student learning is defined and what constitutes high-quality and effective feedback.

The purpose of this literature review is to examine the research literature that addresses the nature of teacher feedback during learning, including the factors that contribute to the effectiveness of feedback in this context. The researcher will discuss the types of feedback and the characteristics of feedback.

To address these issues in-depth, this literature review will begin by situating the role of feedback in the context of classroom teaching and learning, and then analyse current research on the importance of feedback in the classroom (Hattie, 1999; Hattie & Timperley, 2007; Hattie & Yates, 2014; Tollefson, 2000). The researcher then shifts attention to pedagogical practices by examining different feedback

strategies a teacher can implement within a classroom setting (Askew, 2000; Hattie & Timperley). To further support the current investigation on the impact of feedback on students' learning, research literature focused on how feedback can create attitudinal shifts in students towards learning is then examined (Hattie & Timperley). Finally, as a means for fostering teachers' development in feedback practices, a specific focus on teachers' self-reflection processes through the use of video footage is developed (Cunningham, 2002; Richards, 1995; Tripp, & Rich, 2012).

## 2.1.   FEEDBACK AS COMMUNICATION FOR LEARNING

Feedback is an important part of the communication that occurs in classrooms (Voerman, et al., 2012), however communication is multi-faceted and this can impact how feedback works. Communication is more than simply translating an idea into words and then sending it, either verbally or in writing, to a receiver who decodes it. Feedback communicates to a student, that another person cared about their work to talk about it (Brookhart, 2008).

Smart and Marshall (2012) state that "verbal communication between teachers and students in classrooms shapes the learning environment by influencing the type of talk that students engage in during instruction" (p. 250). However, communication is not limited to a verbal exchange, but includes gestures, facial expressions, eye contact etc. It is what Pennycook (1985) calls paralanguage. Paralanguage includes gestures, facial expressions, eye contact, proximity, touching and voice change. Within a classroom environment, Smith (1979) points out that "whether teachers are talking or not, they are always communicating. Teacher's movements, their gestures, the changes in their tones of voice, and even their ages and physiques are continuously communicating something to the students in their class" (p.633). Smith adds, in return, students continuously communicate in similar ways with their teachers. Knowing the different forms of communication, or paralanguages, within a classroom setting was important for this study, as effects of the combined elements of verbal feedback given by the teacher was investigated.

Feedback can be understood as a communication tool for teachers and students to interact. It is through classroom discourse that students acquire new knowledge, develop new skills and communicate their needs and understandings (Voerman et al., 2012). Understanding the complexity of communication and its continuous presence in classroom interactions provides important insights into how feedback is communicated and its consequent impacts upon student learning.

Hattie (2014) argues that there is a considerable variation in the effectiveness of feedback, implying that some forms of feedback are more powerful than others. Furthermore, Harks et al. (2014) argue that:

> Generally, teachers . . . assume that students automatically perceive feedback in the way they intended it to be perceived and expect that the information contained in the feedback is taken as input into the information-processing, motivational or self-regulation systems. (p. 272).

Ellis (2009) identified that teachers should correct a specific error on several occasions to empower the learner to achieve full self-regulation. However, as stated by Ackerman and Gross (2010), students who may understand feedback as reflecting a teacher's negative assessment may avoid accepting the feedback, because it threatens their self-perceptions. Rather than attending to the feedback as useful information, students may instead develop self-serving attributions to protect their self-perceptions.

Hattie (2014) further states that the amount of feedback is not what makes an impact, but the quality and whether it is specific and timely. A close look at the patterns of interaction characteristic of a number of classrooms has shown that, on average, teachers talk for more than two-thirds of the time (Nuthall et al., 2017), however, as Hattie and Yates (2014) found some of this talking is delivering instruction and the actual amount of feedback received by some students can be as little as several seconds per day. In fact, research by Pauli (2010) found that teachers often pose new questions or put forward further details without explicitly reviewing the response or statement of their students.

The research discussed in this thesis aims to categorize the feedback given and the time spent in the classroom giving feedback, and to discuss if it is in fact meaningful and whether it furthers students' learning as opposed to feedback as delivery of instruction and classroom management. This research aimed to either confirm or reject the claims made by previous researchers about the amount of feedback given by the teacher, focusing on timeliness and effectiveness. This included considerations about how feedback might or might not further learning and encourage deeper thinking.

## 2.2. THE IMPORTANCE OF FEEDBACK FOR LEARNING

In this section, the importance of feedback for learning will be discussed. Within an educational setting, feedback is a tool to assist students to acquire new learning and to reflect on their performance. Research shows that in a classroom, effective feedback can fill students' gaps in learning and understanding concepts in a number of different ways, including encouraging increased effort, providing the student with motivation, and fostering engagement (Brookhart, 2008; Harks, et al., 2014; Hattie & Timperley, 2007). As stated by Westberg and Jason (2002), "Beginners aren't equipped to give themselves feedback. When acquiring new capabilities, beginners don't know enough to assess their own performance completely or accurately" (p. 15). If done effectively, feedback can be very powerful, addressing the cognitive as well as the motivational factors. Effective feedback is about its timeliness and giving students access to information they need to understand where they are in their learning and which direction to head next, which has been described as the cognitive factor by Brookhart (2008).  The motivational factor is a feeling students develop once they believe they understand what to do and why, thus giving them control over their own learning.

## 2.3. FEEDBACK HAS AN EFFECT ON STUDENTS' ACHIEVEMENT

To investigate the effects of feedback on learning, researchers have explored the relationship between feedback that is task-focused as opposed to feedback that is self-focused (Hattie & Yates, 2014; Hattie & Timperley, 2007; Voerman et al., 2012). Kluger and DeNisi (1996) performed a meta-analysis of 131 studies on feedback, the majority of which were not classroom- based. They found that, for the most part, feedback interventions improved performance, but over one-third of feedback interventions decreased performance. To explain this phenomenon, Kluger and DeNisi suggested in their Feedback Intervention Theory that the effectiveness of feedback interventions decreases if the feedback draws attention closer to the self, and away from the task (p. 254). They claimed that feedback lacking in specificity may be seen by students to be useless, while feedback that is too elaborate may cause a cognitive overload or may again direct the receiver's attention away from the task. In addition, these researchers found that both positive and negative feedback can enhance learning, provided the feedback contains enough information to allow the student to acknowledge

what is right or wrong in their performance or understanding (p. 1108). The findings from Kluger and DeNisi's study can be linked to more recent research from Hattie and Timperley. In describing feedback as a "consequence of performance" (p. 81), Hattie and Timperley draw attention to feedback as being 'task-focused'.  They explain that feedback involves giving information related to a task or process, with the aim of filling the gap between what has been understood by the student and what is intended to be understood by the student.

## 2.4.    FEEDBACK CAN FOSTER RISK TAKING BEHAVIOURS NECESSARY FOR LEARNING

In addition, when feedback is of a particular quality, it can have the effect of fostering in learners' risk taking behaviours that are necessary for learning, further reinforcing the importance of feedback and its composition and quality.  Linked to this notion of feedback, an understanding about theories of intelligence becomes crucial. Bandura (1997) highlights, that the effectiveness of feedback, however purposeful and targeted to the needs of the student, may be dependent on students' beliefs about their abilities – which are "often preconscious and often inaccurate" (Hattie & Yates, 2014, p. 11). Support for this argument can be drawn from Litt's (1988) study which showed that individuals, when given fabricated feedback on their pain threshold, changed their levels of perceived self-efficacy, which was accompanied with actual changes in pain tolerance. He concluded that, the changes in perceived self-efficacy were comparable with the changes in pain tolerance. However, research signals that these beliefs can change over time, meaning that teachers and their feedback strategies can influence the students' erroneous personal beliefs and opinions about their abilities as they develop (Bandura, 1997; Dweck, 2010).

Research has also shown that children who do well in school, often enjoy learning, feel more capable of taking on risks, and are more likely to master the material independently (Lepper, Corpus, & Iyengar, 2005). In a study involving 797 primary and high school students, Lepper et al., found that students might come to enjoy learning and feel more capable of taking on challenges as a result of receiving high marks and positive feedback. Hattie (1999) found that feedback can be measured as having the highest effect size on student achievement, particularly if it involves students receiving feedback about a task and how to do it more effectively. The graph in Figure 1 shows that teachers, after the students themselves, have the greatest effect on students' achievements. In his research

Hattie found that of the effects of the influences on student achievement, it can be shown, based on effect size, that the major influence on student learning can be attributed to the teacher (see Figure 1).
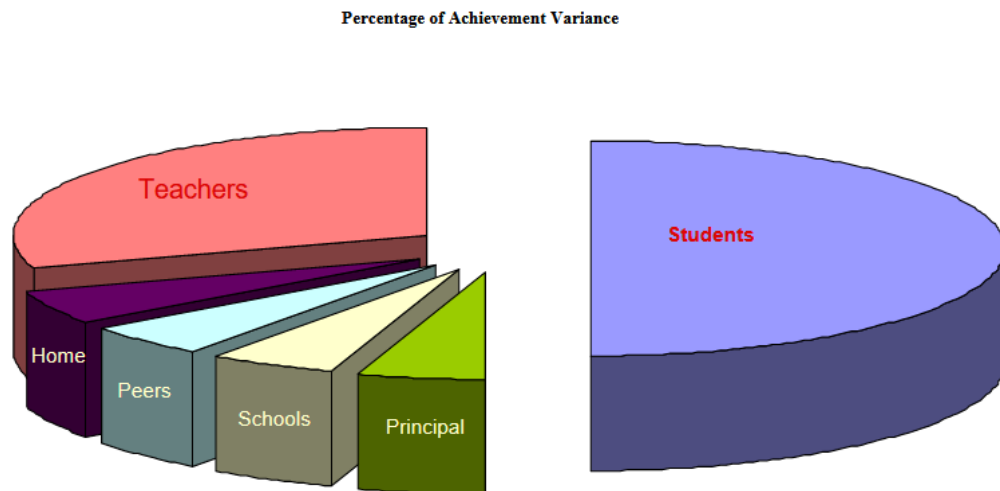


*Figure 1.* Percentage of academic variance of achievement based on Hattie's (1999) research

## 2.5. FEEDBACK PROCESSES CAN BE USED TO DETERMINE SUBSEQUENT DIRECTIONS FOR TEACHING

For feedback to be meaningful and effective it is crucial to reflect on the questions to be asked and evaluated, "Where am I going? How am I going? and, Where to next?" (Hattie & Timperley, 2007, p. 87). They argue that, for a good learning environment, it would be beneficial, if both teachers and students answered these questions frequently. However, according to Hattie and Timperley teachers will often limit students' opportunities to get valuable information about their work in relation to any of the above questions by assuming responsibility for the students and not taking into consideration the learning possibilities of students taking responsibility for themselves. Hattie (1999) found, that the measured effects of praise, rewards and punishment were much lower than targeted feedback. Hattie and Timperley point out when teachers give effective feedback, they are not simply passing on information and understandings to their students, but assessing and evaluating students' understanding of the given information to ensure that the next teaching task can be matched to the

actual understanding of their students. However, according to a study by Nuthall (2007) when students were asked what type and amount of feedback they experienced in classrooms, many students described the amount as being low to almost none. As a matter of fact, Nuthall found students received much higher levels of feedback from their fellow students than from their teachers. This research analysed the amount of feedback given to students by the teacher and whether the findings from this study are confirmed by the ideas put forward in earlier studies.  As Brookhart (2008) states, giving good feedback is a skill that requires practice. Hence, this research evaluated whether the teacher's feedback changed over time, and became more effective and timely as the research progressed.

The above mentioned research by Hattie (1999) was extremely relevant to this research, as it shows that teacher feedback plays the most crucial role in students' learning. Video cued refection was used in this research to evaluate the teacher's progression in the use of evaluating and questioning as suggested by Hattie and Timperley (2007, p. 4) with a view to improving effectiveness of feedback given by the teacher.

## 2.6.   FEEDBACK STRATEGIES

Feedback as identified by recent research (Black et al. 2007; Brookhart 2008; Hattie & Timperley 2007; Hawe et al., 2008) is regarded as part of the crucial interaction between teacher and student, or students, with the intention of furthering learning.  For feedback to be successful within a classroom setting, both teachers and students need to have a clear understanding of the learning intentions and expectations, thus enabling students to accept feedback as a helpful tool to reach their learning goals (Hattie, Fischer & Frey, 2016). Black and William (as cited in Gamlem & Smith, 2013) relate feedback to classroom settings, in saying that feedback should be incorporated into the instructional process of learning, and should be understood as critical points where learning changes direction. The feedback should allow students to recognize what is not yet understood, identify any student misconceptions and engage students in deeper learning.

Erickson (2002) found in her research, that nations who traditionally score high in international comparisons of academic results, often centre their curriculum around the understanding of concepts and principles rather than just the content knowledge, in order to foster deeper engagement with the content and therefore encourage students to make "rich and extensive use of the information" (p. 7).

This deeper engagement can be achieved by giving targeted and explicit feedback to students, to encourage higher order thinking and critical engagement with the content. Moss and Brookhart (2012) note that during a formative learning cycle, both halves of the learning team, meaning the teacher and the students, gather evidence of student progress and use that evidence to improve what they do.

Communication between students and teachers can affect various aspects of student learning in the classroom. Smart and Marshall (2013) observed a positive relationship between students' cognitive engagement and the teacher's questioning level, specifically the complexity of questions asked, the communication patterns, and the overall classroom interactions (p. 249). Additionally, feedback, as noted by Hattie and Yates (2014), given to students, can be understood to be a key driver of behavioural adaptation. They state that effective and meaningful feedback can double the rate of learning, and claim that feedback is among the top 10 influences on student achievement. Research has shown that effective educators focus their teaching on the fundamental reason for schools to exist, namely learning. While most educators are aware of the importance of feedback and believe they give sufficient and valuable advice throughout a day, Hattie and Yates (2014) allege that the amount of feedback received by most students is often as little as only several seconds per day.

Johnson (1999) describes two forms of communication, verbal and nonverbal. When communication takes place without oral language, it is defined as nonverbal. This form of communication often includes body movements, facial expressions, physical contact, posture, written feedback and proximity. When communication takes place using oral language, it is defined as verbal. Verbal and nonverbal communications are interdependent; however, nonverbal behaviours are frequently used to support or modify verbal behaviours. Feedback, in an educational setting, is not only understood to be a verbal interaction between teachers and students, as well as student-to-student, but can also be given non-verbally, and in writing.  Koka and Hein (2005) found that feedback, even when given non-verbally, can have a great effect on student motivation. They state that "higher frequency of perceived positive nonverbal feedback such as smiling, patting on the shoulder, and clapping hands from . . . a  teacher should lead to greater satisfaction with the teacher, which ultimately might increase student intrinsic motivation" (p. 6).

It is crucial for teachers to understand the feedback strategies they use in the classroom and how their feedback is given to students, in order for it to be meaningful and valuable. Studies conducted by Ingvarson and Hattie (2008) showed that even expert teachers applied insignificant amounts of feedback during classroom instruction. On the point of the amount of feedback, de Brabander and Martens (2014) have this to say:

A student is not regarded as an empty vessel that needs to be filled up, but more as a sponge that naturally sucks up the liquid that is available. The learning environment should prevent any disturbances and must provide enough 'tasty' liquid to enable the learning process to continue (p. 29).

A closer examination reveals that this "liquid," as described by de Brabander and Martens (2014, p. 29) is identified as both personal and academic learning goals for the student. This notion is supported by Hattie and Timperley (2007) who argue that, students are more likely to seek and receive feedback about their learning goals when they share a commitment to attaining them.

It becomes apparent, de Brabander and Martens (2014) argue, that for teachers to be effective, they need to have a greater understanding of the feedback they give, to ensure students' can engage deeply and in meaningful ways with the content. Research shows however, that teachers still give feedback which is not process oriented, but instead grade oriented which consequently does not promote grit, perseverance and critical thinking skills (Hattie & Yates, 2014; Kluger & DeNisi, 1996). This research examined the types of feedback and compared the frequencies of verbal and non-verbal feedback provided by the teacher and further explored whether the students were given clear directions and learning intentions, as proposed good practice principles drawn from the research literature discussed in this chapter.

## 2.7.   CHALLENGES WITH GIVING AND RECEIVING FEEDBACK

As with every interaction, giving and receiving feedback can be challenging. Perrenoud (1998, as cited in Gamlen & Smith, 2013) compares the giving of feedback to students with throwing a bottle into the ocean, saying that, "No one can be sure that the message they contain will one day find a receiver" (p. 150).  Although feedback has a positive impact, not all types, and only the right amount of feedback is equally effective. Kluger and DeNisi (1996) explain that feedback seems to obtain high effect sizes when the information received by students is on the task and about how to improve performance; and lower for feedback where the focus is on target-setting. The lowest effects are found when only rewards, praise or punishment are given (Hattie & Timperley 2007; Kluger & DeNisi, 1996). In this study, the researcher investigated whether feedback given to students by the teacher is meaningful

and targeted, or non-specific, and how the feedback impacted student learning, thereby integrating contemporary pedagogical research to improve classroom practice.

Carless (2006) finds that teachers will often deem their feedback far more helpful than their students. In fact, students express that they may find a teacher's feedback non-understandable, non-reasoned and at times confusing. Furthermore, teachers, who praise for the sake of giving praise, decrease its value. Hattie and Yates (2014) find that praise within the classroom can become a problem in that it fails to convey any genuine feedback information. A student who receives a lot of praise, without meaning, will only learn that their teacher praises often; nothing else. Harks et al. (2014) explain that, in order for students to improve their learning outcomes, they need to receive feedback with a focus on task performance. Dweck (1999, as cited in Hattie and Yates, 2014) supports this idea, by maintaining that meaningless praise rather than explicit feedback, "can shift the students' attention onto irrelevant, even destructive, factors, such as excessive attention to the self or one's ability, thus discouraging further effort or listening to feedback about the task" (p. 47). Research conducted by Harks et al. (2014) shows that feedback with a process orientation was perceived as being more useful than grade-oriented feedback and that the perceived usefulness of feedback, in turn, had a positive effect on changes in achievement and interest.

Furthermore, Hattie et al. (2016) identified that, whilst teachers readily give feedback to students, getting students to receive the feedback can be challenging. They found in their research that students who receive feedback and are generally willing to reflect critically on their learning and make changes accordingly, whereas those who do not receive the feedback often prefer feedback that increases their sense of self. Students in a study conducted by Gamlem and Smith (2013) perceived corrective feedback as positive or negative, depending on the teacher's practice. The feedback was understood as negative or disapproving feedback, and made students feel "useless" (p. 160) if the teacher did not give the students sufficient time to work with the feedback received, or did not follow up on the feedback given.  Feedback was perceived as positive when the teacher gave the students some time to work with the feedback received, and followed up the feedback given. These research findings informed the study and were considered from the perspective of constraining factors that also influence what and how the teacher provides feedback to support student learning.

## 2.8.  HOW VIDEO FOOTAGE CAN HELP TEACHERS REFLECT ON THEIR OWN FEEDBACK PRACTICES

Change in a teacher occurs when the teacher pays attention to what is important, makes theoretical and practical connections, and applies what they know about their own teaching context to reason about a given situation (Van Es & Sherin, 2002). Observing one's teaching practice by means of video recordings can help a teacher notice what is important and further provide a basis for linking theory to practice and reasoning to understand and improve one's classroom practice. Some researchers have noted that video technology "affords the luxury of time" (Sherin, 2004, p. 13) and may help teachers observe their ability to facilitate professional learning discussions by slowing down the fast pace of classroom life, so that clear noticing of specific aspects of practice can be further analysed.

### 2.8.1.  What is video cued reflection?

Using video technology for teacher reflection is a powerful tool to improve teacher practice as it allows the teacher to effectively reflect on classroom discourse in a non-invasive and objective way. Use of video technology in this study provided a means for her to closely observe her own classroom practice; she was able to revisit lessons without having to attend to teaching and reflection simultaneously. The Australian Curriculum Assessment and Reporting Authority (ACARA) website (Department of Education, n.d.) highlights in the *Rationale for the Technologies Learning Area* the importance of the use of technology for students, saying that, "digital technologies provide students with authentic learning challenges that foster curiosity, confidence, persistence, innovation, creativity, respect and cooperation", but the use of technology for teachers for professional reflection is missing. Using video cued reflection, according to Raingruber (2003) is especially valuable for educators, as it allows an unbiased insight into their everyday practices. A question Raingruber poses, is, "how often does the camera capture reality with a viewpoint and perspective that differs from that of the participants?" (p. 1156). Raingruber's idea on gaining an unbiased insight into the teacher's everyday feedback practices through video cued reflection presented an objective, unobtrusive means of studying the phenomenon of interest to the researcher.

Gaudin and Chaliès (2015) discuss two main reasons for the increasing use of video to aid teachers' professional development. First, videos allow both pre-service as well as experienced teachers greater access to classroom events than in class-observation (Welsch & Devlin, 2006) without sacrificing accuracy. Secondly, the improvement of storage capacity and the progressively more sophisticated software have played a key role in the increased development of video in professional practice analysis. The chosen self-tracking video software and cloud storage facility employed in this study attest to the views expressed by Gaudin and Chaliès and Welsch and Devlin.

## 2.9.    THE IMPORTANCE OF TEACHER REFLECTION

Teachers are required to reflect on their practices regularly, to be critical about their delivery of content and their pedagogical understandings, as stated in the Department of Education's Focus 2017 directions (Department of Education, 2016). Using a video-cued approach allows educators to revisit classroom interactions and interpret the data, and to stop and reflect on what is most significant and how to bring about continuous improvements (Raingruber, 2003). Additionally, Brophy (2003) highlights the advantage of using video cued reflection by pointing out that educators can stop, replay, or otherwise manipulate the footage to facilitate a focus on particular aspects of teaching and professional reflection. Videotaping becomes particularly empowering, as it enables participants to observe aspects of their response and feedback that had been lived rather than understood in an explicit way. Feedback is often given in non-verbal ways, so by being able to look back at recorded interactions, the researcher was able to identify body language or changes in the voice to evaluate the way the feedback had been given, and immediately observe the response from the student receiving the feedback. Raingruber notes that through the use of video, it was possible to identify regular patterns and types of communication, that highlighted otherwise taken-for granted lived experiences, which was realised in this study also.

The ideas expressed by Raingruber (2003) and Brophy (2003) were significant in relation to video cued reflection because they showed that some interactions might not be noticed if they are not being captured on videotape, and therefore the associated meanings may not be immediately visible to the teacher in real time. According to Raingruber, "Everyone reads body language; it's just that no one thinks about it" (p. 116). Collins, Cook-Cottone, Robinson and Sullivan (2004) highlight that digital video could possibly be used to conduct remote supervision and feedback sessions, enabling teachers to critique their own interpersonal interactions and responses. Additionally, Mccullagh (2012) notes

the relevance for teachers to reflect not only on their own pedagogies, but also on how they are being perceived by their students. He interviewed a teacher about his experience of being filmed, who noted:

> It was really useful to see the lesson from the pupils' point of view; how it came across to them and it made me think a lot more about what they might have made of it. I could see much more than when I was back there teaching it. (p. 140)

## 2.10. WHAT ARE THE BENEFITS OF VIDEO CUED REFLECTION?

Research has shown that reviewing video excerpts of a teacher's own practices enables him or her to observe it from a new perspective and to identify aspects he or she did not perceive during the lesson (Marsh & Mitchell, 2014). Furthermore, external video footage enables teachers to see their colleagues' instructional strategies and relate their own pedagogical practices to their observations (Seidel, Stürmer, Blomberg, Kobarg & Schwindt, 2011). McConnell et al. (2008) found that teachers who use video are more likely to base their reflections on evidence rather than memory or inferences, confirming that the use of video cued reflection is an effective tool to promote teachers' reflective practice (Finn, 2002; Sherin & van Es, 2005) because of its ability to help teachers become aware of and bring to mind events not necessarily observed during the teaching period.

Trip and Rich (2012) comment that:

> Most studies reported that using video to reflect was beneficial for helping teachers to evaluate their teaching. After using video to reflect, teachers were able to: (a) Identify gaps between their beliefs about good teaching and their actual teaching practices (b) articulate their tacit assumptions and purposes about teaching and learning, (c) notice things about their teaching that they did not remember, (d) focus their reflections on multiple aspects of classroom teaching, and (e) assess the strengths and weaknesses of their teaching. (p.729)

Collectively, the ideas from researchers mentioned above informed the study, and reinforced the benefits that could be gained by the teacher by engaging in video cued reflection to improve the feedback practices that were used in the classroom.

## 2.11. WHAT ARE SOME OF THE CHALLENGES OF USING VIDEO IN THE CLASSROOM, AND HOW CAN THESE BE MITIGATED?

Whilst the use of video technology has been identified as an effective tool for reflection and professional development, Lane (2014) notes that video usage in schools can be challenging and therefore careful protocols must be followed in order to obtain departmental permission. Furthermore, researchers must also be aware that teachers can find it confronting at first to see themselves on video (Armstrong & Curran, 2006; Lane). This can potentially affect their reflection and willingness to openly engage in the process. This notion is supported by Raingruber (2003), who cautions that a problem with videotaping any form of interaction is, that it may subtly change the nature of the experience in some cases, especially when it is carried out in a classroom, where children might feel the need to perform for the camera of feel intimidated by it.

As with every learning experience however, new learning will only take place when the learner is discontented with their current understanding or beliefs and have access to an alternative or better ideas which are intelligible, plausible and fruitful (Mccullagh, 2012). This can pose a challenge for the use of video in the classroom, as it requires the teacher to be willing to identify shortcomings and areas of improvement in their own teaching, which was unproblematic in this study as the teacher embraced the use of video in the classroom willingly.

## 2.12. WHAT NEW TECHNOLOGIES ARE AVAILABLE TO SUPPORT UNOBTRUSIVE USE OF VIDEO IN THE CLASSROOM, FOR THE PURPOSE OF TEACHER REFLECTION?

Previous video research required teachers partnering up to film, or obtaining outside assistance (Armstrong & Curran, 2006; Harford, MacRuairc & McCartan, 2010) to record their classroom teaching. For the purpose of this research, self-tracking video technology through the use of the SWIVL device and an iPad allowed the teacher to unobtrusively record her classroom teaching, without any external assistance.

Whilst most educators agree that reflecting on their professional practice and reviewing classroom discourse would be important, it is not yet common practice. This research aimed to investigate and show the possible benefits of utilising video footage, in particular through the use of self-tracking video devices to explore and potentially demonstrate its effectiveness and debunk the image of it being confronting for teachers. Rather than perceiving it as an intrusion, the researcher endeavoured to show that it can be a valuable and personal reflection tool.

## 2.13. SUMMARY

The literature identified feedback as a communication tool for teachers and students to interact. Through feedback students acquire new knowledge, improve their skills and communicate their needs and understandings (Voerman et al., 2012). Analysing and understanding the intricacies of communication and its varied occurrences in classroom interactions provides important insights into how feedback is communicated and how it can impact on student learning. Contemporary research (e.g., Hattie & Yates, 2014) found that most feedback given in classrooms, is feedback which is not process oriented, but instead grade oriented which consequently does not promote grit, perseverance and critical thinking skills. This poses a danger to effective teaching, as research by Hattie (2014) and Nuthall et al. (2017) showed, it is not the quantity of feedback, but the quality and type of

feedback,that has a positive impact on student learning.  As Brookhart (2008) states, effective feedback is about its timeliness and giving students access to information they need to understand where they are in their learning and which direction to head next.

After examining the literature, it still remains unclear, if non-specific feedback, when given in a timely manner and fit for the specific circumstances, is in fact less meaningful and therefore detrimental to students' learning or if it is effective as a type of feedback for classroom management, which can be interpreted as giving students' direction. There is limited literature that discusses the effects of non-specific, but contextually appropriate feedback, which is used to positively manage behaviour in the classroom. Gamlem and Smith (2013) however noted that feedback can, at times, be given to foster a positive relationship with students. Koka and Hein (2005), further found, that some non-specific feedback, even when given non-verbally, can have a large effect on student motivation. This gave the teacher reason to investigate the circumstances in which feedback was given to students and if it could be understood as a tool to assist students to acquire new learning and to reflect on their performance (Brookhart, 2008).

Kluger and DeNisi's (1996) study on feedback found that over one-third of feedback interventions decreased students' performance. They explain this occurrence by saying that the effectiveness of feedback decreases if the feedback is aimed at the individual student, as opposed to the task. In addition, these researchers found that both positive and negative feedback can enhance learning, provided the feedback contains enough information to allow the student to acknowledge what is right or wrong in their performance or understanding. Examples for positive feedback are types of feedback containing specific, positive information about the performance or level of understanding. In contrast, examples for negative feedback are those types of feedback containing specific, but negative information about the performance or level of understanding, or non-specific types of feedback, including utterances like 'Well done' or 'Good job' (Voerman, Meijer, Korthagen, & Simons, 2012).

Richards (1995) notes that one method for teachers to move towards a greater pedagogical understanding, is by questioning their own teaching, using observation and reflection as a way of developing their instructional practices. Raingruber (2003) discusses video cued reflection, and identifies it to be especially valuable for educators, as it allows a neutral insight into their everyday practices. Using video cued reflection, allows teachers to analyse their recorded interactions and to observe their instructional practices from a new perspective, to identify aspects he or she did not perceive during the lesson (Marsh & Mitchell, 2014). Raingruber adds that through video cued reflection, teachers are able to identify regular patterns and types of communication.

While the current literature discusses the use of written reflections during the video-cued reflective process (Tripp & Rich, 2012) as allowing teachers opportunities to view interactions in their classroom, and notice specific behaviours, there are only few studies discussing how the note taking was used afterwards to develop teachers' growth and reflection. Furthermore, the benefits of video to foster a collaborative peer review process, without the need for the reviewer to be present in the classroom, has been discussed in the current literature (Baecher, McCormack & Kung, 2014; Tripp and Rich, 2012), however, little research can be found about the tools used to take notes and make annotations. This study explored the effectiveness of using a checklist to facilitate 'noticing' and then guiding reflective process, individually and collaboratively.

Raingruber's (2003) idea on gaining an unbiased insight into the teacher's use of feedback strategies by using video provided a strong motivation for using video cued reflection in this study.

# 3.    METHODOLOGY

The goal of conducting any research study, regardless of the field of study is to review existing practices, to gain new knowledge, generate a better-informed understanding of a particular issue or to improve existing circumstances.

This chapter introduces the theoretical and conceptual framework that formed the basis for this thesis. It is organised into six main sections, describing the research paradigm, the theoretical framework, the conceptual framework, and the data collection methods, and explains how the data has been analysed. Issues of reliability, validity, bias concerns, and the potential limitations of the study are also discussed.

## 3.1. THE RESEARCH PARADIGM

The research was conducted to investigate the impact of video as a self-reflective tool for improvement of teacher feedback practices. A self-tracking video tool was used to record the researcher-as-teacher, and the recorded footage focusing on feedback techniques was reflectively analysed. To accommodate the research-as-teacher role in this study, a quasi-ethnographic research paradigm was deemed appropriate. Kervin, Vialle, Herrington and Okely, (2006) describe the process of conducting an ethnographic study in an educational setting as the researcher being placed in a classroom, taking notes to inform the research.  Silverman (2006) describes ethnography and participant observation as the researcher conducting observations within the classroom setting and also as a participant in the research. Ethnographers recognize that social research is inevitably embedded in social relationships (Dilger, Pels & Sleeboom-Faulkner, 2019), a process, in which the establishment of trust and the interpretation of data continue to evolve throughout the duration of the research. Characteristics described by both Silverman and Dilger et al. were applicable to the study, in so far as the researcher-as-teacher was actively engaged in the phenomenon under observation, and with an appreciation that the classroom represents a socio-cultural context and that teacher-student relationships are continually evolving in this context.

Hammersley (1990) refers to ethnography as social research which includes the following features. Ethnographic research involves observation of people's behaviour in everyday situations, rather than under experimental circumstances created the researcher.  Data is collected from a range of sources, with observation and/or informal conversations being the main ones. The research participants are often located in a single setting and usually constitute a group, of relatively small scale. The analysis of data seeks to uncover the meanings and functions of interpersonal actions and mainly takes the form of verbal descriptions and explanations. These features characterised the present study: teacher behaviour (i.e. feedback) was observed in a natural setting (i.e., classroom interaction with students) utilising multiple data sources, which was analysed to improve effectiveness in the feedback practices employed by the teacher.

This type of research is often not based on a pre-existing hypothesis, but rather begins with a theoretical framework, allowing the researcher to gradually narrow their focus (Hammersley, 1990). In this qualitative study, the researcher employed certain theoretical assumptions that guided the description of the phenomenon under investigation rather than providing specific explanations. To describe this strategy, Bogdan and Biklen (2007) analogise the qualitative researcher as "the loosely scheduled traveller" (p. 54) who has a general plan about how they will proceed, but the plan evolves

as they learn about the participants, their setting and other sources of data through direct examination. Addressing this idea, Kervin et al. (2006) note that in qualitative research, the design evolves during the study and is therefore inductive rather than deductive, as it aims to generate explanation instead of test a theory. The present study evolved through use of a general plan and inductive analysis that sought to describe and analyse the feedback practices that were used by the teacher.

Ethnography and observational methods can include interviews, checklists or audio-visual recording, observation, and documents (Genzuk, 2003). Employing these data collection techniques enables the researcher to observe roles, responses, interactions and influences from all participants including self. The present study utilised a number of these techniques to collect and analyse data, in particular checklists (Appendix A), video recordings and observations.

The research approach adopted in the present study aligns well with Gray's (2018) description of qualitative research as a process which is "inherently interpretative" (p. 58). Such an interpretive approach according to Pope, Ziebland and Mays (2000) is highly dependent on the quality of the data analysis; it is strongly dependent on the integrity, vision and skill of the researcher. "In much qualitative research the analytical process begins during data collection as the data already gathered are analysed and shape the ongoing data collection" (p. 114). In this vein, the researcher adopted an iterative process of data collection and analysis, with each stage further informing the next.

Although the study adopted many facets of ethnographic research, it is characterised as 'quasi ethnographic', for the reason that the focus remained on the teacher. Although the teacher's actions occurred in the classroom context of student-teacher interaction, the student perspective was not explored as part of this study.

## 3.2. THEORETICAL FRAMEWORK

The theoretical framework informing this study is Activity Theory. Activity Theory has been identified as one of the most commonly used theoretical frameworks in contemporary educational investigations (Gedera & Williams, 2016), providing a conceptual lens to investigate the nature and development of complex dynamic systems and how they change over time. The classroom is representative of complex and dynamic social system. The iterative process of analysing a series of

lessons and identifying and implementing specific change processes suited the use of this theoretical framework.

Activity Theory emerged from Vygotsky's (1987) theory of socio-cultural learning during the 1930s and 1940s, alongside the work of Leontiev, Luria and Engeström (Gedera & Williams, 2016). It provides a model that explains how learning occurs. The first generation model of Activity Theory (Figure 2, adapted from Engeström, 2001) identifies a triangular relationship between the subject (the phenomenon / group being studied), the object (intended learning outcome) and mediating artefact (the tool used by the subject to achieve the object) (Hashim & Jones, 2014).

It can be understood as a methodological foundation from which to observe the relations between "societal, institutional and personal dimensions of human development" (Hedegaard, 2012, as cited in Gedera & Williams).
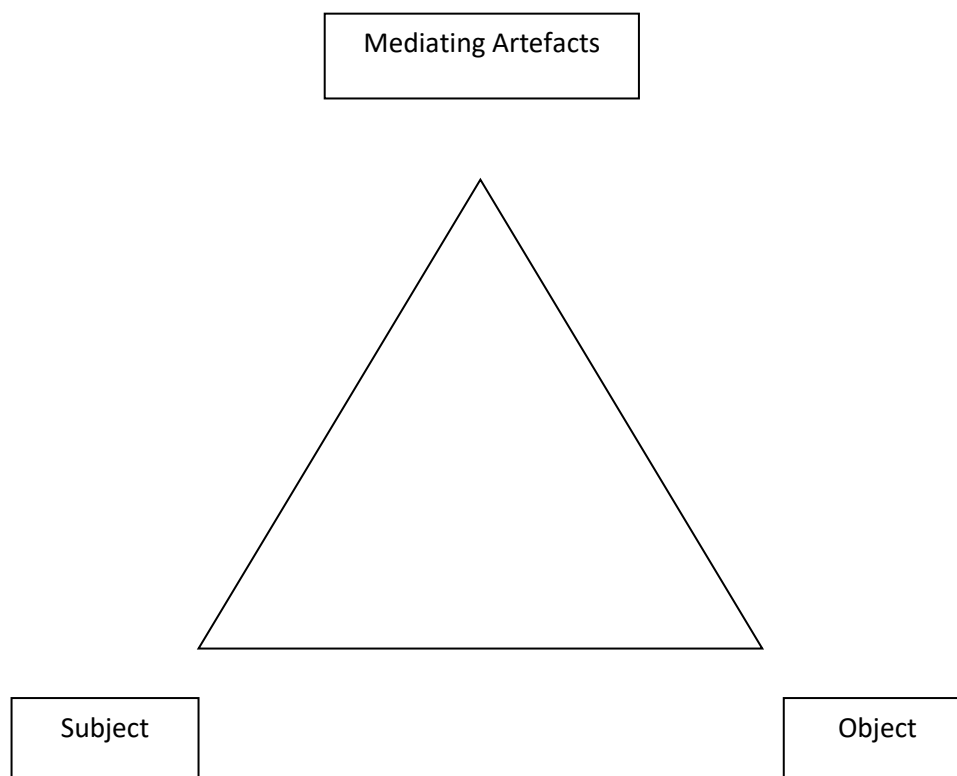


*Figure 2.* Vygotsky's first generation model of a mediated act

For the purpose of this study, the subject was the teacher who implemented the mediating artefact, the video cued reflection of the feedback strategies used, working towards the object: improving learning outcomes and feedback strategies.

Activity Theory was adopted as the theoretical framework, as it presented a suitable structure for the teacher (subject) to observe, review, monitor and reflect on the teacher's use of verbal, written and embodied feedback in lessons, which were recorded using self-tracking video technology (tool), to improve the effect of feedback on student learning. This application of Activity Theory fits with Hashim and Jones' (2007) description of Activity Theory as the "integration of technology as tools which mediate social action. These tools, or artefacts, include instruments, signs, language, machines and computers" (p. 6). These researchers elaborate that whilst it may at times be difficult to analyse why people do things in a particular way, it can provide deeper insight to the more implicit elements of an action. Hashim and Jones argue that with the assistance of technology or "sophisticated tools" (p. 13), researchers are able to study "the elements of activities (how people do things) and the relationships between them (togetherness)" (p. 13). Therefore, in this study Activity Theory was deemed an appropriate theoretical lens for studying the elements of feedback practices and their influence on student learning, with the use of video footage to guide the teacher's reflective analysis.

The theoretical framework of Activity Theory allows a researcher to investigate components within complex social systems, and bounded structures or elements. In this study, feedback by the teacher was positioned as a bounded structure, or system element that is integral to and contributes to the functioning of the system. This theory further provided a framework for the researcher to study how the influences of society, the school, and the personal motives and demands on the teacher are constantly interacting in the classroom system (Gedera & Williams, 2016). Also providing a structure, activity theory provides insight about how student engagement is impacted by the frequency and nature of feedback given by the teacher, and the relationship between this and the development of the system as a whole (i.e., feedback and learning in this classroom setting). This facilitates analysis of complex systems, revealing contradictions that characterise such systems. In this study, activity theory is considered a suitable theoretical framework in this study as it was focused on an investigation that encompassed a classroom intervention in which the teacher sought to enhance student engagement by exercising transformative agency (Engeström, Sannino, & Virkkunen, 2014), to reveal the deeply embedded ways in which the system operates, sometimes through contradictions.

Activity Theory also offers a methodological framework that can guide researchers in their investigations. This framework espouses Vygotsky's (1997) idea of holistic research to understand how a system develops and transforms itself. When undertaking methodological analysis of a system it is essential for the researcher to specify what is being developed, which in this study refers to effective and meaningful feedback practices by the teacher. The four components critical to holistic research as described by Vygotsky are: unit, historical development, theoretical robustness, and the role of the researcher (Gedera & Williams, 2016).

The system 'unit' studied in the present study was teacher feedback. Vygotsky (1987) defined "unit" as a product of analyses that possesses all the basic characteristics of the 'whole' (p. 46). Vygotsky (1987) identified two methods of analyses.  The first is designed to study the elements within a system. In this study, this involved an atomistic approach where feedback practices as a 'whole' was broken down into "the simplest components or elements" (Gedera & Williams, 2016, pp. 8-9). Although this approach helps to dismantle the 'whole,' doing so has the effect of losing the properties of the 'whole' in the elements. The second method occurs when the researcher breaks down the whole into units that retain the properties of the whole. This helps to retain the dynamic and relational qualities of the 'whole.' In using the checklist, the researcher sought to address the second method, but system level contradictions sometimes meant that atomistic approach resulted in the analysis.

Historical development is the concept Vygotsky (1987) used to articulate the complexity of 'whole' systems that are in continuous change. When researchers study a phenomenon historically, Vygotsky believed they are studying it in motion.  Hence, this method foregrounds how systems change over time, the past is always present in how a system currently functions. Thus, the past is inseparable, embedded and merged into the present. In this study, it was apparent that the teacher's development of feedback techniques was historically constructed, as were students' classroom engagement; both system elements affected the change processes that occurred.

Theoretical robustness, explained Vygotsky (1987) is always demonstrated in how data is generated in social research. This is an important aspect in Activity Theory research because it relates to validity and reliability. Validity is enhanced when the researcher makes visible the concepts used in the interpretation of the data, including his/her conception of the development that has taken place, and the themes that emerged (Gedera & Williams, 2016). Reliability is enhanced in Activity Theory research when the researcher is clear about the object of the research. Both these aspects were given careful attention during data collection and analysis in the present study.

Finally, the role of the researcher that Vygotsky (1987) advocated was one of "fullness" (p. 36) in data gathering. He stressed the importance of showing how the research context was established as well as the ongoing role of the researcher during data collection, as he argued this gives greater insights into the process of development. The sections that follow (including Chapter 4) provide a detailed description of how the research context was established, and the role the researcher took throughout the data collection and analyses, which clarifies the conclusions that were drawn about feedback practices in the classroom, and the effects of the targeted developments.

In mapping out the theoretical framework for the study, the researcher has outlined how Activity Theory was employed theoretically and methodologically. Activity Theory it was shown, provided a lens to identify *what* was being developed (i.e. feedback practices), and *how* this development was studied (i.e., through video-cued reflection). The holistic approach provided a means to identify contradictions or tensions present in the activity system (classroom feedback), and to show the characteristics of feedback and the ways in which elements of the object system (different feedback techniques) function within the classroom context.

## 3.3.    THE CONCEPTUAL FRAMEWORK

A conceptual framework is designed to give direction to a study. It shows the relationships between the different concepts the researcher wishes to investigate and is constructed by the researcher within a research paradigm (Maxwell, 2005).

The conceptual framework arising from the previously discussed investigation of current research and literature (in Chapter 2). Figure 3 illustrates the cycle of giving feedback to the students and reviewing that feedback for its effectiveness to make improvements and changes.
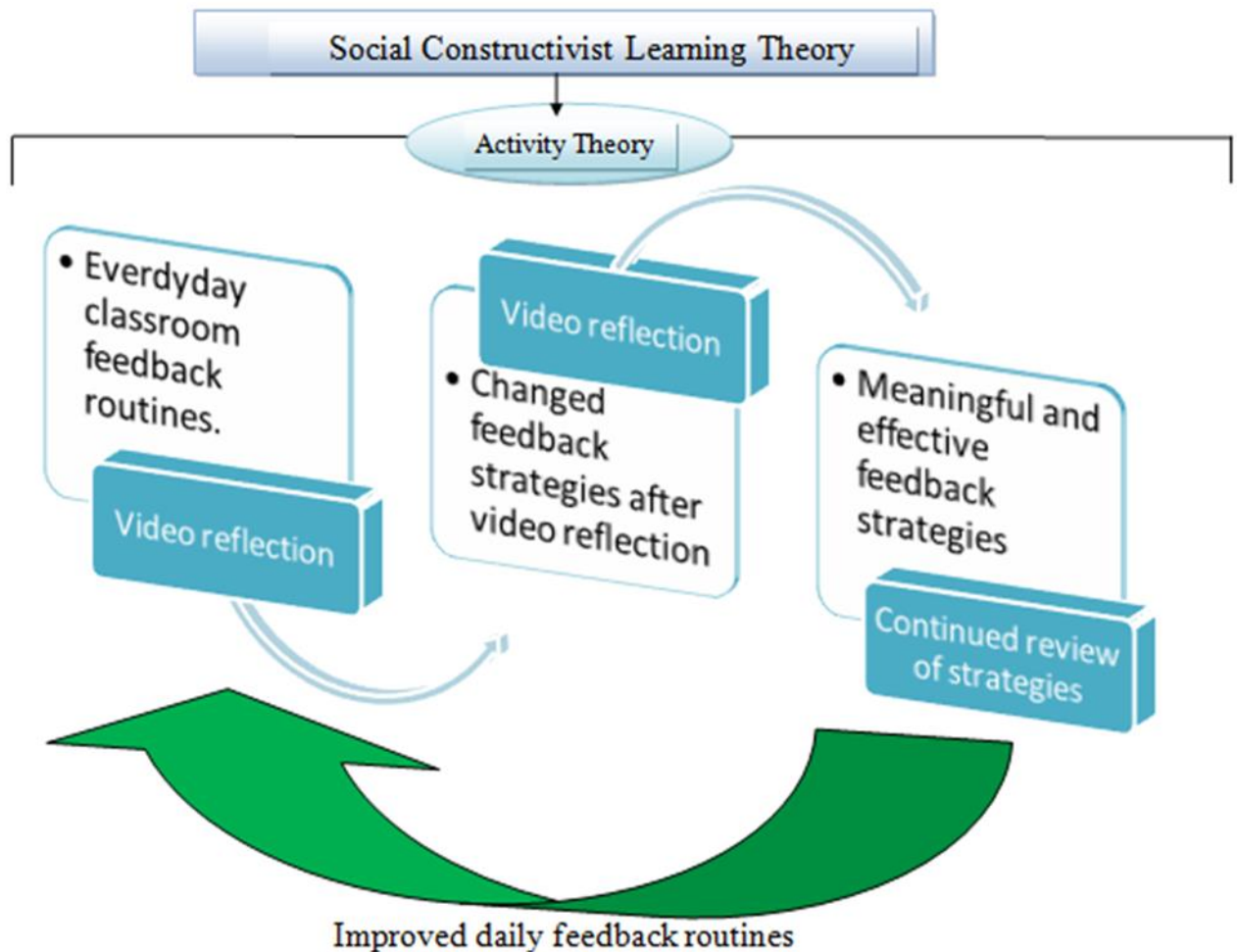
*Figure 3.* Conceptual framework demonstrating the cycle of giving feedback

## 3.4.    PARTICIPANTS

The research was undertaken at a Department of Education Independent Public School in the southern suburbs of Perth, Western Australia which is also the school the researcher works at as a specialist teacher. The participants in the research were invited from a Year two cohort of 26 students. The students were of a range of abilities with different ethnic backgrounds. All students have English as their first language.  After ethics approval for the study to proceed was granted by Edith Cowan University's Research Ethics Committee, approvals were obtained from the Department of Education and the selected school. An information and consent letter (Appendices B and C) were sent to the principal of the school, outlining the relevance of the research project and how the research will be

conducted, posing no interruptions to the delivery of the curriculum content. The research process and protocols complied with Department of Education guidelines.

An information letter and consent form was sent to both the parents and students in the class (Appendices D, E, F, and G), outlining the nature of the research, as well as giving information about the safety measures in place to protect the students. A parent information session was conducted (Appendix H) to answer any questions arising.  Signed consent forms were obtained from all parents, guardians and students who had agreed to participate in the research, including consent to be captured on video-recording of normal classroom teaching and learning activities over a period of six weeks. The data collection commenced in August 2018.

The focus of the research was the teacher and the feedback she gave to her students in the course of normal curriculum-based classroom teaching and learning, with the aim of assessing the type, nature and frequency of the feedback provided. Students were filmed throughout the study however they were not the focus of the research, therefore the impact of the feedback on student learning or behaviour was not be considered in the discussion of the findings of this study.  Students were filmed in the context of usual classroom experiences during normal classroom routines, with a camera located at the back of the classroom so that the camera was targeted at the teacher, rather than the students. This camera position reduced the likelihood of capturing students' faces on camera. Any student who did not consent to participate in the research remained in the classroom and participated in regular classroom activities, but was seated in a position where he/she was out of range of the self-tracking video capture system, and has not been included in any footage.

## 3.5.   THE DATA COLLECTION METHOD

The data for this research has been collected by using the following techniques:

- Video footage of the use of feedback in the classroom. This was obtained with the use of a non-invasive self-tracking video device placed in the classroom.

- Annotated notes, entered directly onto the video footage. This was done when the researcher viewed and reflected on the video footage using the SWIVL technology. The reflections included comments that were focused on the nature and the frequency of the feedback given.

An independent reviewer was invited to view the footage and add annotated notes directly onto the recorded video material.

- Feedback checklist (Appendix A) – The focus of the checklist was not only on the verbal teacher-to-student feedback, but additionally, attention was paid to the embodied feedback the teacher gave to students. This checklist fits in within the quasi-ethnographic and qualitative research approach, as it allowed the researcher to objectively reflect on her feedback in a structured manner.

These data collection techniques were targeted to address specific research questions, as shown in Table 1 below.

Table 1

*Data collection techniques relating to the corresponding research questions*

| Research questions | Data collection |
| --- | --- |
| Which types of feedback strategies are used by this teacher? | Video footage, Teacher reflective comments and annotations entered into the SWIVL portal, as well as the Feedback checklist. |
| How does video cued reflection enhance teacher feedback practices? | Video footage, Teacher reflective comments and annotations entered into the SWIVL portal, as well as the Feedback checklist. |

### 3.5.2.  VIDEO FOOTAGE, USING A SELF-TRACKING VIDEO DEVICE

Video footage of the classroom interactions was collected over the six-week research period. As stated by Cunningham (2002), access to digital filming allows teachers to review, reflect, and edit their videos with more flexibility. Whilst this approach of data collection may have limitations regarding the rigor of a quantitative research review, Blomberg et al.  (2013) identified the fact that many studies in this field are based on qualitative approaches, but do provide empirical data that fits the purpose of this

study. The self-tracking device captured classroom interactions, both verbal and embodied, without being invasive and distracting. The video data collected within the classroom environment, allowed the researcher to identify implicit and explicit communications, including embodied responses in the classroom environment that may not have been identified using other data collection techniques (Raingruber, 2003).

The researcher recorded a total of six lessons for, covering the entire 60-minute duration of individual lessons.

Table 2

*Video recording time for each Health lesson*

| Lesson # | Time recorded |
|---|---|
| Lesson 1 | 52.01 minutes |
| Lesson 2 | 50.50 minutes |
| Lesson 3 | 52.31 minutes |
| Lesson 4 | 49.44 minutes |
| Lesson 5 | 40.36 minutes |
| Lesson 6 | 28.42 + 25.29 |

Following collection of the data, the researcher viewed each video recording. The purpose was to enter annotations directly onto the SWIVL portal, to identify specific segments within the video data that the researcher deemed useful for self-reflection.

### 3.5.3. TEACHER REFLECTIVE COMMENTS AND ANNOTATIONS

Following the collection of the video footage, the researcher viewed the footage using a reflective process to identify what feedback strategies were being utilised by the teacher, and evaluate their effectiveness in fostering student learning. Bell (2014) advises to take notes during the course of an observation and then transfer them to a summary chart. She further suggests comparing notes with

an independent reviewer afterwards to see if both observers noted the same incidents. The use of self-tracking video technologies in the classroom enabled video cued reflection on action by the teacher, providing an account of the actual events, and an opportunity to revisit this later. The self-reflection process guided the teacher's awareness of the feedback strategies she was using and through self and collaborative reflective evaluations she was able to adjust her feedback strategies over time.

### 3.5.4.   CHECKLIST

Checklists have played an important role in presenting respectability in qualitative research and in convincing critics of its thoroughness (Barbour, 2001). A checklist (see Appendix A) to compile and categorise the video footage collected over the research period, adapted from the checklist developed by Voerman et al. (2012) was used to monitor teacher feedback. This checklist was used to record the types and frequency of feedback given by the teacher. It facilitated 'noticing' a range of verbal and non-verbal behaviours associated with feedback practices. Within the checklist, the focus has not only been on the verbal teacher-to-student feedback, but additionally, attention has been paid to the embodied feedback that the teacher gave to students. This checklist fits within the quasi-ethnographic and qualitative research approach, as it allowed the participating teacher to identify and focus on specific elements in the feedback system, and then use these to objectively reflect on her practice and identify goals for further development.

### 3.5.5.   INDEPENDENT REVIEWER-FEEDBACK

Peer-feedback was provided by the schools' Deputy Principal who had consented to taking the role of an independent reviewer for this study. The researcher shared the collected video footage with the independent reviewer via the secure SWIVL portal, allowing him to view and tag the video footage and enter annotations. In addition to making annotations, he used the checklist completed by the researcher to discuss differing interpretations of the viewed material. Coffey (2014) notes that viewing and reflecting on a teaching episode through video review, together with written or verbal peer or tutor comment, is significant in scaffolding the growth of skills in reflection.

## 3.6.    DATA ANALYSIS

The goal of conducting any research study, regardless of the field of study is to review existing practices, to gain new knowledge, generate a better-informed understanding of a particular issue or to improve existing circumstances. All data collected has been analysed using qualitative methods, where analysis begins as data first becomes apparent and this analysis then shapes further data collection (Bell, 2014, Pope et al. 2000).

The use of multiple data collection techniques enables a researcher to apply a more comprehensive analysis of themes (Bell, 2014). For the purpose of this study, annotated notes as well as video footage were reviewed not only by the researcher, but also an independent reviewer, to ensure validity of the data. After the collection of data, it was analysed and, organised using the categories from the feedback checklist. Emerging themes were identified and interpreted, and finally, the research and findings were used to construct the conclusions and recommendations. This systematic process follows that presented by Creswell (2006).

Data collected in this study has been analysed according to Yin's method of five stages of qualitative data analysis (Yin, 2015), consisting of compiling, disassembling, reassembling, interpreting and concluding, as outlined in Table 3. This process enabled the researcher to proceed to analyse the data and to "revisit and refine questions, develop hypotheses, and pursue emerging avenues of inquiry in further depth" (Pope et al., 2000 p. 114).

able 3

*Implementing Yin's Five Stages of Qualitative analysis*

| | |
|---|---|
| Compiling | Gather and compile footage of verbal feedback |
| | Gather and compile data from embodied feedback |
| | Gather and compile data from field notes |
| Disassembling | Tag and annotate the video footage |
| Reassembling | Determine emerging themes |
| Interpreting | Develop an understanding of the data |
| | Explain the meaning of the data |

| Concluding | Conceptualise data |
|---|---|
| | Draw conclusions |
| | Make recommendations |

### 4.6.1  COMPILING

The first stage of Yin's (2015) method of qualitative data analysis, was to gather and assemble video data, over a period of six weeks. The data was compiled by filming six consecutive Health lessons in the same Year 2 class.  The analysis began with filming and then compiling the video footage collected.

### 3.6.2.  DISASSEMBLING

This second stage of Yin's (2015) qualitative data analysis involved tagging and annotating the video footage, as this stage calls for breaking down the collected data into smaller fragments or pieces. The second phase of the procedure may (but does not have to) be accompanied by allocating new labels, to the fragments or pieces. The disassembling procedure can, and in this study was, repeated many times as part of the process of applying codes.

A checklist (Appendix A), previously described was used to disassemble the data into predefined categories, noting verbal and nonverbal feedback techniques that were used.

According to Yin (2015), this second phase, can involve a formal coding procedure but does not need to. For this research, coding was undertaken by means of the observation checklist instead. The video footage was reviewed and annotated independently by both the researcher and an independent reviewer to ensure reliability and validity. Disassembling the data allowed the researcher to identify broader patterns in the data.

### 3.6.3. REASSEMBLING

The second phase of Yin's (2015) qualitative data analysis was followed by the reassembling stage, using themes to reorganize the previously disassembled elements of the data collected into different groupings and sequences. Here, substantive themes were being identified through the reorganization and disassembling.

The researcher identified patterns in the types and frequencies of the feedback given by the teacher. These patterns were analysed by viewing the video footage multiple times to find commonalities or inconsistencies in the patterns. This data analysis, in combination with the annotations by both the teacher and the independent reviewer, allowed the researcher to reassemble the data into themes.

### 3.6.4. INTERPRETING

The fourth phase, interpreting (Yin, 2015), involves using the reassembled material to create a new understanding of the data. The review of the initial interpretations of the types and frequencies of feedback given by the teacher, prompted the researcher to recompile the data in a different way, or to disassemble or reassemble the data differently. The researcher used the newly created themes in conjunction with the annotated notes from the teacher and the reviewer to interpret how feedback can be affected by environmental factors and discussed how progress feedback may not always be the best type of feedback, depending on the circumstances of the lesson.

The fifth and final phase is the concluding stage (Yin, 2015). The researcher analysed the video footage and its relationship with the annotations from both the teacher and the independent reviewer and drew conclusions, considering all the data.

## 3.7.  RELIABILITY AND VALIDITY

Bell (2014) cautions researchers to be aware that when collecting any form of data, reliability and validity of the methods used to collect and interpret the data, needs to be assessed carefully. For this research, reliability and validity were addressed by having an independent reviewer analyse and interpret the video footage before discussing the findings with the researcher. An information letter, as well as a Guarantee of Confidentiality letter (Appendices I and J) were sent to the Deputy Principal of the school, who agreed to act as an independent reviewer of the annotated video footage. After reviewing the video footage, the researcher sent the feedback checklist as well as the video footage to the reviewer to ensure reliable data collection.

Bias as defined by Pannucci and Wilkins (2010) is "any tendency which prevents unprejudiced consideration of a question" (Definition and Scope of Bias, para. 1). The danger of bias needs to be considered when conducting any qualitative study. Pope et al.  (2000) state "at its heart, good qualitative analysis relies on the skill, vision and integrity of the researcher doing that analysis" (p. 116) and Bell cautions that a researcher must be ". . . wise and vigilant, critical of [their] interpretation of the data, regularly question [their] practice and wherever possible triangulate" (Bell, 2014, p. 170). Acting on the ideas from Pope et al. and Bell, the researcher the researcher reviewed all data multiple times, and similarly checked and cross checked against different data sources when developing the themes and categories.   These practices were reflected on to ensure that all data collected presented was truthfully represented and free of bias by the researcher. As noted by Dilger at al. (2019), one essential condition for ethnographic research is that the researcher must be accountable for the integrity, conservation and protection of the data gathered during their research project.

## 3.8.  ETHICAL CONSIDERATIONS

The ethical conduct of this research was directed by approval obtained from Edith Cowan University Research Ethics Committee and the System and School Performance Directorate of the Department of Education. The research procedures guaranteed informed consent and that the privacy of each participant was preserved. Where required, details in the data were modified without altering the original meaning of the data, to ensure participant privacy.

The research data and records were kept in a confidential and secure manner.

## 3.9.  DATA MANAGEMENT

Notes that were used when annotating the video footage were stored in a locked drawer for the duration of the research project. After deidentifying and transferring notes to electronic copies, any paper copies of the annotations were shredded. The video data collected has been stored safely on the password protected SWIVL portal hosted on a secure server. Only the researcher, independent reviewer and the supervisor had access to observe the video data.

## 3.10.  LIMITATIONS

There were a number of limitations the researcher was confronted with when conducting this study:

- The researcher and the teacher are the same person.

- The length of the research study was limited to six weeks.

- The findings of the research are confined to one classroom in one school and cannot be generalised.

These limitations might result in doubt as to the generalisability of the findings from the study. However, as Bell (2014) states, if the study refrains from making assertions which cannot be validated, it may be relatable in a way that will let members of similar groups recognise problems and, possibly, to see ways of solving similar problems in their own groups (p. 15).

These limitations are addressed further in the analysis and discussion of the findings.

## 3.11.  SUMMARY

The purpose of this research was to evaluate the impact of video as a self-reflective tool for improvement of teacher feedback practices. The theoretical framework informing this study was Activity Theory, which is one of the most commonly used theoretical frameworks in educational investigations. The quasi-ethnographic data collection approach allowed the researcher to analyse data found in a situational activity, located in its natural setting, and consequently the results are interpretive of the teacher *in situ*.  The data was analysed using qualitative research techniques, which, according to Neuman and Robson (2014) enables a stronger focus on depth rather than breadth. In this study, the researcher drew upon qualitative methods because the goal was to "develop a deep understanding of a phenomenon as it is experienced in a particular setting rather than to draw broad conclusions about a particular aspect of human behaviour" (Neuman & Robson, p.71)

The researcher used self-tracking video footage of classroom practice, a checklist as well as annotation of the video footage (by the researcher and an independent reviewer) as data sources. Twenty five students, participated in the research. Lessons were videoed without interrupting the curriculum delivery and reviewed by both the researcher and the independent reviewer afterwards, and data was analysed using the five techniques presented by Yin (2015).

Throughout the research ethics and approval protocols were adhered to, to ensure participants' privacy and safety was protected at all times.

In the following chapters, the researcher draws meaning from the data, and this is reported, displayed and discussed. Chapter Four presents the findings of the research.

# 4.    ANALYSIS AND FINDINGS

## 4.1.    INTRODUCTION

The aim of this chapter is to analyse the data collected from multiple sources over a period of six weeks.  Firstly, an overview of the study context and the physical setting in which the research took place will be given. This is followed by a presentation of the data collection and analysis techniques. The data will be presented as a summary with links to identified themes. This will be followed by a discussion of the emerging themes, connecting them to pertinent literature.  Finally, a summary will conclude the chapter, providing an insight into the following chapter where conclusions from the study will be drawn and implications presented.

The goal of this research was to use video cued reflection to identify and improve teacher feedback strategies in a primary classroom and to assess whether video cued reflection enhanced teacher feedback. This overarching goal connects to the research literature which claims that despite an abundance of research on feedback strategies, there is limited evidence to identify the most effective feedback strategies (Askew, 2000; Dean & Marzano, 2012; Harks et al., 2014; Kluger & DeNisi, 1996). Likewise, there is limited research that has explored how video technology can be used as a tool for reflection on teaching practice.  This study sought to address these identified gaps in the research literature, within a specialist primary classroom context.

## 4.2.    STUDY CONTEXT

As previously stated, the research was undertaken at a Department of Education Independent Public School in Perth, Western Australia which is also the school the researcher works at as a specialist teacher. All except one of the 26 students in the Year two classroom consented to participate in the study, and most students attended all six lessons identified for data collection. The 13 girls and 13 boys ranged in age from eight to nine years. The students were of a range of abilities with different ethnic backgrounds represented in the cohort. All students have English as their first language.  There were no students with special needs or additional learning needs in the class.

The teacher delivered one Health lesson per week of one-hour duration. The school adopts a whole-of-school approach to classroom management, which was followed by the specialist teacher in the study setting.

## 4.3. PHYSICAL SETTING

The classroom is located in the Year two block at the rear of the school. Figure 4 provides a representation of the classroom layout.
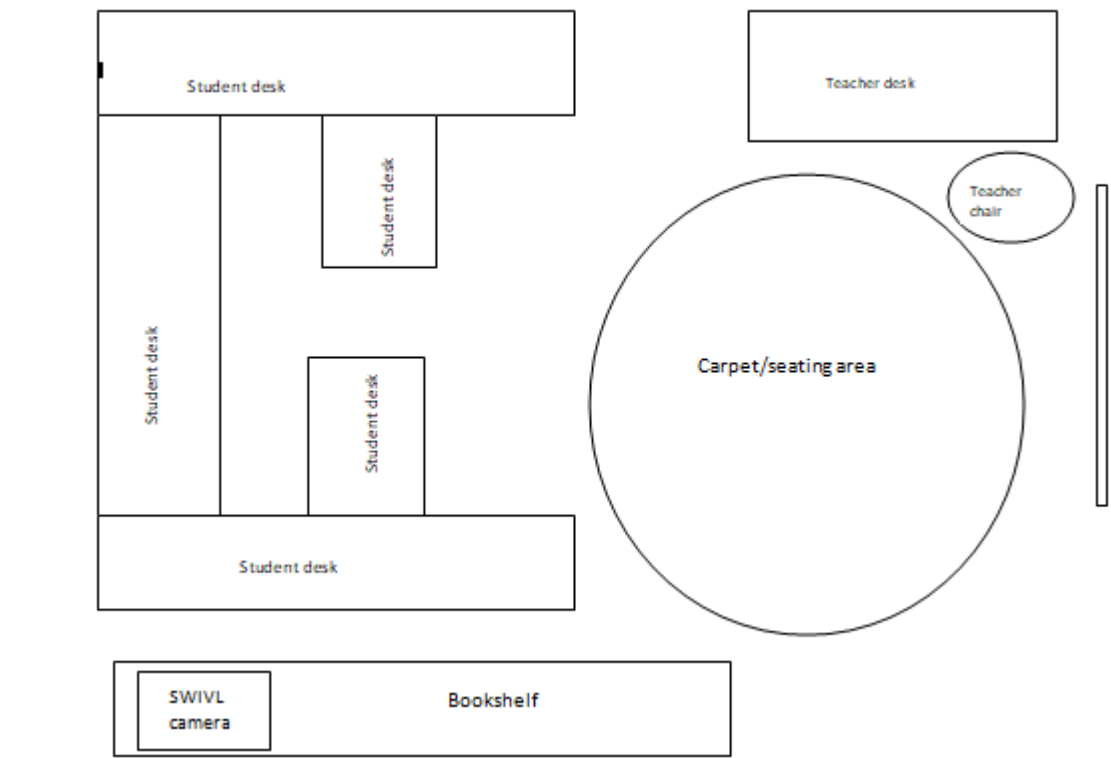


*Figure 4.* The layout of the Year 2 classroom in which Health lessons were conducted

The students' desks were arranged in a U-shape, facing the front of the room where the Interactive Whiteboard is located. At the front of the room is a mat area where students are seated during the instructional parts of the lesson as shown in the screen capture below (Figure 5).
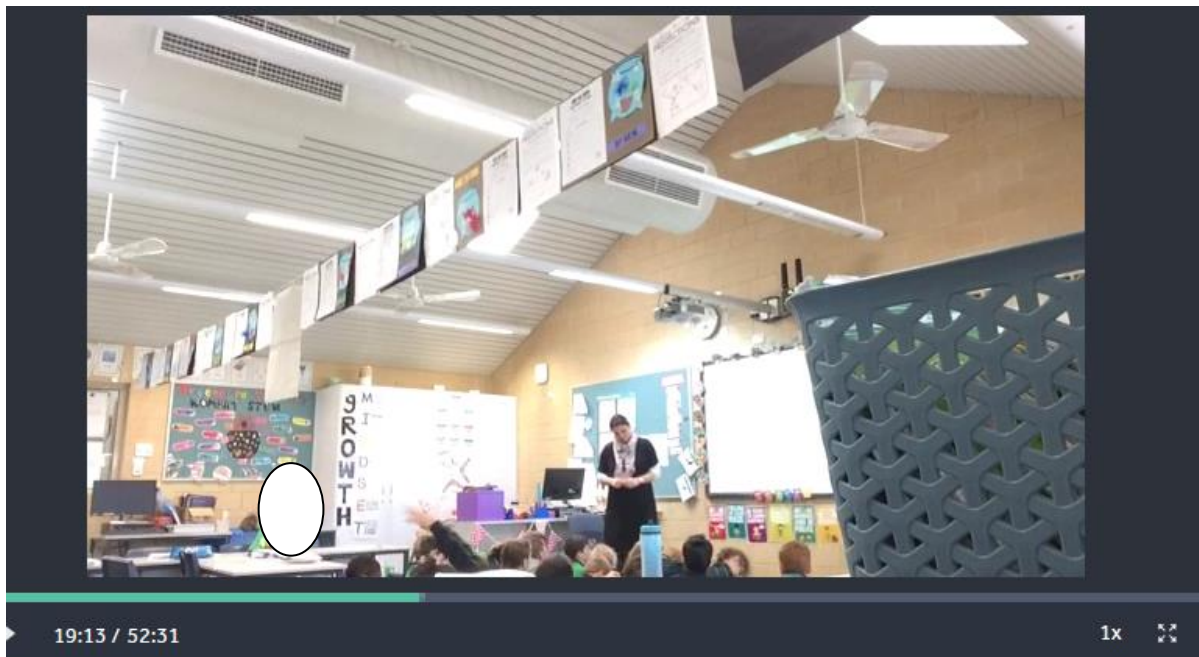


*Figure 5.* Screenshot of Video recording, showing the Year 2 students seated on the mat (own photo)

The SWIVL camera and the iPad were placed at the back of the room to ensure minimal disturbances and distractions, whilst allowing it to rotate freely and capture the entire classroom. This camera position also reduced the likelihood of capturing students' faces on camera as can be seen in the below image (Figure 6).

16/8/18 ⓘ
ⓒ created on Aug 18, 2018    👤 by Julia.mueller Mueller

▶   47:27 / 52:31     1.25x ⤢

*Figure 6.* Screenshot of Video recording, showing the Year 2 students seated at their desk (own photo)

## 4.4.  VIDEO RECORDINGS

The data collection occurred during six consecutive weekly one-hour Health lessons in Term Three. The researcher intended to capture the entire 60 minutes of each lesson to ensure maximal data collection, but found that transitioning from one room to another and setting the device up at the start of the lesson, and some technical issues impacted on both the recording time and the quality of data collected. The SWIVL device was turned on at the start of the lesson, and recorded the full duration of the lesson, except for intermittent pausing/muting when the teacher interacted with the non-participating student. This maximised the data collection. Table 4 presents an overview of the technical problems occurring during the recording process.

Table 4

*List of technical problems during the recording process for each Health lesson*

| Lesson # | Technical issues | Time recorded |
|---|---|---|
| Lesson 1 | Slight obstruction of the camera by an object | 52.01 minutes |
| Lesson 2 | No technical problems | 50.50 minutes |
| Lesson 3 | No technical problems | 52.31 minutes |
| Lesson 4 | Half of the lesson had audio, but no visual image. | 49.44 minutes |
| Lesson 5 | No technical problems with the recording, however, the Whiteboard in the class did not work, so the students had to be moved to a different room | 40.36 minutes |
| Lesson 6 | The recording stoped and had to be resumed, resulting in two videos for this lesson | 28.42 + 25.29 |

The video data collected was saved on the password protected iPad and immediately uploaded to the secure, password protected SWIVL portal, with the recording on the iPad then deleted.  The SWIVL portal was then accessed to view, analyse and annotate the video footage by both the researcher and the independent reviewer. The researcher and the independent reviewer added brief annotations into the SWIVL portal, but, upon reflection on the process, found it to be more beneficial and timely to meet in person for collaborative peer discussions, rather than communicating through the portal alone. This also facilitated interpretation of specific behaviours in different contexts, enabling a more nuanced use of the Checklist, as it became evident that it was possible to code a specific feedback strategy differently depending on the context in which it had occurred.  The opportunity for discussion added consensus to the process of coding the observed strategies.

## 4.5.    DATA ANALYSIS

Within this quasi ethnographic study, the three sources of data were integrated throughout the analysis process.  Table 5 provides an overview of the rich interconnections made across different data during the five stages (Yin, 2015) that guided the analysis.

Table 5

*Overview of the interconnections made across different data and Yin's five stages of analysis*

| Research questions | Data sources | Analysis process | Key themes |
|---|---|---|---|
| Which types of feedback strategies are used by this teacher? | Video footage Feedback checklist Teacher reflection and annotations entered into the SWIVL portal Independent reviewer comments | Stage 1: Compiling (i.e., Managing and organising the data, viewing video footage and making notes after each lesson, reflecting and summarising the notes) Stage 2: Disassembling (i.e., tagging and annotating the video footage to identify feedback strategies, identifying codes for the various feedback strategies) Stage 3: Reassembling (i.e., viewing the footage again noticing context and checking and rechecking the assigned codes, reading and re-reading reviewer annotations, counting frequency of codes, transferring the frequencies onto the checklist, reflecting) Stage 4: Interpreting (i.e., reducing the codes to themes, creating categories, relating categories, reconfirming by revisiting the footage, further annotating the footage and reviewing checklist data, identifying patterns, Revisiting stages 1-4 once all data collection was completed, relating categories to the literature, developing a point of view, displaying the data. Stage 5: Concluding (i.e., condensing the data to construct an answer to the research question, identifying implications) | Feedback and classroom management in a Specialist classroom Progression of lesson content in Specialist classrooms Feedback must be viewed in context Specificity of feedback Amount of feedback |
| How does video cued reflection enhance | | Stage 1: Compiling (i.e., reflecting and distilling ideas and goals following each lesson, building a composite checklist) Stage 2: Disassembling (i.e., coding reflections, notes, and identified goals) | Revisiting classroom interactions 'Seeing' ones practice |

| | | | |
|---|---|---|---|
| teacher feedback practices? | | Stage 3: Reassembling (revisiting the video footage and coded material, reducing the codes, identifying themes and categories)<br><br>Stage 4: Interpreting (i.e., combining and reducing themes and categories, relating categories to the literature, developing a point of view, displaying the data.<br><br>Stage 5: Concluding (i.e., Condensing the data to construct an answer to the research question, identifying implications) | Reflective annotations<br><br>Authentic professional learning<br><br>Collaborative reflection process |

The analysis process identified in Table 5 demonstrates the multiple and iterative cycles of data collection and interpretation that was adopted in this qualitative study. In the following discussion data relating to each lesson will be discussed, allowing for the perspective of the teacher to emerge ethnographically.

## 4.5.1.  LESSON 1

The content of Lesson 1 focused on the safe use and storage of medicines. All 25 students were present for the duration of the lesson. The teacher had introduced the device previously to familiarise students with the SWIVL device and the video recording process and to avoid distractions to learning during data collection. The equipment was set up and recording began without interruption.

The researcher later viewed the video footage multiple times, repeatedly, stopping and starting the recording in order to log the various feedback strategies used at specific stages of the lesson. Table 6 provides a sample of the video data log that was collated from Lesson 1.

Table 6

*Extract of video data log collated from Lesson 1*

| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 0:17- Well done x <br><br> 1:08 – Well done, good idea x <br><br> 1:22- Well done (teacher paraphrase what was said), good job <br><br> 1:37- Beautiful <br><br> 2:07- (Teacher paraphrase what was said), beautiful) |
|---|---|---|
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | No examples observed |
| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of understanding of the student. | 6:01- Wow, what a great idea, thank you <br><br> 7:25- Good question <br><br> 10:37- x has already started, x has finished it, well done <br><br> 12:31- Thank you x, I love that you are sitting Super 6 |
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | No examples observed |
| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 3:30 – I love that you remember buddy <br><br> 11:30- x, 3 times you did it, well done <br><br> 23:57- x, I love how you are thinking |

This process was followed for the length of the video recording, resulting in a collation of the feedback strategies the teacher used throughout the lesson (see Appendix K). This data was coded and

categorized to collate the frequency of specific feedback strategies. Table 7 provides a summary showing the frequency of different types of feedback the teacher used in Lesson 1 (see Appendix K).

Table 7

*Checklist for Lesson 1 showing frequencies of the observed feedback strategies*

| Feedback Category | What would this look / sound like? | Frequency |
|---|---|---|
| 1. Specific positive | Positive feedback containing specific information about the performance or level of understanding of the student. | 6 |
| | **Discrepancy:**<br><br>Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 0 |
| | **Progress:**<br><br>Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 3 |
| | **Other:**<br><br>Other 'positive' feedback not included above | 1 |
| 2. Specific negative | Negative feedback containing specific information about the performance or level of understanding of the student. | 2 |
| | **Discrepancy:**<br><br>Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 4 |
| | **Progress:**<br><br>Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 0 |
| | **Other:**<br><br>Other 'negative' feedback not included above | 3 |

| 3. Non-specific positive | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 20 |
|---|---|---|
| 4. Non-specific negative | Non-specific negative utterances, such as: "Wrong!" and, "Not quite!" | 0 |
| 5. Non-verbal | Communicative expressions without the use of words (e.g., proximity, smiling, eye contact) | 2 |
| 6. Body language | Communicative gestures using body without the use of words (e.g., proximity, nodding, head shaking, pointing to work, hand signals). | 26 |
| 7. Other | May include questions, brief instructions, and the like that do not fit into any of the above | 55 |

Table 7 shows the three most extensively used feedback strategies occurring in Lesson 1 were: Non-specific positive feedback, other interventions, and body language. Phrases such as: 'Well done x', 'Well done, good idea' and 'Beautiful' are examples of non-specific feedback strategies that the teacher used. Other feedback strategies categorised as classroom management, consisted of utterances such as 'Sshhh . . . " for students to be quiet and instructions like 'Eyes to me' or 'Sit on your bottom please'. These strategies were aligned with the whole school classroom management approach. Hattie (1999) and Pauli (2010) note that the overall occurrence of feedback is low in most classroom interactions and that the most frequent feedback given is nonspecific.

Progress feedback was identified as another category. This included negative and positive progress feedback that compared the performance of a student or their level of understanding with earlier performance or level of understanding. Progress feedback was given only three times throughout this lesson as seen in Table 8 below.

Table 8

*Total amount of progress feedback given in Lesson 1*

| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 3:30 – I love that you remember buddy<br><br>11:30- x, 3 times you did it, well done<br><br>23:57- x, I love how you are thinking |
|---|---|---|
| 4b. Progress feedback | Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | No negative progress feedback was given |

After viewing the recording of Lesson 1 a number of times and thus confirming the accuracy of the findings, the teacher sought feedback from the independent reviewer, who also identified greater amounts of non-specific feedback, other interventions and feedback given by body language. Interestingly, the independent reviewer did not identify the presence of progress feedback in Lesson 1, which raised awareness of context in which feedback occurred, rather than the 'type'.

These unexpected feedback findings from the independent reviewer promoted further teacher reflection. A reflective comment recorded by the teacher in the annotations follows:

> Having extensively researched the importance of progress feedback, I thought my lesson delivery would show more of the meaningful and targeted feedback and less of the non-specific, potentially detrimental feedback.

Through further review and data reassembling the teacher extracted a sample of non-specific feedback that was used in Lesson 1. In total, non-specific feedback was used 20 times. This data set was coded to differentiate non-specific positive and non-specific negative feedback; an excerpt is shown in Table 9. Interpretation of this data facilitated sense-making of what was going on during Lesson 1. The teacher was not using targeted feedback, but instead using feedback to keep the students in high spirits and on task by praising them often and in quick succession. As shown in Table 9, there were eight occurrences of non-specific feedback given in the duration of just over six minutes. It is likely that a contributory factor was to keep students' attention away from the SWIVL device and directed towards the teacher. The researcher drew further insights about the use of non-specific feedback in this context, by referring to Zahorik, et al. (2003), who state that, in order to manage

classes, teachers will often "handle student infractions quickly, not allowing them to distract the class" (p. 76).

Table 9

*Example of succession of non-specific feedback over 6 minutes during Lesson 1*

| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 11:05- Good job, well done |
| --- | --- | --- |
| | | 11:17- Well done |
| | | 12:12- Well done |
| | | 12:50- Beautiful, x, x, x, x, x, x, x |
| | | 13:24- Well done |
| | | 14:00- Well done |
| | | 14:48- Well done, good job |
| | | 17:35- Absolutely |

After drawing the above-mentioned conclusions, the goal the teacher identified for Lesson 2 was to decrease the amount of non-specific feedback and increase the amount of specific feedback in order to make the learning interactions more meaningful and targeted.

## 4.5.2. LESSON 2

The content of Lesson 2 focused on assertive behaviours in relation to Protective Behaviour. There were two students absent from the lesson and one student arrived late, returning to school from an appointment, which caused brief disruption during the lesson. It must also be noted that the teacher was unwell during the lesson and this might have contributed to the classroom interactions.

As for the previous lesson, the observation process began with the researcher viewing the video repeatedly, stopping and starting to log the different feedback strategies used at particular stages of the lesson. This time, specific attention was given to the frequencies and differences of non-specific and specific feedback.

55

Table 10 provides a collation of the frequency different feedback strategies were used in Lesson 2. This data enabled the researcher to scan the different categories, focusing especially on non-specific and specific feedback and their differentiation into positive and negative sub-categories within this lesson (see Appendix K).

Table 10

*Checklist for Lesson 2 showing frequencies of the observed feedback strategies*

| Feedback Category | What would this look / sound like? | Frequency |
|---|---|---|
| Specific positive | Positive feedback containing specific information about the performance or level of understanding of the student. | 11 |
| | Discrepancy:<br><br>Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 3 |
| | Progress:<br><br>Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 1 |
| | Other:<br><br>Other 'positive' feedback not included above | 10 |
| Specific negative | Negative feedback containing specific information about the performance or level of understanding of the student. | 2 |
| | Discrepancy:<br><br>Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 2 |

| | Progress:<br><br>Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 6 |
| --- | --- | --- |
| | Other:<br><br>Other 'negative' feedback not included above | 37 |
| Non-specific positive | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 20 |
| Non-specific negative | Non-specific negative utterances, such as: "Wrong!" and, "Not quite!" | 0 |
| Non-verbal | Communicative expressions without the use of words (e.g., proximity, smiling, eye contact) | 14 |
| Body language | Communicative gestures using body without the use of words (e.g., proximity, nodding, head shaking, pointing to work, hand signals). | 39 |
| Other | May include questions, brief instructions, and the like that do not fit into any of the above | 10 |

Table 10 shows that while non-specific feedback was used with the same frequency as that which occurred in Lesson 1, specific feedback had significantly increased. This result was confirmed by the independent reviewer, who had identified one additional time when specific feedback was given in Lesson 2.

Through the peer review discussion, it became evident that the focus and content of Lesson 2 meant there was reduced mat time, and consequently reduced teacher talk, resulting in time dedicated to independent desk work by students. This further had the effect of decreased noise levels throughout Lesson 2, which possibly could explain the increased use of non-verbal feedback within this classroom

climate (e.g., proximity, looks aimed at students), compared to Lesson 1 where greater use of verbal feedback occurred.

An annotation made by the independent reviewer in regards to this observation was:

> The students appear more focused on their independent work when they have a clear task ahead of them. The feedback I observed during this period of quiet work consists mainly of phrases related to students interacting with the task: 'Wow, what a great idea, thank you', 'Good question' and '(Name) has already started, x has finished it, well done'.

Following Yin's (2015) five stages of qualitative analysis the researcher came to the conclusion that the teacher was conscious of reducing the amount of non-specific feedback and was probably less inclined to praise individual students when they were working independently. Contrastingly, the data appears to suggest that an environment where students were working independently created increased opportunities for more one-to-one communication with students, allowing the teacher to give specific feedback like:

> Thank you boys at the front.

> You worked so well. You worked the neurons. You were listening. Not interrupting. Very impressed!

> (Name), awesome. He is already writing his name.

The goal for this lesson was to reduce non-specific feedback and incorporate more progress feedback, which Hattie and Timperley (2007) and Kluger and DeNisi (1996) identified as the most meaningful and effective type of feedback. The teacher's reflective notes and annotations included reminders to self to consciously incorporate progress feedback and thus encourage deeper engagement with the content by students.

> My goal for the next lesson is to pay greater attention to the feedback I am giving, to ensure that it is focused on the students' earlier performance or level of understanding. If I just give a 'Well done' it is not aiding students to make progress and thus improve their learning.

To further guide the teacher towards the goal of reducing non-specific feedback and increasing the use of progress feedback the independent reviewer noted the following suggestion in his annotations:

> Get students to really think about their answers. Ask 'why are you thinking that?' or 'can you describe how you got to this idea?'

> I used to write myself a reminder to pin at the back of the room, so every time I looked up, I saw it, which kept me on track.

> Choose one or two students per lesson and draw deep into their thinking. Don't try to do it with every answer as you need to get through the content (and other students might get bored), but try to identify t where you could encourage Aha-moments

Additionally, the independent reviewer identified instances where the teacher had used progress feedback effectively, and drew her attention to this in his annotation, noting:

> Here, when you said, "(Name) I love how you are participating this term, it's really great to see that you remember to keep putting your hand up and you keep answering questions. And I love the smile, it makes me so happy! ", you were adopting an effective progress feedback statement to the student. You were comparing what the student didn't do in the past with what she is doing this term. You made her feel noticed and used the personal relationship you have established with her going. This is a technique you should continue to refine and use more frequently.

Van Es and Sherin (2002) identified that teacher education should support teachers in learning to notice, which is facilitated by reviewing the footage multiple times (Baecher et al., 2014). Baecher et al. further identified that teachers, who peer-reviewed their video recordings, were able to reflect more critically about their performance. In this study, the feedback from the independent reviewer acted as guidance for the teacher to reflect deeply on the effectiveness of her use of progress feedback.

### 4.5.3. LESSON 3

The content of Lesson 3 focused on early warning signs, and safe and unsafe feelings. All students were present; however, there were some disruptions to the lesson by the classroom teacher entering the room a number of occasions. There were no technical issues with the equipment or recording.

Following the same process as Lessons 1 and 2, the researcher began the observation by viewing the video a number of times to log the feedback strategies occurring throughout the lesson. As was noted after analysing Lesson 2, the researcher focused her attention on progress feedback and earlier performance or level of understanding of the students, to evaluate if the feedback she gave changed according to the goal she had set for herself.

The data from the video recording was entered into the checklist to assemble the feedback strategies and frequency with which they were used by the teacher. This data collated in Table 11, shows 'other-negative', 'non-specific positive,' and other – non- specific' as the three most frequently occurring feedback categories in Lesson 3 (see Appendix K).

Table 11

Checklist for Lesson 3 showing frequencies of the observed feedback strategies

| Feedback Category | What would this look / sound like? | Frequency |
|---|---|---|
| Specific positive | Positive feedback containing specific information about the performance or level of understanding of the student. | 12 |
| | Discrepancy:<br><br>Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 4 |
| | Progress:<br><br>Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 1 |
| | Other:<br><br>Other 'positive' feedback not included above | 4 |
| Specific negative | Negative feedback containing specific information about the performance or level of understanding of the student. | 2 |
| | Discrepancy:<br><br>Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 11 |
| | Progress:<br><br>Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 0 |

| | Other:<br><br>Other 'negative' feedback not included above | 41 |
| --- | --- | --- |
| Non-specific positive | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 18 |
| Non-specific negative | Non-specific negative utterances, such as: "Wrong!" and, "Not quite!" | 2 |
| Non-verbal | Communicative expressions without the use of words (e.g., proximity, smiling, eye contact) | 12 |
| Body language | Communicative gestures using body without the use of words (e.g., proximity, nodding, head shaking, pointing to work, hand signals). | 4 |
| Other | May include questions, brief instructions, and the like that do not fit into any of the above | 16 |

Table 11 further shows in Lesson 3, there were similar frequencies of non-verbal and non-specific feedback in comparison to the previous lessons; however, there was a notable increase in discrepancy feedback, where the teacher was comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. Examples of this type of feedback used within the context of Lesson 3 were drawn from the teacher's annotations, as follows:

> Stay where you are, put your hand up and ask to move.

> That would be the right thing to do.

> (Name), I am getting tired to talk to you about sitting Super 6. You are nearly in Year 3.

These examples of discrepancy feedback show this type of feedback is directed at the individual student's behaviour, rather than their learning and progress.

The researcher confirmed her findings with annotations supplied by the independent reviewer, who identified a similar increase in discrepancy feedback in Lesson 3. Some comments made by the independent reviewer on this point are:

The use of discrepancy feedback is not effective at this point. Using a phrase like: 'Awesome Year 2s, that's nice and quiet' does not give your students clear directions. It is a blanket statement, which may, or may not include all students.

Maybe you could phrase it differently, saying: The noise level we agreed to work best with, is quiet. I like that we are all working towards being quiet? How could we all make sure that we keep the noise levels low to help each other?

Reflecting further on the independent reviewer's comments, the researcher viewed Video 3 again, focusing on the amount of discrepancy feedback while paying particular attention to the timing of the occurrences throughout Lesson 3. It was noted that the class appeared restless and often off task, which peaked during the disruptions when the classroom teacher entered and exited the room. This lead the researcher to the conclusion, that feedback given in a classroom environment must be viewed in the context of the lesson. Even after actively planning to have a greater focus on progress feedback, the circumstances during the lesson required the teacher to respond to behavioural issues as they occurred, which accounted for the notable spike in discrepancy feedback. Voerman et al. (2012) note that when teachers tend to pay attention to what is wrong they give greater discrepancy feedback and neglect providing feedback on what is right. In this instance, the teacher focused on the negative behaviour of the students and therefore gave discrepancy feedback instead of progress feedback, which is task oriented.

Based on the conclusion drawn from analysis of Lesson 3, the teacher's goal for Lesson 4 was to ensure that feedback, even when addressing students' behaviour, should include specific instructions for the student to understand how to change the behaviour in order to make the feedback purposeful, targeted and directed.

### 4.5.4.   LESSON 4

The content of Lesson 4 focused on students' safe networks and assertiveness. Limited amount of the class time was spent on the mat giving instructions by the teacher. There was a significant amount of partner work and work at the students' desks.  Four of the 26 students were absent, including the student who had not given consent to participate in the research.

The researcher viewed the recorded video footage, annotating the feedback strategies given by the teacher over the 60-minute period of the lesson.  The researcher noted a technical problem with the footage, as half of the lesson had audio, but no visual image, making it impossible at times to identify body language, as well, sound quality was affected depending on the positioning of the teacher in the room.

As noted earlier, analysis of Lesson 3 led to identifying the goal of increasing feedback that provided purposeful, targeted and directed instructions in order to more effectively assist the students in understanding how to change their behaviour, which aligns with ideas expressed by Brookhart (2008), who says that, 'Good feedback gives students information they need so they can understand where they are in their learning and what to do next ...." (p. 2).

The video data from Lesson 4 was collated and transferred onto the feedback checklist with Table 12 showing the frequency of the various feedback strategies observed during Lesson 4.  The three most frequently used feedback strategies were non-specific positive feedback, specific positive feedback and, surprisingly, even after only being able to view half of the lesson, the use of body language was noted as occurring frequently (see Appendix K).

Table 12

*Checklist for Lesson 4 showing frequencies of the observed feedback strategies*

| Feedback Category | What would this look / sound like? | Frequency |
|---|---|---|
| Specific positive | Positive feedback containing specific information about the performance or level of understanding of the student. | 12 |
| | Discrepancy:<br><br>Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 2 |
| | Progress: | 4 |

| | | |
|---|---|---|
| | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
| | Other: Other 'positive' feedback not included above | 0 |
| Specific negative | Negative feedback containing specific information about the performance or level of understanding of the student. | 6 |
| | Discrepancy: Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 0 |
| | Progress: Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 0 |
| | Other: Other 'negative' feedback not included above | 8 |
| Non-specific positive | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 19 |
| Non-specific negative | Non-specific negative utterances, such as: "Wrong!" and, "Not quite!" | 0 |
| Non-verbal | Communicative expressions without the use of words (e.g., proximity, smiling, eye contact) | 2 |
| Body language | Communicative gestures using body without the use of words (e.g., proximity, nodding, head shaking, pointing to work, hand signals). | 10 |

| Other | May include questions, brief instructions, and the like that do not fit into any of the above | 8 |
|---|---|---|

Upon further analysis of the video data and the checklist, the researcher noted that the pattern of feedback frequency had changed. There was a smaller amount of feedback given overall and the feedback that was given was mostly positive and specific. Although non-specific feedback was still the most frequently used type of feedback, the amount had decreased since Lesson 1.

After comparing the checklist data, the specific examples drawn from the video annotations by the teacher, and the independent reviewer's comments, it emerged that the feedback statements made by the teacher, had been categorised differently by the independent reviewer. For example, the following feedback statement was categorised by the teacher as progress feedback, whilst the independent reviewer categorised it as discrepancy feedback.

> Love that. It shows me that you are interested in what we are learning. Give yourself another tick.

This discrepancy in categorisation prompted the researcher to revisit previous checklists to crosscheck the classification of various feedback strategies, but found that only a few entries were disparate. Interestingly, all of them were placed in the category of either progress or discrepancy feedback, possibly suggesting their definitions were slightly arbitrary.

Following a discussion between the teacher and independent reviewer, the next goal was established. The goal for Lesson 5 was to accurately formulate progress feedback to allow for a distinct differentiation between progress and discrepancy feedback.

### 4.5.5.   LESSON 5

The content of Lesson 5 focused on the safety continuum in Protective Behaviours, identifying the differences of feeling safe, fun to be scared and feeling unsafe. One student was absent, and another

student left early to attend a medical appointment. The interactive whiteboard in this classroom was not working properly on this day, so the students were moved to a different room. For Lesson 5 students were relocated to the German specialist classroom which was unfamiliar to them. This resulted in some off task behaviour and a much shorter recording time of only 40.36 minutes (see Table 2), due to the move. There were no technical problems with the recording device.

As with all of the previous lessons, the observation process for Lesson 5 began with the researcher viewing the video recording multiple times to log the feedback strategies the teacher used throughout the lesson. Table 13 presents a collation of the feedback strategies the teacher used, including the frequency of each strategy (See Appendix K).

Table 13

*Checklist for Lesson 5 showing frequencies of the observed feedback strategies*

| Feedback Category | What would this look / sound like? | Frequency |
|---|---|---|
| Specific positive | Positive feedback containing specific information about the performance or level of understanding of the student. | 14 |
| | Discrepancy:<br><br>Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 2 |
| | Progress:<br><br>Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 0 |
| | Other:<br><br>Other 'positive' feedback not included above | 1 |

| Specific negative | Negative feedback containing specific information about the performance or level of understanding of the student. | 1 |
| | Discrepancy: Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 3 |
| | Progress: Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 0 |
| | Other: Other 'negative' feedback not included above | 21 |
| Non-specific positive | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 12 |
| Non-specific negative | Non-specific negative utterances, such as: "Wrong!" and, "Not quite!" | 1 |
| Non-verbal | Communicative expressions without the use of words (e.g., proximity, smiling, eye contact) | 8 |
| Body language | Communicative gestures using body without the use of words (e.g., proximity, nodding, head shaking, pointing to work, hand signals). | 42 |
| Other | May include questions, brief instructions, and the like that do not fit into any of the above | 22 |

Analysis of data from Lesson 4 led the teacher to identify the area of Progress Feedback as an improvement goal for Lesson 5. This involved giving attention to accurately phrased progress feedback, concentrating on comparing the students' current performance or level of understanding

with their earlier understanding, rather than comparing the students' performance or level of understanding to some predefined goal or desired level of achievement.

Surprisingly, data presented in Table 13 reveals that no progress feedback was given at all during Lesson 5. This was confirmed with the findings from the independent reviewer. A closer analysis of the data showed there was a marked increase in the teacher's use of Body Language and Non Verbal types of feedback during this Lesson 5. Reviewing the footage repeatedly and reflecting on the lesson, the closest proximate to Progress Feedback was the following types of statements by the teacher, made a number of times during the lesson.

> Year 2's, I am not sure what is happening today, but this . . . I am not sure if you need a break because you have been working hard this morning, but this is not the class I am used to

And:

> I find it distracting when lots of people talk. I can't concentrate

These types of statements had been logged and categorized as discrepancy feedback. As this was confounding, the teacher raised the issue with the independent reviewer to clarify whether it demonstrated Progress Feedback at all.

Both the researcher and the independent reviewer agreed that there was no room for the teacher to demonstrate progress feedback as the move from one classroom to another influenced the dynamics of the class and the students' focus.

A reflective note made by the teacher states:

> The class was intrigued by the new surroundings. They knew that they were going to learn German in Year Three and were excited to share thoughts with their peers. Attempts by me to teach Health were in vain, all I could do is manage the behaviour.

After discussing the data, the researcher considered that the movement to the alternate classroom and the change in established routines, contributed to the significant increase in the use of body language and non-verbal feedback. This variation in routine meant that a greater amount of time was used for classroom management feedback, like counting students and gestures to indicate to students

where to sit. The change of circumstances prioritised management of students' behaviour and engagement which limited the opportunities for the use of feedback strategies designed to further students' thinking and learning, in the form of progress feedback. DiGennaro, Martens and Kleinmann (2007) found increase in appropriate student behaviour is related to the number of praise statements provided by the teacher. This lead to the conclusion, that the intervention by the teacher was an acceptable strategy in this situation.

As part of the reflective process, the teacher also made the following annotations when considering influencing factors.

> The teacher moved the class to a new room. Transitioning through the school, when it is unexpected, often unsettles classes.

> The classroom was unfamiliar to the students. Anchor charts are in a different language. There were hands-on materials in the class, ready for the next German class, which were interesting to look at.

> The students were excited to be in the German class as most of them were looking forward to beginning German lessons when they are in Year Three.

In exploring these observations during discussion with the independent reviewer, he concurred that these factors were influencing students' behaviour and engagement, and consequently had an impact on the type of feedback the teacher utilised.  To synthesise the ideas that emerged from this collaborative peer discussion, the teacher entered the following annotation at the end of Video 5.

> The type and frequency of feedback that occurs during a lesson is directly influenced by the environment and the context of the lesson. Feedback cannot be viewed in isolation. During Lesson 5, this limited the opportunity for me to improve the way I use progress feedback.

The sentiments expressed by the teacher shown above, can be understood in line with the following ideas expressed by researchers McClowry et al. (2013), who observed that teachers who managed difficult behaviours, were more likely to provide negative feedback to their students compared to those who were industrious.

With input from the independent reviewer, the goal set by the teacher for the final lesson was to pay closer attention to the classroom environment to better understand if there are particular circumstances or triggers that promote the use of particular types of feedback, and how the teacher can more effectively manage and integrate different feedback strategies to foster student engagement and learning during a lesson.

LESSON 6

The content of Lesson 6 focused on safe and unsafe secrets. All of the students were present. The content of the lesson was very interactive and the students were encouraged to work in small groups and moved around the room.

Following the same process as for all the previous lessons, the observation process for the final lesson began with viewing the video a number of times, stopping and starting to record the different types of feedback the teacher used throughout the lesson. The data collected from the video footage was then entered into the checklist table to categorize the frequencies and types of feedback given (Table 14) (see Appendix K).

Table 14

*Checklist for Lesson 6 showing frequencies of the observed feedback strategies*

| Feedback Category | What would this look / sound like? | Frequency |
|---|---|---|
| Specific positive | Positive feedback containing specific information about the performance or level of understanding of the student. | 13 |
| | Discrepancy: Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 7 |
| | Progress: Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 2 |
| | Other: Other 'positive' feedback not included above | 1 |
| Specific negative | Negative feedback containing specific information about the performance or level of understanding of the student. | 5 |

| | | |
|---|---|---|
| | Discrepancy: Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 5 |
| | Progress: Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 0 |
| | Other: Other 'negative' feedback not included above | 17 |
| Non-specific positive | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 27 |
| Non-specific negative | Non-specific negative utterances, such as: "Wrong!" and, "Not quite!" | 2 |
| Non-verbal | Communicative expressions without the use of words (e.g., proximity, smiling, eye contact) | 7 |
| Body language | Communicative gestures using body without the use of words (e.g., proximity, nodding, head shaking, pointing to work, hand signals). | 26 |
| Other | May include questions, brief instructions, and the like that do not fit into any of the above | 55 |

As Lesson 5 had been disrupted by circumstances out of the teacher's control, influencing students' behaviour and engagement, and impacting the feedback the teacher gave. The goal set for Lesson 6 was for the teacher to be attuned to how and to what extent her feedback strategies were being influenced by environmental conditions and students' behaviour, and to explore how this related to the frequency of different techniques.

The three most frequently given types of feedback in this lesson, much like the previous ones, were other interventions, non-specific positive feedback, and body language. The observed examples included:

- [Other interventions] Can you move somewhere else please? Just move here, at the front', 'Eyes to me', 'Come and sit down please' and 'Put your hand down'

- [Non-specific positive feedback] 'Fantastic', 'Good, well done', 'Absolutely' and 'Fabulous, (Name), good stuff'

- [Body language]-raising a finger to the teacher's mouth to signal silence, the teacher shaking her head to signal disapproval of the displayed behaviour, approval of the displayed behaviour, and giving the 'Thumbs up' to signal approval of the displayed behaviour.

The independent reviewer's annotations confirmed the patterns in feedback presented in Table 14. The collaborative peer review discussion explored the likely benefits of the feedback interventions used by the teacher for managing behaviour and improving student engagement. This gave the teacher reassurance that the non-specific (other intervention) feedback strategies she had used were contextually appropriate and had a positive effect on managing behaviour in the classroom. This relates well to comments from researchers, such as Gamlem and Smith (2013) who identified the use of feedback to foster a positive relationship with students. Upon reviewing the video footage again, the teacher made the following annotations related to the use of non-specific other intervention feedback types.

> Using the whole school classroom management strategy of counting a student when they are being disruptive or non-compliant allows me to briefly, without spending too much time or energy on it, address the student's behaviour. The language is familiar to the students and no discussion is necessary. This adds to efficiency in communicating feedback on behaviour.

In a similar vein the independent reviewer had made the following annotation, which affirmed the benefits of the teacher's use of brief instructions directed at managing the classroom.

> By using short instructions, which align with the whole school approach, you ensure that the students know what to do. Using short instructions like: '(Name) move here', 'Super

6 (Name)' and a signal to begin are familiar to the class. You don't bring emotions into the instruction and don't waste important teaching time.

This feedback from the independent reviewer reassured the teacher and validated the effectiveness of techniques she had employed. Further support can be drawn from the literature by Koka and Hein (2005), who found that some non-specific feedback, even when given non-verbally, can have a large effect on student motivation.

Once again, in Lesson 6 the teacher's use of non-specific positive feedback was prominent, as shown through the typical feedback comments provided above. To explore this feedback type further, the teacher revisited the video footage, making the following annotations.

> I noticed that I used non-specific feedback frequently this lesson. I called individual students' name and gave non- specific praise like: 'You are being on fire, good stuff' and 'Great idea', followed by the student's name. The nature of the lesson was pretty 'messy' so using this type of feedback allowed me to appeal to other students' eagerness to do the right thing too, to maximise peer modelling of desired behaviours.

> I got 'swamped' a few times when students wanted to show me their work or needed clarification. Using non-specific feedback like: 'Well done' and 'What a good idea', I was able to move through students' work quite quickly, assuring them that they were on the right track.

The independent reviewer's annotations provided further insights about how the teacher was using non-specific positive feedback, how it related to the classroom environment, and students' behaviour and engagement.

> I noticed that towards the end of the lesson, the frequency of your non-specific feedback increased. By then, the lesson content had moved to small group work and there was a lot of movement in the room. You are spending limited amounts of time on each interaction, which enables you to attend to all students in the room.

Through observation, focused reflection, and collaborative peer discussion the teacher gained a deeper understanding of the situatedness of feedback, and felt that for feedback to have a positive effect on students' engagement and learning, the teacher must be attuned to how students are engaging with the lesson content, the learning activity, the resources, the instructions, their peers,

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and the general environment (e.g., classroom layout, noise levels, interruptions, etc.). Thus, what is going on within the learning environment provides triggers for what feedback strategies the teacher uses, as well as how frequently different strategies are used, an idea that is shown in views expressed by Kluger and DeNisi (1996) who found that both positive and negative feedback can enhance learning, provided the feedback contains sufficient information to allow the student to identify what is right or wrong in their performance or understanding. Similarly, van Es and Sherin (2002) identified that teachers need to apply what they know about their own teaching context to reason about a given situation.

This is conveyed in the following annotation by the teacher:

> I can see during this lesson, how much feedback depends on the situation and the context. Being able to give feedback on small group work, allows me to target a behaviour that is either desired or discouraged. Saying: 'Well done Year 2's. That is possibly the quietest pairing that I have seen in a long, long time' communicates a sense of pride to them, which will, hopefully, encourage them to continue doing the right thing.

> '(Name), (Name) eyes to me. It doesn't really matter what they are doing over there. You should be focusing on your own group'. Giving this feedback, especially in a small group situation directs the students' attention back to their own task, while focusing on the behaviour, not on the person.

When comparing Lesson 2, which included a great amount of independent desk work, with Lesson 6, where a large amount of time was spent in group work and therefore included more movement and noise, a difference in feedback types and frequencies can be noted. The lessons where interruptions occurred also showed a greater amount of classroom management feedback rather than learning content related feedback. It can be reasoned that when students are off task, the teacher felt the need to control the class, rather than focusing on content learning and thus fewer amounts of progress feedback occurred.

# 4.6.    DISCUSSION OF FINDINGS

The preceding sections of this chapter have presented the findings.  Here the researcher synthesises the key findings thematically, and explores sub-themes that emerged from the data.

## 4.6.1.    FEEDBACK STRATEGIES USED BY THE TEACHER

A teacher's ability for providing effective feedback is essential to supporting Western Australia's educational goals as stated by the Department of Education (2016). Within an educational setting, feedback can be understood to be a tool to assist students to acquire new learning and to reflect on their performance (Brookhart, 2008).

Using the data from the checklist and the conversations between the researcher and the independent reviewer, patterns in the frequencies and types of the observed feedback given by the teacher, became evident. However, as identified by Van den Bergh et al. (2013), whilst feedback is one of the most effective tools teachers can use to develop students' learning, it is often challenging for teachers to give qualitatively good feedback, especially during active learning.

The above-mentioned observation by Van den Bergh et al. (2013) draws attention to the first key finding of the study related to the challenges that impact teachers' capacity to consistently give qualitatively good feedback. A consistent change in the pattern of qualitatively good feedback did not emerge over the six-week duration.  In spite of teacher knowledge and reflective goal setting that targeted qualitative improvements in feedback techniques, a continued pattern of improvement was not observed.  This suggests that factors emergent within the classroom can often challenge teachers' efforts to give qualitatively good feedback. Second, whilst teacher knowledge and reflection concurred with the research literature (Askew, 2000; Brookhart, 2008; Hattie & Timperley, 2007; Hattie & Yates, 2014) on the point that specific feedback was qualitatively more effective for developing students' learning, observation of classroom practice over the six week period in fact showed that the teacher consistently used non-specific feedback frequently.  Focused attention on reducing the use of non-specific feedback techniques did result in its reduced frequency, but only

marginally.  Again, this suggests that classroom factors (e.g., behaviour, disruptions) challenged the teacher's goals to give qualitatively good feedback, and can be related to Eraut's (1995) explanation that during a lesson, many things happen simultaneously and there is a continuous pressure on the teacher to act.

A further finding relates more broadly to what guides teacher behaviour. Whilst it seems a logical argument that once teachers have the right insights and beliefs about qualitatively good feedback practices to improve student learning (as was the case in this study), they could change their behaviour / practice in the right direction. Korthagen (2017) claims this is a rather primitive view of teacher learning. Further support for this view can be drawn from earlier work by Clark and Yinger (1979) who stated that it is impossible for a teacher to be consciously aware of all that happens in a classroom. Thus, these researchers assert that teachers make relatively few conscious decisions while teaching, and as a result their behaviour is only partly influenced by thinking, let alone by the theories they have learnt. A frequently occurring instructional issue Hoekstra, Beijaard, Brekelmans and Korthagen (2007) claim is that experienced teachers continue with some behaviours, although from their reflective assessment of a lesson, something appears to be going wrong. They explain, "it is remarkable that research on teacher learning is mostly concerned with teachers' change in cognition, as if behavioural change automatically follows from a change in cognition" (Hoekstra et al.  p. 116). It is therefore important to acknowledge that multiple sources actually guide teachers' behaviour. In this study, it became apparent that the teacher's behaviour was the result of a complex mix of cognitive, affective and motivational sources that influenced her behaviour related to feedback, concurring with ideas proposed by Day and Gu (2009) and Schutz and Zembylas (2009).  Such influences are partly implicit and are often not deeply reflected on. It can be argued that in this study the teacher was immersed within the experiential system of the classroom, and was operating in the realm of physical responses and automatic processes (i.e., unconscious routines). This presents challenges when attempting to interpret the teacher's feedback in isolation, as feedback is embedded within the holistic system of the classroom, as shown within an Activity Theory model. .

Finally, it was found that the teacher used brief instructions and body language more frequently than progressive or discrepancy feedback, although the latter types of feedback are known to be the most effective types of feedback (Brookhart, 2008; Hattie & Timperley, 2007; Kluger & DeNisi, 1996), as they address the learning and understanding of the student.  It is surmised that despite the teacher's knowledge of which feedback practices are more effective (i.e., the cognitive dimension), affective and motivational dimensions in classroom practice also had a powerful influence on the teacher's behaviour. Added to this, the social context of the classroom also characterises the classroom climate

and the instructional processes. Hoekstra et al.'s (2007) ideas are relevant here too; she argues that teaching is a profession in which feelings and motivation play an essential role. It is likely that these changing dimensions within the various lessons cast the teacher's use of feedback techniques as a rather unpredictable aspect of classroom learning and teaching, once again alerting one to how system contradictions that can act to change and develop the system in particular ways, through the lens of Activity Theory.

The above-mentioned findings are addressed in greater depth within the following sub-themes.

## 4.6.1.1. FEEDBACK AND CLASSROOM MANAGEMENT IN A SPECIALIST CLASSROOM

Classroom management concerns in a specialist class cannot be neglected. According to Behets (1996), specialist teachers provide students with significantly more feedback in their corrective categories. This could be explained with the fact that classroom management takes significant amounts of class time, with many students spending up to one-half of instructional time engaged in tasks not associated to learning, such as classroom procedural matters, transitions between activities and classrooms, discipline situations, and off-task activities (Codding & Smyth, 2008); these factors could be exponentially greater in specialist classes. The feedback practice observed in this study aligns with the research by Codding and Smyth, in so far as the teacher spent large amounts of class time managing behaviour. Behets further notes that classroom management requires observation of events and the learning process, but added that silent and passive monitoring of the behaviour is not very efficient. In line with this, the teacher in this study sought to manage behaviour, using behaviourally focused feedback strategies which likely resulted in lesser attention on giving feedback focused on progression of learning.

Time restrictions during specialist classes mean that very little time is available to build relationships and deliver the content. It is plausible that the teacher's extensive use of non-specific feedback had the positive effect of making students feel at ease, and thus contributed towards relationship building, which according to Hattie and Timperley (2007) has the biggest effect size on student learning.

### 4.6.1.2. PROGRESSION OF LESSON CONTENT IN SPECIALIST CLASSROOMS

Duijnhouwer (2010, as cited in Voerman et. al, 2012) defines progress feedback as giving students information as to whether their performance has improved compared with the previous performance in a similar task or not. Taking into consideration that the classes observed in this study were one hour-long, once a week specialist Health classes, which did not build upon previous learning content, only limited comparison was possible between the learning derived from the earlier lessons, thereby limiting opportunities to give progress feedback.  The content of each of the lessons in this study can be viewed as a new starting point, with weekly gaps between each lesson. Activity Theory presents a temporal perspective on the influence of historical changes; whilst these could be deeply layered within the system, they were not immediately visible through the teacher's feedback interactions. Consequently, the focus of the feedback was on developing students' knowledge rather than sustaining and maintaining previously attained knowledge.

Additionally, Van den Bergh et al. (2013) noted that whilst half of the interactions between a teacher and their students' include feedback, the type of the feedback given is usually focused on the task, and only 5% of the feedback is explicitly related to a learning goal. With this in mind, it is surmised that although the teacher provided large amounts of feedback throughout the lessons, most of her feedback was behaviour and task focused, rather than explicitly focused on learning goals.

### 4.6.1.3. FEEDBACK MUST BE VIEWED IN CONTEXT

Feedback cannot be looked at in isolation. Feedback given by a teacher must be analysed in the context of the lesson. Research by Poulos and Mahony (2008) identified that feedback has various functions according to the particular learning environment in which it is examined. In various lessons, it became apparent that feedback given by the teacher was a lever used to respond to the specific socio-emotional and physical circumstances and classroom context. This was observed in the teacher's annotations, pointing to such things as 'the students seemed restless' and 'were curious about the specialist German language classroom'.  Again, this is explained using Activity Theory as system

components being woven into the fabric of the dynamic system, and when attempts are made to extract individual components, their meaning can be lost.

### 4.6.1.4. SPECIFICITY OF FEEDBACK

Although the principle that specificity in feedback helps to improve students' learning is an accepted generalization, Goodman, Wood and Hendrickx (2004) claim sufficient evidence to support the argument is still lacking. They state that detail on what the specificity part of feedback means in practice, is inadequately discussed in contemporary literature, although the intention of it appears be that "improvement is best fostered by specific verbal feedback provided by a supervisor or other appraiser, as close in time to the exhibited behaviour as possible, and followed by suggestions on how future performance can be improved" (Bernardin & Beatty, 1984, p. 197, as cited in Goodman et al.). In this study, feedback given was often non-specific, and often directed at the whole class rather than the individual student, and therefore lacked immediacy and a future improvement orientation. Whilst the principle that specific feedback helps student learning is highly valued, in a classroom where the teacher in managing multiple behavioural and engagement issues, the closeness in time to an exhibited behavioural issue, and for future improvement of learning, proved to be fraught with challenges, mainly linked to class size. Once again, this can be viewed through the lens of Activity Theory, suggesting that the socio-historical context influences feedback as one component with a complex, dynamic system.

### 4.6.1.5. AMOUNT OF FEEDBACK

Ackerman and Gross (2010) found that many students will perceive high levels of feedback as more unfair and unhelpful than low levels of feedback, particularly when it is directed to them individually. In this study feedback given by the teacher was often directed at the whole class rather than the individual student, possibly minimising students' perceptions of unfairness that has been raised by Ackerman and Gross.

## 4.6.2.  ENHANCEMENT OF TEACHER REFLECTION USING VIDEO

Richards (1995) identifies the term "Reflective teaching" (p. 1) and notes that one method for teachers to progress towards a greater pedagogical awareness, is by reflecting on their own teaching, using observation and reflection as a way of developing their instructional practices.  This study found that reflection based on observation enhanced the teacher's pedagogical awareness, and provided directions for further developing effective instructional practices.

To foster and grow teacher capacity, Liang (2015) reasons that teachers' professional development is crucial and that it should involve a process of identifying weaknesses and in turn, taking actions for improvement. This study found that video cued reflection accompanied by reviewer feedback provided a collaborative and objective basis for identifying areas of strength and areas for further development.  Thus, video cued reflection provided a robust process for taking actions to improve teaching practices, which fits within an Activity Theory perspective. The mutually influencing interactions of system components (subject-object-tool) has a transformative capacity as tensions arise and become resolved or persist.

Evidently both the above-mentioned findings (i.e., reflective practice and professional development) are directly linked to the Department of Education's goals, as stated in High Performance-High Care goals (Department of Education, 2016) and Classroom First Strategy (Department of Education, 2017b). The techniques used to guide the reflective process in this study, contributed practical ways in which this teacher could work towards the quality enhancement goals for professional teachers, as specified by the Department of Education.

Attention will now be given to closer examination of the sub-themes related to the findings discussed above.

## 4.6.2.1. REVISITING CLASSROOM INTERACTIONS

Using a video-cued approach enabled the teacher/researcher, to revisit interactions in the classroom and at the same time allowed her to stop and reflect on what is most significant (Raingruber, 2003) when interpreting the data. This is in accordance with Brophy's (2003), point that video cued reflection offers the benefit of revisiting classroom events multiple times to focus on particular aspects of teaching and their professional reflection. This echoes the methodological aspects of Activity Theory that Vygotsky pointed to. The opportunity to revisit what had occurred during a lesson or series of lessons allowed scope for reflection to occur temporally, and provided an accurate record of what had occurred (i.e., revisiting the data objectively). This allowed the teacher time to process her thoughts, and revisiting recordings also provided nuanced insights about classroom interactions and feedback given by the teacher. Importantly, this process was not impacted by memory fading (e.g., retrospective gloss), which is likely to occur with time in the absence of a video recording.

## 4.6.2.2. 'SEEING' ONE'S PRACTICE

The video recordings served as a trigger to create greater awareness of the teacher's classroom practice, similar to what Tripp and Rich (2012) describe as an opportunity for "teachers to more effectively 'see' their practice" (p. 679). The use of video reflection in this study enabled this objective process of "seeing" one's practice, which was further supported with the triadic Activity Theory model (Vygotsky, 1987, 1997). It became evident that the teacher recognised that sometimes there are differences between what one knows, perceives what is happening, and actually 'seeing' what is happening, and developed a deeper understanding of the mutually influencing relationships between subject, object, and tool.

## 4.6.2.3. AUTHENTIC PROFESSIONAL LEARNING

Pellegrino and Gerber (2012) found that participants, who used video-recording for self-analysis expressed that engaging in this reflective activity, brought a greater awareness of their teaching strengths and weaknesses. Baecher et al.  (2014) identified that engaging teachers in the metacognitive task of evaluating their own performance, lead to a more active and self-reliant role in their learning. According to Seidel et al. (2011), individuals who watched their own teaching, experienced a stronger sense of immersion, resonance, authenticity and motivation, views that also resonate through an Activity Theory lens. Collectively, the views expressed by the afore-mentioned researchers was confirmed in this study, as the researcher felt a greater awareness of her teaching strengths and weaknesses; increased metacognitive understanding of her feedback practices, with increased capacity for self-directed improvements; and heightened motivation, engagement, authenticity, and situatedness of her professional learning, and in so doing accessed the theoretical and practical insights via an Activity Theory framework.

### 4.6.2.4. REFLECTIVE ANNOTATIONS

The use of the annotation and check listing while observing the video footage provided opportunities to become more targeted or specific in the reflective process. As Tripp and Rich (2012) note, written reflections allow teachers to view interactions in their classroom at a slower pace, and enable them to identify things they may not have noticed when they reflected purely from memory. The checklist assisted in differentiation of feedback techniques, but also highlighted that context can influence how specific techniques are classified.  Being able to view and annotate the footage allowed the teacher to directly link her thought processes with tangible evidence, and provided space for the teacher to immerse herself in things that went unnoticed in the moment (Marsh & Mitchell, 2014).

### 4.6.2.5. COLLABORATIVE REFLECTION PROCESS

The use of video enabled a collaborative peer review process, without the need for the reviewer to be present in the classroom.  This not only made the process more efficient from a human resource perspective, but also reduced the possibility that having an observer in the classroom could be a confounding factor affecting the classroom climate.  The cloud-based portal added ease, with the teacher and the reviewer being able to access and annotate recordings at times and locations that suited them.  It improved the process in practical ways. These benefits further heightened an observation by Tripp and Rich (2012), who found that contributions made by others were often perceived as the most influential element in helping teachers reflect effectively on their practice. Studies by Thompson (1992, as cited in Tripp & Rich, 2012) showed that it was beneficial for teachers to discuss their teaching videos with others, and many teachers stated that analysing and discussing their videos resulted in greater learning. Baecher et al.  (2014) also confirm this finding, stating that a number of researchers have suggested that with the guidance of a peer or a facilitator, teachers are better equipped  to utilize the power of video to "notice, revisit, and investigate" (p. 4). Evidently, the use of video in this study enabled and strengthened the benefits of a collaborative peer reflection process identified by the above-mentioned researchers.

## 4.7.  SUMMARY

The findings of this study show that a change in the patterns towards increased qualitatively good feedback did not emerge over the six-week duration. Although the teacher had informed knowledge of targeted qualitative feedback which enabled her to set goals to improve her feedback techniques, these goals were not achieved.

The review of the goal setting and reflective process, lead the researcher to the conclusion that classroom factors, such as behaviour and lesson disruptions weakened the teacher's ability to give qualitatively good feedback, which can be related to research by Eraut (1995) who found that during a lesson, a multitude of things happen concurrently, putting constant pressure on the teacher to act.

The data analysis further lead the researcher to consider what guides teacher behaviour. Whilst it is common belief that once teachers have the right insights and beliefs about qualitative good feedback practices to improve student learning, as the teacher in this study did, they could adapt their behaviour and thus instructional practice, in the right direction. This idea has been rejected by Clark and Yinger (1979) who stated that it is not possible for a teacher to be consciously aware of all that happens in a classroom all the times.

The researcher identifies that multiple sources guide teachers' behaviour. In this research, it became evident that the teacher's instructional practice was the consequence of a combination of cognitive, affective and motivational sources that influenced her feedback, aligning with research by Day and Gu (2009).

As the teacher in this study was immersed in the experiential structure of the classroom, and was working routinely, attempting to interpret the teacher's feedback in isolation is difficult, since feedback is embedded within the all-encompassing system of the classroom.

Finally, the researcher found that the teacher used succinct instructions and feedback in the form of body language more often than the expected progressive or discrepancy feedback, despite the fact that those types of feedback are known to be the more effective types of feedback (Brookhart, 2008; Hattie & Timperley, 2007; Kluger & DeNisi, 1996). Affective and motivational dimensions in classroom setting had a powerful impact on the teacher's behaviour, regardless of the teacher's knowledge of which feedback practices are more effective. Hoekstra et al.'s (2007) findings are pertinent in this

discussion as she states that teaching is a profession in which feelings and motivation play a fundamental role.

The final chapter of this thesis will discuss conclusions of the findings and implications for future research and practice.

# 5.  RESULTS

## 5.1.  INTRODUCTION

The research study aimed to answer the following research question:

How does the use of video as a self-reflective tool impact on the quality of teacher to student feedback?

The following subsidiary questions gave added focus:

- Which types of strategies are used by the teacher to give feedback?

- How does video cued reflection enhance teacher feedback practices?

Assessing the effects of video use on teaching practice and teacher professional learning is complex. As noted by LeFevre (2003), " . . . video is not a curriculum. Video is rather a medium, which can be developed into a resource and used in specific ways to enhance learning" (p. 235).

## 5.2.  OVERVIEW OF THE STUDY

The goal of this research was to use video cued reflection to categorize and improve teacher feedback strategies in a primary classroom and to evaluate the effectiveness of video cued reflection in relation to enhanced teacher feedback. This links to current literature which claims that despite an abundance of research on feedback strategies, there is limited evidence to identify the most effective feedback strategies (Askew, 2000; Dean & Marzano, 2012; Harks et al., 2014; Kluger & DeNisi, 1996). Additionally, there is limited research that has explored how video technology can be used as a tool for reflection on teaching practice.

The research was undertaken at a Department of Education Independent Public School in a southern suburb of Perth, Western Australia which is also the school the researcher works at as a specialist Health teacher. Twenty-six students in a Year two classroom consented to participate in the study, which occurred over a six-week period.

## 5.3.  CONCLUSIONS

The researcher drew four conclusions from analyses of the data, in an attempt to answer the above-mentioned subsidiary research questions:

**Subsidiary research question 1**

Which types of feedback strategies are used by this teacher?

In this study, the teacher used a variety of feedback strategies during the six lessons that were observed. The most frequently occurring feedback strategies were non-specific positive feedback, body language and other interventions, like questions or brief instructions.  The moderately occurring feedback strategies were specific positive feedback, positive progress feedback and negative discrepancy feedback. The most infrequently occurring feedback strategies were non-specific negative feedback and negative progress feedback. Although the teacher had set goals to increase the use of specific types of feedback strategies in each lesson, these were not realised. Deeper analyses of the reasons why this was the case lead the researcher to conclude that a wide range of feedback types were used within the lessons to respond to individual learners and the class as a whole, within a specific set of circumstances.  On this point, the researcher also concluded that feedback must be viewed in the context in which it occurs, and therefore specific types of feedback can sometimes be viewed differently in the context in which they occur.

**Subsidiary research question 2**

How does video cued reflection enhance teacher feedback practices?

In this study, video served as a tool for the teacher to deeply reflect on her classroom practice, in particular the effectiveness of the feedback strategies she used.  Video cued reflection provided a means to revisit a lesson with accuracy, and to focus on micro teaching events in detail, which would not have been possible without the use of video. Rich examples of practice and subtle changes in practice could be studied intensively, with the use of video. Above all, it would not have been possible for the teacher to log the frequency of different feedback types in a checklist format, without the use of video.  This information critically focused the reflective process and goal setting.

The features of the video technology used in this study streamlined the viewing and annotating processes, allowing the teacher to directly enter her reflective notes on the video data.  This cataloguing feature added ease in making rich comparisons across different video segments, which allowed the teacher to gain depth of understanding how she was using specific techniques whilst noticing the contexts in which they were located. The video technology also enabled the added dimension of peer review and collaborative reflection, making these processes more efficient.

### 5.3.1.   CONCLUSION 1: A WIDE RANGE OF FEEDBACK TYPES ARE USED WITHIN A LESSON

In this study, the amount of non-specific feedback given by the teacher was greater than the amount of specific feedback, or progress oriented learning, and therefore did not provide opportunities for future improvement of learning. Although the notion that specific feedback assists students in their learning is highly valued, it is important to acknowledge that teachers are under pressure to manage multiple behavioural and engagement issues in the course of a lesson, and conditions in specialist primary classrooms can be different from the general primary classroom.  These combined factors can impact *when*, *what* and *how* feedback is given by the teacher.

Prioritising effective classroom management within a specialist classroom, the teacher used positive non-specific feedback, body language and non-verbal gestures frequently. Kluger and DeNisi (1996)

advise that the effectiveness of feedback decreases, when feedback draws attention closer to the self, and away from the task. When negative non-specific feedback was given in this study, the teacher mainly addressed the whole class, rather than the individual student, potentially minimising the effect of drawing attention away from the task. Related to the use of body language and non-verbal gestures, a study by Koka and Hein (2005) found that feedback, even when given non-verbally, can have a large effect on student motivation. They identified that when students received positive non-verbal feedback, like smiling, patting on the shoulder and clapping hands, their satisfaction with the teacher improved, which lead to an increase in students' intrinsic motivation. Koka and Hein's work gives support to what occurred in this study; non-specific feedback is not necessarily always ineffective, it can be beneficial for improving student motivation. In this study, the researcher surmises that the frequent use of body language and non-verbal gestures enhanced the teacher-student relationship and fostered student motivation in doing the learning tasks. A further point related to using feedback to foster a positive relationship with students comes from a study conducted by Gamlem and Smith (2013). These researchers described corrective feedback as either positive or negative, depending on the teacher's practice and their relationship with the students. Although the teacher's feedback was classified as non-specific, it included instances of corrective feedback directed at the whole class, with the effect of maintaining a positive relationship with all of the students, as opposed to singling out individuals.

Teachers need to be able to recognize the feedback strategies they use in the classroom and how their feedback is given to students, in order for it to be meaningful and valuable. In this study, the teacher's feedback practices improved when focused attention was given to the types of feedback that was occurring. This aligns with research by Van Es and Sherin (2002), who state that a change in teachers occurs when they pay attention to what is important for students' learning and consider how theoretical and research-based ideas might be occurring within their own teaching practice. The teacher in this study gained increased awareness and understanding of the feedback practices she employed, including the effect this was having on students' learning and engagement within the context of a specialist classroom. Through critical reflection she was able to accurately monitor the feedback types that were being used, set goals and evaluate her decisions and practices contextually. As much as theoretical and research-based knowledge guided the improvements sought by the teacher in this study and will continue to do so, her practical knowledge in the given situation remains an invaluable guide for being 'present' and attuned to what is going on in *her* classroom, with *her* students, at any specific time. This possibly explains why the feedback improvement goals set by the teacher commonly did not materialise. Although she was using theoretical knowledge to guide her

improvements in the classroom, she was paying attention to what was important in the classroom at the time, and this was reflected in the feedback strategies she used.

## 5.3.2. CONCLUSION 2: FEEDBACK MUST BE VIEWED IN CONTEXT

After examining the video footage and analysing the checklist for types and frequencies of feedback, the researcher identified that the majority of feedback given was non-specific feedback, feedback in the form of body language and other feedback, mostly in the form of questions and brief instructions. Many researchers deem these forms of feedback as non-effective and therefore as not supporting students' learning (Hattie & Yates, 2014; Kluger & DeNisi, 1996; Van den Bergh et al., 2013; Voerman et al., 2012). They argue that, feedback missing specificity may be understood by students to be worthless. However, in this study, the researcher found, that feedback must be viewed in context and cannot be evaluated without examining the environment in which it is given, or without taking the relationship between the teacher and the students into consideration.

The environmental factors influencing the teacher's feedback in this study, namely student behaviour, duration of the lesson, lesson content and disruptions of classroom routines, often limited the teacher's ability to use feedback strategies that is commonly understood as being 'effective feedback'. However, Poulos and Mahony (2008) claim, for feedback to be effective, it must be timely and appropriate to the needs of the situation. Hattie and Timperley (2007) note that at times, an interactive effect between feedback aimed at improving the strategies and processes, and feedback targeted at the more surface task information, can be found assisting in improving task confidence and self-efficacy. In this study, the researcher believes feedback was timely and appropriate, and further that the interactive effect between improvement oriented feedback and task information was present. These combined effects contributed towards improved learner confidence in doing the tasks and learner self-efficacy, based on the observed student behaviours during lessons.

Interpretation the findings in the context in which they occurred leads the researcher to conclude that classification of some types of feedback is arbitrary, as the context can influence the intention of the feedback. In this study, the types of feedback used by the teacher was influenced by multiple environmental factors and was the consequence of a combination of cognitive, emotional and motivational aspects. Whilst the predominant types of feedback given by the teacher was classified as 'non-specific', and therefore deemed ineffective by many researchers (Hattie & Yates, 2014; Kluger &

DeNisi, 1996; Van den Bergh et al., 2013; Voerman et al., 2012), they were effective for the needs of the teacher and the students within the contexts in which they occurred in this study. This conclusion finds support in Poulos and Mahony's (2008) work, which suggests that for many students, feedback goes further than simply providing information on how to improve assessment marks. This conclusion concurs with Poulos and Mahony's argument that 'effective feedback' is that which provides emotional support. The researcher argues that it is especially poignant when considering the socio-emotional and intellectual developmental stage of students in a Year 2 class, and the important effect teacher reassurance can have on students' socio-emotional well-being and self-efficacy.

### 5.3.3.  CONCLUSION 3: VIDEO OBSERVATION ENHANCED TEACHER REFLECTION

The research was conducted using a self-tracking video device, which allowed the researcher to record classroom interactions, and observe both verbal and non-verbal feedback, without being invasive and distracting. Pellegrino and Gerber (2012) found that teachers, who used video-recording for self-refection purposes, identified a greater awareness of their teaching strengths and weaknesses.

Reflective teaching, as identified by Richards (1995) requires teachers to ruminate on their own teaching practices, by means of observation and deep and structured contemplation with an improvement focus. In this study, it became evident that through the use video cued reflection, the teacher was provided with a tool to objectively identify areas of strength and areas for further development. It enabled the teacher to recognise what happens in the classroom, without having to rely on her memory alone.  Tripp and Rich (2012) described this as a way for teachers to gain insight into their practice, and in turn to be able to reflect on the differences between theoretical knowledge, a perception of what is occurring, and actually observe what is happening.

Using video to assist with the reflective process generated opportunities for the researcher to revisit and observe several incidents in the classroom, while, at the same time being able to stop and reflect on specific interactions when interpreting the data, identifying patterns and types of communication. This, according to Raingruber (2003) allows researchers to identify interactions which otherwise would

have been overlooked and not noticed were they not captured on video. This enabled the teacher to develop reflective thoughts and make annotations, which allowed her to gain deeper insights about the feedback given and the environmental impacts on her teaching.  In this way, the teacher was also able to monitor and evaluate patterns and changes that were occurring over a period of time.  In Gaudin and Chaliès' (2015) words this was like "holding up a mirror from which . . .  teachers [the teacher] could actually see the reality of their [her] practice" (p. 65).

Using the secure SWIVL portal allowed the researcher to safely share the video footage with an independent reviewer without having the reviewer physically in the classroom, which would have required him to be present for significant periods of time. Baecher et al. (2014) found that having a peer observe the video as well, can bring the teacher's attention to aspects of practice that otherwise may have gone unnoticed. They further identified that co-viewing generated more detailed annotations about the teacher and their students' behaviours, and that peer observers helped teachers to be more critical about their teaching practices. Indeed, in this study, the researcher found that the independent reviewer's comments brought the teacher's attention to aspects of her feedback practices that had gone unnoticed. Peer discussions during co-viewing deepened the reflections as was revealed by some of the annotations made by the teacher and independent reviewer. This contributed to critical reflection, whilst also valuing things that had worked well.

Video observations purposefully directed the teacher's professional development towards specific pedagogical improvements.  As stated by Gaudin and Chaliès (2015), the objective of video observation as a reflective tool, is not to "characterize 'good' and 'bad' teaching practices" (p. 48), but to provide teachers with video footage of teaching examples, which can be utilized for discussions and reflections, to clarify and refine teacher's theories on teaching and learning. It enables teachers to test their theories, and to develop new understandings about teaching and learning. In this study, the video footage enhanced teacher reflection through a process of independently and collaboratively viewing a range of rich examples of her classroom teaching, and to illuminate and sharpen her understanding of the complexities of feedback. She was able to test her theoretical knowledge practically and ways that were meaningful within her classroom setting.

### 5.3.4. CONCLUSION 4: THE VIDEO TECHNOLOGY FEATURES ENHANCED THE INDIVIDUAL AND COLLABORATIVE REFLECTIVE PROCESSES.

The use of video observation greatly assisted the process of individual and collaborative reflection. Having an independent reviewer assist with the process of viewing, annotating, discussing and recommending changes, to overcome the gap between theory and practice (Gaudin & Chaliès, 2015), proved exceptionally valuable in this study. Harford et al. (2010) found that peer reviewed video reflection "facilitated . . . teachers to move from a focus on the technical aspects of their practice towards a closer examination of their theoretical constructs underpinning their practice" (p. 58). In this study, the ease of sharing videos through the secure cloud based portal, strengthened the peer review process; viewing, annotating and discussing videos was made highly efficient through the portal and the tools available with the SWIVL technology, allowing the teacher to move from the technical aspects to achieve a closer study of the theoretical underpinnings of her practice.

Gaudin and Chaliès (2015) further found in their research that human support is more effective than video feedback alone, even if not face to face but online or via correspondence. This idea was affirmed in this study, as feedback from the independent reviewer through annotated comments on the video portal, as well as face to face discussions provided guidance and direction throughout the teacher's critical reflection on practice. Sherin and Van Es (2005) also identified the important role of the support, which occurred in this study by the independent reviewer encouraging and reassuring the teacher, whilst also suggesting areas for further consideration. The video portal and the accompanying collaborative reflective process created a collaborative space for personalised professional development, in which academic, professional and practical discourse occurred (Youens, Smethem, & Sullivan, 2014).

## 5.4. IMPLICATIONS FOR FUTURE RESEARCH AND PRACTICE

Student involvement:

Carless (2006) and Higgins et al. (2002) found that feedback viewed as helpful by teachers was often perceived as not helpful by students. Their studies found students interpreted feedback as being too general or vague, too detailed, not comprehensive enough, too reliant on scholarly language, or biased or subjective. Future research into the quality of teacher to student feedback could include asking the students' input as well. A questionnaire about the students' perception of the quality and frequency of the teacher's feedback would give additional information and strengthen teacher reflection and goal setting.

Technical problems:

A further consideration for future research relates to the use of the recording device. It is important that researchers who might choose to use video recording technology in the classroom check the quality of the recording throughout the lesson, in order to avoid technical problems which can impact significantly on the data collection. The recording device should be introduced a number of times before the commencement of recording for data collection purposes, in order to desensitise the students to seeing themselves on video, and to avoid unnecessary distractions when recording commences. In situations where teachers are recording primarily for reflective purposes, problems arising due to technical failure can be rectified by doing further recordings. In both research and practice related situations, using multiple recording devices simultaneously can mitigate against loss of data due to technical failure.

Checklist:

If future researchers are going to adopt the checklist used in this study, it would be recommended to include a section to address feedback which is reactive to environmental disruptions, such as announcements over the PA, teachers or students entering or exiting the room etc. This would make it considerably easier to identify and categorize the feedback. If feedback checklists are used to

monitor everyday classroom practices, then teachers should exercise flexibility to further contextualise conventionally used feedback types so they become meaningful within specific settings.

Including a number of classes over an extended period of time:

Future research will benefit from extending the scale of the study to include more than one class and a number of teachers as this will address issues of different situational context as well as different feedback strategies and different teaching styles.

## 5.5.    SUMMARY

The findings of this study confirmed the value of video used by the teacher to reflect on her teaching practices, as giving many opportunities to raise the teacher's quality of feedback and to extend her opportunity for professional development. However, simply viewing recorded video footage does not ensure teacher learning. Collaborative peer review strengthened the teacher reflection and improved the professional development that occurred during this study. In future research as well as for purposes of observing everyday classroom practices, teachers can benefit from the use of self-tracking as an efficient tool with many affordances.

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# 7. APPENDICES

## *APPENDIX A*

Feedback Checklist

| Feedback type | What could this look/sound like | Observed behaviour (Notes from the independent reviewer) |
|---|---|---|
| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | |
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | |
| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of understanding of the student. | |
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | |
| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
| 3c. Otherwise | Other specific positive feedback. | |
| 4. Specific negative feedback | Negative feedback containing specific information about the performance or level of understanding of the student. | |
| 4a. Discrepancy feedback | Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | |
| 4b. Progress feedback | Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
| 4c. Otherwise | Other specific negative feedback | |

| | | |
|---|---|---|
| 5.          Other interventions: | Example:  questions, brief instructions. | 108 |
| 6. Body language | Examples:  smiling, nodding, head shaking. | |
| 7.          Non-verbal feedback | Examples: Proximity, using hand signals, pointing to work. | |
| 8.     Other,     non-specified feedback | Other interventions and or embodied feedback not included above | |

Information letter to the Principal

Julia Mueller

Edith Cowan University

School of Education

2 Bradford Street

Mount Lawley

WA 6050

Phone: ▮▮▮▮▮▮▮▮

Email: jmuelle@our.ecu.edu.au

Dear . . . .

I am a Masters student currently undertaking my Master of Education by Research at Edith Cowan University.  I am undertaking research titled, 'The impact of video as a self-reflective tool for improvement of teacher feedback practices'. As the researcher I will also be the teacher in focus within this study.

**The research project**

The reason for this research project is to promote excellence in teaching and learning in our school through reflection on individual teaching practice. While there are numerous articles on feedback strategies, there is little research on which is most effective, and if feedback does indeed change the students' willingness to attempt more challenging tasks. Research by Hattie and Yates (2014), shows that feedback should be timely, targeted and not simply praise for effort. They found that feedback which only provides praise may have little value to the students and potentially makes them feel less empowered in their learning. Consequently, it may impact on students' willingness to engage with their learning and therefore decrease their willingness to attempt challenging tasks.

This project aims to observe and reflect the various feedback strategies I use as a teacher in the classroom. Self-tracking video technology will be used to video my feedback strategies in the classroom. This video will be analysed to see how and if the feedback strategies used by the teacher impacts on student learning outcomes.

There is limited research on the use of video as a tool for teacher reflection. This project incorporates the use of a cloud portal to house the video and provide a facility to record the video cued reflections. The data contained in the portal will be examined to see how this cloud based facility can be used to enhance the use of the video as a reflective tool.

**Context**

Communication between students and teachers can affect various aspects of student learning in the classroom. When effective feedback is given to students, it is understood to be a key driver of behavioural adaptation, and although feedback has a positive impact, not all types and only the right amount off feedback are equally effective. For teachers to be effective, they need to have a greater understanding of the feedback they give, to ensure students' previously mentioned deep and meaningful engagement with the content. Research shows however, that teachers still give feedback which is not process oriented, but instead grade oriented which consequently does not promote grit, perseverance and critical thinking skills.

The proposed study will be a qualitative research approach, involving approximately 26 students, and one teacher-researcher and one experienced teacher as an independent observer. I am planning to engage in video cued reflection as I review the videos of myself teaching one hour a week over a period of six weeks, and will seek to refine the strategies I use in giving feedback to the students.

**Timeline**

Application for ethics approval from both Edith Cowan University and the Department of Education has been submitted. Once these approvals have been obtained, it is envisaged that the research will commence in Term 1, 2018. Data collection will occur for a period of six weeks (one hour per week), during usual curriculum-based classroom activities. Data analysis and preparation of the thesis will occur in the following months and the study will reach completion in Term 4, 2018.

**Research team**

I will be the researcher in this study, however, in order to minimize bias, an independent third party, who has no involvement in the study, will be engaged to review the data together with the researcher to verify categorisation and coding of the data. The reviewer will be invited to analyse the annotated video footage and add his observations and comments as a direct response to the researcher's comments and annotations, using the SWIVL cloud portal (the system that supports the self-tracking video technology used in this study). This will ensure that the data is being interpreted objectively.

**Participant consent**

The proposed research will comply with Department of Education policy requirements and the university standards for ethical conduct of research. Care will be taken when videoing in classrooms ensuring participant confidentiality and secure data management.

Students participating in the proposed study will have given their consent, and who's parents will have given consent, to participate.  Parents will be supplied with a detailed Information Letter and a Consent Form to be signed by both individual students and their parents. The research processes as outlined in the aforementioned documentation will be compliant with ethical requirements for human research and approved by the ECU Research Ethics Committee, and will be administered prior to the data collection phase.

Participation in the proposed research is voluntary and there will be no adverse consequences relating to any decision by an individual or the school regarding participation / non-participation.  The information Letter will explicitly state that decisions made as part of the research study will not affect the student-teacher relationship and  . . . . PS.

All data collected will be kept confidential to ensure students' privacy. Students who choose to participate will have the right to withdraw at any time without providing an explanation.

**Research procedures**

Following all formal approvals for the study to proceed, parents will be invited to an information session where the researcher-teacher will explain what the study is about and answer any questions that might arise. Parents will then be invited to give their written consent for their child to participate.

Data collection will commence after the consent process has been undertaken. Data collection will take two forms:

- Video evidence of the use of feedback in the classroom filmed with the use of a non-invasive self-tracking device located unobtrusively at the rear of the classroom to maximize footage of the teacher.
- Field Notes created by the researcher-teacher

The above-mentioned data will be securely stored in the SWIVL cloud portal, with access limited to the researcher-teacher and the independent reviewer, using a unique password.

The independent reviewer will be supplied with the Information Letter and additional notes outlining the aims of the research, the desired outcome, the specific role of the reviewer, and ethical considerations to be adhered to. The reviewer will be required to sign a confidentiality agreement in accordance with the ethical standards specified for this study.

A summary of the research findings will be made available to the participating site and the Department of Education, and this will be available to parents of participating students on request. This summary report will be available in Term 4, 2018.

**What does participation involve?**

Participating students will be asked to:

- Undertake usual classroom activities.
- A self-tracking video device fitted onto an iPad will be used to record short video clips that will be uploaded to a password protected secure cloud based network.
- The camera will be positioned at the rear of the classroom in order to minimise the likelihood of capturing students' faces on camera. Should faces of students who have not given consent be captured on film, they will be rendered unrecognizable using software tools, thus ensuring pro-tection of privacy.

- Students for whom consent has been obtained will be captured on video footage to record their learning interactions using self-tracking video technology as they interact with the teacher while undertaking these activities.

On the secure network, the video clips will be reviewed by the researcher-teacher as well as the independent reviewer, with the focus being on the feedback strategies used by the teacher. Importantly, it is noted that the focus of the proposed research is teacher feedback that is given to students. Although student interactions will be captured on video, these will not be the subject of the analysis in this research.

There will be no disruption of the normal classroom routines during the filming, as the students will continue to work to complete tasks aligned with the West Australian Curriculum.

**What will happen to the information collected?**

The identity of participants and the school will not be disclosed at any time, except in circumstances that require reporting under the Department of Education Child Protection policy, or where the researcher is legally required to disclose that information. Participant privacy, and the confidentiality of information disclosed by participants, is assured at all other times.

The findings of the research will be used to improve professional learning for teachers and school leaders regarding teacher feedback strategies, and the use of self-tracking video for video-cued reflection. The Department of Education, the school and study participants will receive a summary of the findings of the study.

Some exemplar video clips may be selected for use in professional learning for teachers or for use in educational contexts to demonstrate best practice. Before they are used in this way, separate written authorization for the use of each specific clip will be obtained from the school principal or site manager. The data will be used only for this project, and will not be used in any extended or future research without first obtaining explicit written consent from participants.

The data will be retained for 25 years after project completion or publication (whichever is the latter)

**Has the research been approved?**

The research has been approved by the ECU Human Research Ethics Committee, Project Number 18348, and has met the policy requirements of the Department of Education as indicated in the attached letter.

**Who do I contact if I wish to discuss the project further?**

If you would like to discuss any aspect of this study please contact me on ██████████ If you have any concerns about the research project and wish to talk to an independent person, you may contact: **Research Ethics Officer Edith Cowan University 270 Joondalup Drive JOONDALUP WA 6027 Phone: (08) 6304 2170 Email: research.ethics@ecu.edu.au**

**How do I indicate my willingness for the school to be involved?**

If you have had all questions about the project answered to your satisfaction, and are willing for the school to participate, please complete the **Consent Form** on the following page.

This information letter is for you to keep.

Thank you for your participation

Best Regards

Julia Mueller

Teacher

Masters of Research Candidate

Edith Cowan University, Western Australia

Principal consent Form

Julia Mueller

Edith Cowan University

School of Education

2 Bradford Street

Mount Lawley

 WA 6050

Phone: ███████

Email:

jmuelle@our.ecu.edu.au

# CONSENT DOCUMENT

# THE PRINCIPAL

**The impact of video as a self-reflective tool for improvement of teacher feedback practices**

- I have read this document and understand the aims, procedures, and risks of this project, as described within it.

- For any questions I may have had, I have taken up the invitation to ask those questions, and I am satisfied with the answers I received.

- I am willing for this *school* to become involved in the research project, as described.

- I understand that participation in the project is entirely voluntarily.

- I understand that the *school* is free to withdraw its participation at any time, without affecting the relationship with the research team or Edith Cowan University

- I understand that I am free to withdraw from further participation at any time, without explanation or penalty but that data already collected will remain part of the project.

- I give permission for the research finding from this study to be reported at academic conferences, published in reports and journal articles*,* provided that the participants and school are not identified.

- I understand that the school*]* will be provided with a copy of the findings from this research upon its completion.

- I understand that I will be asked to authorise the use some exemplar video clips which may be selected for use in professional learning for pre-service teachers and teachers.

………………………………………………………………………………
Name of the school

………………………………………………………………………………
Name of the Principal

………………………………………………………………………………
Signature

………………………………………………………………………………
Date

Parent information letter

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**INFORMATION LETTER FOR PARENTS**

The impact of video as a self-reflective tool for improvement of teacher feedback practices

**Dear Parents**

In addition to being the Health teacher at  ::::: Primary School, I am also a Master of Education by Research student from Edith Cowan University, under the supervision of Dr Kuki Singh.  I am inviting the students in Room 23 to participate in a study of the different feedback strategies teachers give and to assess the type, nature and frequency of the feedback the teacher uses as well as their effectiveness.

Research shows that feedback should be timely, targeted and not simply praise for effort. Feedback that is not effective may have little value to the students and potentially make them feel less empowered in their learning. Consequently, it may impact on students' willingness to engage with their learning and therefore decrease their willingness to attempt challenging tasks. This project

aims to help the teacher observe and reflect on the various feedback strategies she uses in the classroom to improve student learning outcomes.

**What does the project look like?**

The research will take place in your child/ward's Health Lessons at the school.
During Term 3, 2018 I will use video footage to evaluate if  the feedback I am giving to students is meaningful and process oriented. I will be using self-tracking video technology as a tool for teacher reflection and development.  The purpose of the recordings are to capture real-time footage of how the nature and frequency  of the feedback  I give to students.

Non-participating students will complete all classroom activities but will be seated away from the camera.

The video footage will be uploaded to SWIVL, a password protected secure network, where it will be analysed. Once uploaded, the footage will be deleted from the recording device.

Mr :::: and my University Supervisor, Mrs Kuki Singh, will be asked to view the annotated video footage to ensure results are not biased during the analysis stage of the research project.

**What does participation involve?**

- Agreeing to be filmed as part of weekly Health lessons for six weeks
- Students will be informed when filming is occurring.

During the filming the students in the class will work to complete tasks aligned with the Western Australian Curriculum. This will be part of the normal work they do in class.

The following measures will be in place to protect the rights of the participating students:

- The camera will be placed at the back of the room to ensure limited disturbance throughout the lesson and to minimise the occurrence of capturing the students' faces. It is likely that students' faces could be captured, due to movement in the room.
- All identifying information will be removed from the summary reports and publications.
- Any student who does not consent to participate in the research will remain in the class-room and participate in regular classroom activities, but will be seated in a position where he/she will be out of range of the self-tracking video capture system, and will not be included in any footage. Should any students who do not consent to participate incidentally end up on video footage, this footage will be deleted and not used for the research project.
- Those students who do not consent to participate will not be disadvantaged in any way, nor will any marking or grading reflect their choice to not participate.

Some exemplar video clips may be selected for use in professional learning for teachers or for use in educational contexts to demonstrate best practice. Before they are used in this way, separate written authorisation for the use of each specific clip will be obtained from the school principal, Mrs ::::::.

**Voluntary participation and right to withdraw**

Students, with their own and their parent's consent, will be invited to participate in the research. Participation in this research project is voluntary and there will be no consequences relating to any decision by an individual or the school regarding participation, other than those described in this letter. Decisions made will not affect the relationship with the research team or Makybe Rise PS. Participants will have the right to withdraw from the project at any stage. If they withdraw from the project no further data will be collected, however data that has already been collated will remain part of the research project. A decision to not participate or to withdraw from the study will not have any impact on students' grades or their relationship with me as their teacher.

**What will happen to the information collected and is privacy and confidentiality assured?**

The identity of participants and the school will not be disclosed at any time, except in circumstances that require reporting under the Department of Education Child Protection policy, or where the research team is legally required to disclose that information. Participant privacy, and the confidentiality of information disclosed by participants, is assured at all other times.  Should any incidents occur in the video recorded lessons that might cause embarrassment to the teacher, students or school these will be erased from the video tapes by the researchers with the exception of incidents that are likely to be the subject of disciplinary or legal action.

All data collected will be anonymous.  The names of the participants will not be recorded.  All information will be strictly confidential.  Information that identifies anyone will be removed from the data collected.

The findings of the research will be used to strengthen the quality of teaching in the school.They will enable me to reflect on my pedagogy to improve my teaching practice and serve as a foundation for considerations in improving teaching practice more broadly. Reports written on this project will help teachers learn how to how to give effective and meaningful feedback and to meet professional standards. The findings will be used for professional publications.  A summary report will be written and you can request a copy of this report.

The data will be used only for this project, and will not be used in any extended or future research without first obtaining explicit written consent from participants.

**Has the research been approved?**

The research has been approved by the Office of Research Edith Cowan University Project 18348, and has met the policy requirements of the Department of Education.

**Who do I contact if I wish to discuss the project further?**

If you would like to discuss any aspect of this study, please contact me. If you have any concerns about the research project and wish to talk to an independent person, you may contact: Research Ethics Officer Edith Cowan University 270 Joondalup Drive JOONDALUP WA 6027 Phone: (08) 6304 2170 Email: research.ethics@ecu.edu.au

**How do I indicate my willingness for my child to be involved?**

If you have had all questions about the project answered to your satisfaction, and are willing for your child to participate, please complete the **Consent Form** on the following page. Your child has also been given a letter and consent form to complete to indicate their willingness to participate.

This information letter is for you to keep.

Thank you for your participation

Kind Regards

Julia Mueller

Health teacher

:::::: Primary School

Parent consent form

Edith Cowan University

School of Education

2 Bradford Street

Mount Lawley

 WA 6050

Phone:

Email: jmuelle@our.ecu.edu.au

**Consent Form for Parents – Child Participation**

**RESEARCH PROJECT:**

The impact of video as a self-reflective tool for improvement of teacher feedback practices

- I have read and understood the information letter about the project, or have had it explained to me in language I understand.

- I have taken up the invitation to ask any questions I may have had and am satisfied with the answers I received.

- I understand that participation in the project is entirely voluntarily.

- I am willing for my child to become involved in the project, as described.

- I have discussed with my child what it means to participate in this project. He/she has explicitly indicated a willingness to take part, as indicated by his/her completion of the child consent form.

- I understand that both my child and I are free to withdraw that participation at any time without affecting the family's relationship with my child's teacher or my child's school.

- I understand that data collected up to the point of my child's withdrawal from the study may still be used in the research study.

- I give permission for the contribution that my child makes to this research to be used in professional learning for teachers and pre-service and teachers at the school, or for use in educational contexts. I further give permission for my child's contribution to be used in academic publications, provided that my child or the school is not identified in any way.

- I understand that I can request a summary of findings after the research has been completed.


Name of Child (printed):

Name of Parent/Carer (printed): _____

Signature of Parent: _____  Date:  /  /

_____

Student information letter

Julia Mueller

Edith Cowan University

School of Education

2 Bradford Street

Mount Lawley

 WA 6050

Phone: █████████

Email: jmuelle@our.ecu.edu.au

**INFORMATION LETTER FOR STUDENTS**

**Dear Students**

My name is Ms Mueller and as well as being your Health teacher, I am also from Edith Cowan University. I would like to invite you to take part in a research project that I am doing. It is about what feedback I give to you to improve your learning.

**What would you be asked to do?**

If you take part, you would be asked to:

- Be videoed during classes so that I can look back to see when and how I give feedback.

**Do you have to take part?**

No. You are completely free to say yes or no. I will respect your decision whichever choice you make.

**What if you wanted to change my mind?**

If you say no, but then change your mind and want to take part, just let me, or mum, or dad (or the person who looks after you) know, and they will tell me.

If you do stop, I will make sure that you will no longer get filmed when I take video footage. Video footage that I have already collected from you will stay with the research project.

**What if you say something during the project that you don't want anyone else to know?**

I may have to tell someone if you tell me that you have been hurt by someone. But for all other things you tell me, I won't repeat them to anyone else.

**What will happen do with the information you give me?**
I collect video footage about myself and the feedback I give to students, and then I will write a report on what I find out. When I do this, I won't write or tell anyone your name, or the names of any other students or your school.

All video footage will be stored on a secure server managed by Edith Cowan University.

**How do you get involved?**

You have already talked with your mum or dad, or the person who looks after you, about what it means to take part in the project. If you choose to take part, then please read the next page and write your name in space to say that you agree to take part in the reseaech.

If you **do** want to be a part of the project, please read the next page and write your name in the space provided, to state that you do not agree to participate.

This letter is for you to keep.

Kind Regards

Ms Julia Mueller

Student Consent Form

Edith Cowan University

School of Education

2 Bradford Street

Mount Lawley

 WA 6050

Phone:

Email: jmuelle@our.ecu.edu.au

**Consent Form Primary School Children**

**RESEARCH PROJECT:**

The impact of video as a self-reflective tool for improvement of teacher feedback practices

- I know that I don't have to be involved in this project, but I would like to be.

- I know that I will be filmed whilst doing my usual classroom tasks*.*

- I know that I can stop when I want to at any time of the project.

- I understand that I need to write my name in the space below, before I can be a part of the project.

Your name:                                     Today's  Date:   /  /

Invitation to information session

Julia Mueller

Edith Cowan University

School of Education

2 Bradford Street

Mount Lawley

 WA 6050

Phone: ▮▮▮▮▮

Email: jmuelle@our.ecu.edu.au

**INVITATION LETTER FOR PARENTS**

The impact of video as a self-reflective tool for improvement of teacher feedback practices

**Dear Families of Room X.**

I would like to invite you to an information session next Wednesday, 20th June at 3.15 in your child's room.

As you may have heard from your child, in addition to being their Health teacher at ::::: Primary School, I am also a Master of Education by Research student from Edith Cowan University, under the supervision of Dr Kuki Singh.

I am inviting the students in Room X to participate in a study of the different feedback strategies teachers give and to assess the type, nature and frequency of the feedback the teacher uses as well as their effectiveness.

The research will take place in your child/ward's Health Lessons at the school.

During Term 3, 2018 I will use video footage to evaluate if the feedback I am giving to students is meaningful and process oriented. The purpose of the recordings are to capture real-time footage ofhow the nature and frequency of the feedback  I give to students.

During the information session, I will give detailed information about the purpose of the research, and will be able to answer any question you may have.

I am looking forward to seeing you next week.

Kind regards,

Julia Mueller

Health teacher

:::::: Primary School

Information letter to the Independent reviewer

Julia Mueller

Edith Cowan University

School of Education

2 Bradford Street

Mount Lawley

WA 6050

Phone: ▉▉▉▉▉▉

Email: jmuelle@our.ecu.edu.au

Dear Mr  . . . .

I am a Masters student currently undertaking my Master of Education by Research at Edith Cowan University.  I am undertaking research titled, 'The impact of video as a self-reflective tool for improvement of teacher feedback practices'. As the researcher I will also be the teacher in focus within this study.

**The research project**

The reason for this research project is to promote excellence in teaching and learning in our school through reflection on individual teaching practice. Research by Hattie and Yates (2014), shows that feedback should be timely, targeted and not simply praise for effort. They found that feedback which only provides praise may have little value to the students and potentially make them feel less empowered in their learning. Consequently, it may impact on students' willingness to engage with their learning and therefore decrease their willingness to attempt challenging tasks.

This project aims to observe and reflect the various feedback strategies I use as a teacher in the classroom. Self-tracking video technology will be used to video my feedback strategies in the classroom. This video will be analysed to see how and if the feedback strategies used by the teacher impacts on student learning outcomes.

**Context**

Communication between students and teachers can affect various aspects of student learning in the classroom. When effective feedback is given to students, it is understood to be a key driver of behavioural adaptation, and although feedback has a positive impact, not all types and only the right amount off feedback are equally effective. For teachers to be effective, they need to have a greater understanding of the feedback they give, to ensure students' previously mentioned deep and meaningful engagement with the content.

The proposed study will be a qualitative research approach, involving approximately 26 students, and one teacher-researcher and one experienced teacher as an independent observer. I am planning to engage in video cued reflection as I review the videos of myself teaching one hour a week over a period of six weeks, and will seek to refine the strategies I use in giving feedback to the students.

**Research team**

I will be the researcher in this study, however, in order to minimize bias, I would like to ask, if you would agree to being the independent reviewer in this study. Your role would be to analyse the annotated video footage and add your observations and comments as a direct response to my comments and annotations, using the SWIVL cloud portal (the system that supports the self-tracking video technology used in this study). This will ensure that the data is being interpreted objectively.

**Participant consent**

The proposed research will comply with Department of Education policy requirements and the university standards for ethical conduct of research. Care will be taken when videoing in classrooms ensuring participant confidentiality and secure data management.

Parents and students will be supplied with a detailed information letter and a consent form to be signed by both individual students and their parents. The research processes as outlined in the aforementioned documentation will be compliant with ethical requirements for human research and approved by the ECU Research Ethics Committee, and will be administered prior to the data collection phase.

**Research procedures**

Following all formal approvals for the study to proceed, parents will be invited to an information session where the researcher-teacher will explain what the study is about and answer any questions that might arise.

Data collection will commence after the consent process has been undertaken. Data collection will take two forms:

- Video evidence of the use of feedback in the classroom filmed with the use of a non-invasive self-tracking device located unobtrusively at the rear of the classroom to maximize footage of the teacher.
- Anecdotal Notes, entered directly into the video footage, using the SWIVL technology, in relation to the nature and the frequency of the feedback given, created by the researcher-teacher
- A Feedback checklist will be used by both the researcher and you to code the video footage collected throughout the research. These codes will enable the researcher to explicitly look for, tag and annotate feedback strategies identified during the video cued reflective process.
- At the completion of the data collection, you will be given a structured tool to supply an over-all summary of his findings throughout the study, to add to the report. This will enhance the accuracy of the reported outcomes. As well as viewing and tagging the data using the pre-determined categories form the feedback checklist as a guide, focus questions for you will be used, enabling you to exactly look for what the research study aims to investigate, and con-centrate on the feedback strategies used in the classroom.

All video data will be uploaded immediately to the secured SWIVL cloud portal, with access limited to the researcher-teacher. I will share short clips of my practice with my Supervisor, Dr Kuki Singh our

Principal, Mrs .::::, as well you, ensuring objective analysis of the data. The focus of the video analysis will be my use of feedback strategies.

**What will happen to the information collected?**

The identity of participants and the school will not be disclosed at any time, except in circumstances that require reporting under the Department of Education Child Protection policy, or where the researcher is legally required to disclose that information. Participant privacy, and the confidentiality of information disclosed by participants, is assured at all other times.

The findings of the research will be used to improve professional learning for teachers and school leaders regarding teacher feedback strategies, and the use of self-tracking video for video-cued reflection. The Department of Education, the school and study participants will receive a summary of the findings of the study.

The findings of the research might be used to improve professional learning for teachers and school leaders regarding teacher feedback strategies, and the use of self-tracking video for video-cued reflection. Some exemplar video clips may be selected for use in professional learning for teachers at ::::::::: Primary School or for use in educational contexts to demonstrate best practice. Before any video images are being used, separate written authorization for the use of each specific clip will be obtained from the Principal. Mrs. :::::::::, to ensure that only children with parental consent are included and that they show all children and myself in a positive light.

At the conclusion of the study, all electronic data will be transferred into a university approved secure cloud data storage facility available to research students.  This service fulfills the requirements for data security and national regulatory compliance. The School of Education and the Office of Research Ethics has oversight of this process. The data will be stored for a period of 7 years, and then will be destroyed under the university procedures for secure data destruction.

**Has the research been approved?**

The research has been approved by the ECU Human Research Ethics Committee, Project Number 18348, and has met the policy requirements of the Department of Education as indicated in the attached letter.

**Who do I contact if I wish to discuss the project further?**

If you would like to discuss any aspect of this study please contact me on ▮▮▮▮▮▮▮. If you have any concerns about the research project and wish to talk to an independent person, you may contact: **Research Ethics Officer Edith Cowan University 270 Joondalup Drive JOONDALUP WA 6027 Phone: (08) 6304 2170 Email: [research.ethics@ecu.edu.au](mailto:research.ethics@ecu.edu.au)**

**How do I indicate my willingness for the school to be involved?**

If you have had all questions about the project answered to your satisfaction, and are willing for the school to participate, please complete the **Consent Form** on the following page.

This information letter is for you to keep.

Thank you for your participation

Best Regards

Julia Mueller

Teacher

Masters of Research Candidate

Edith Cowan University, Western Australia

Guarantee of confidentiality

Julia Mueller

Edith Cowan University

School of Education

2 Bradford Street

Mount Lawley

WA 6050

Phone: ▮▮▮▮▮▮▮

Email: jmuelle@our.ecu.edu.au

Guarantee of Confidentiality

**The impact of video as a self-reflective tool for improvement of teacher feedback practices**

I declare that I will not reveal any details of the video material I shall be reviewing for the research project being conducted by Julia Mueller who is undertaking this project for the purposes of a Master's degree.

I recognise that to do so would be in breach of participant confidentiality, and of ethical guidelines for research.

Further, I will ensure that while data or other materials related to the research project are in my care, they will be kept in a secure location until they can be returned, and will not be accessible to others entering my work place.


Name:

Business name (if applicable):

Postal Address:

Phone number:


Signature: _____Date:


Researcher:

Lesson 1: Video 1

| Feedback type | What could this look/sound like | Observed behaviour (Notes from the researcher) |
|---|---|---|
| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 00:12 - 'I love that!'<br><br>0:17- Well done x<br><br>1:08 – Well done, good idea x<br><br>1:22- Well done (teacher paraphrase what was said), good job<br><br>1:37- Beautiful<br><br>2:07- (Teacher paraphrase what was said), beautiful)<br><br>2:20 – 'What a good idea'<br><br>4:50 – 'Good stuff, good point'<br><br>5:30 – Paraphrase, then 'good'<br><br>8:33 – 'Good' then repeat the std's answer<br><br>8:38 – 'Fabulous', then repeat the sdt's answer<br><br>8:43 – 'Great idea', then calling stds name<br><br>8:55 – 'Fantastic'<br><br>9:11 - 'Good', then paraphrase<br><br>9:19 – 'Awesome', then paraphrase<br><br>10:16 – 'Good'<br><br>10:24 – 11:16 – 'Fantastic', 'Good idea'<br><br>11:05 - Good job, well done<br><br>11: 17 – Well done<br><br>12:12 – Well done<br><br>12:50 – Beautiful, x, x, x, x, x, x, x,<br><br>13: 24 – Well done<br><br>14: 00- Well done |

| | | 14:48 – Well done, good job |
| --- | --- | --- |
| | | 17:35- Absolutely |
| | | 17: 41 – Good |
| | | 18:24 – 'Well done, good stuff' |
| | | 20:01 – 'Good, well done x' |
| | | 20:45 – 'x, on to it!' |
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | |
| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of understanding of the student. | 00:59 - Calling individual stds' names for specific praise: 'Fabulous, beautiful Super Six'<br><br>1:03 - Calling individual std's name for specific praise: 'beautiful Super Six'<br><br>2:04 – 'Fantastic, what a great idea! x'. Then, asking for clarification to explain understanding<br><br>6:58 – Name of std 'beautiful still sitting, Super 6. You are showing a great example to others, I am very impressed'<br><br>16:33 – 'Fabulous quiet working Yr 2's'<br><br>17:46 – 'Thank you x, that is really nice of you'<br><br>20:11 – 'Yes, that's awesome. Great spelling too'<br><br>20:30 – Specific feedback: 'I can see what you are thinking' |
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 18:20 – 'Awesome x, she is up to doing her writing'<br><br>18:24 – 'x is labelling her picture. Well done, what a... Good stuff' |
| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
| 3c. Otherwise | Other 'positive' feedback not included above | |

| | | |
|---|---|---|
| 4. Specific negative feedback | Negative feedback containing specific information about the performance or level of understanding of the student. | 5:47 – 'Put that away please, thank you'<br><br>6:11 – Name of std with a specific information of what they are doing wrong 'You are not showing me attentive listening right now'<br><br>18:12 – 'Come on, x, don't worry about your pencil case' |
| 4a. Discrepancy feedback | Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | |
| 4b. Progress feedback | Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
| 4c. Otherwise | Other 'negative' feedback not included above | 1:10 – Calling a std's name to remind them of the desired behaviour<br><br>1:14 – 'Super six' and a look to show disapproval<br><br>1:27 – Calling a std's name and a look to show disapproval<br><br>3:15 - Calling a std's name and a look to show disapproval<br><br>7:52 –' Sshh'- sound. Calling std's name<br><br>10:16 - Calling a std's name to remind them of the desired behaviour<br><br>15:12 – 'Not impressed'<br><br>16:10 - Calling a std's name to remind them of the desired behaviour |
| 5. Other interventions: | Example: Questions, brief instructions. | |
| 6. Body language | Examples:  Smiling, nodding, head shaking. | 00:12 - Moving arms to show excitement<br><br>3:10 – Finger to mouth to signal silence<br><br>4:31 – Nodding<br><br>6:11 - Finger to mouth to signal silence<br><br>7:52 - Finger to mouth to signal silence<br><br>8:38 - Moving arms to show agreement |

| | | 10:16 – Nodding |
| --- | --- | --- |
| | | 10:24 – 11:16 – Nodding, smiling |
| | | 19:50 - Finger to mouth to signal silence |
| | | 20:45 – Clapping hands to show approval and excietement |
| 7. Non-verbal feedback | Examples: Proximity, using hand signals, pointing to work. | 4:30 – Scanning the room |
| | | 4:39 – Proximity for desired behaviour, then model the correct behaviour |
| 8. Other, non-specified feedback | Other interventions and or embodied feedback not included above | 00:57 – Count (1, 2, 3 Magic) |
| | | 1:47 – Count (1, 2, 3 Magic) |
| | | 3:39 – 'Put your hand down' |
| | | 10:23 – Physical assistance to help a std into the desired position |
| | | 11:19 - Count (1, 2, 3 Magic) |
| | | 11:51 - Count (1, 2, 3 Magic) |
| | | 13:07 - Count (1, 2, 3 Magic) |
| | | 15:12 - Count (1, 2, 3 Magic) |

Lesson 2: Video 2

| Feedback type | What could this look/sound like | Observed behaviour (Notes from the researcher) |
|---|---|---|
| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 2.40 – 'Good'<br><br>4.41 – 'Good, I like that'<br><br>4.41 – 'Absolutely'<br><br>7.30 - 'Good'<br><br>9.38 – 'Thanks x<br><br>16.21 – 'Well done x, good thinking'<br><br>29.11 – 'Awesome, awesome, awesome, awesome'<br><br>30.58 – Thank you boys at the front<br><br>31.13 - 'Good'<br><br>40.06 – 'What a great idea'<br><br>46.39 – 'Eyes to me. Super impressed, super impressed, well done, well done, well done' 'This front her, wonderful' 'These people are trying really hard'<br><br>40.07- You worked so well. You worked the neurons. You were listening. Not interrupting. Very impressed!<br><br>44. 27 – (Name), awesome. He is already writing his name<br><br>49.46 – 'Thank you x, thank you x, thank you' |
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | 47.30- 'Not now' |
| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of understanding of the student. | 4.41 – Specific feedback about what stds said<br><br>9.55 – 10.05 – 'x, I love how you came inside, got yourself organised and didn't interrupt'<br><br>17.25 – 'I like that you are using that word, good x'<br><br>20.20 – 20.47 – 'Where is the secret? ... Yep...I love how you are trying to work out what you are thinking, but I am not sure there is a secret in there.' 'I give you more thinking time' |

| | | 21.55 – 'How ist that a secret?' Asking for clarification |
|---|---|---|
| | | 22.54 – 'x, why not' Asking for clarification |
| | | 25.47 – Explaining a misconception |
| | | 28.06 – 'x, I love how you are doing the thinking face' |
| | | 31.38 - Asking for clarification |
| | | 46.55 – 'I can see that you are trying really hard, buddy, but you are also distracting a lot' |
| | | 47.59 – 'Thank you guys for sitting quietly. Thank you for not talking' |
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 12.08 – 'x is sitting beautifully x is sitting wonderfully. x, x, wonderful, thank you'<br><br>13.20 – 'x, still sitting beautifully'<br><br>15.19- Sitting amazingly beautiful , x |
| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 31.50- That's what we talked about earlier, you are right<br><br>38.22- (Name), I love how you are participating this term, it's really great to see that you remember to put your hand up and you keep answering questions. And I love the smile , it makes me so happy! |
| 3c. Otherwise | Other 'positive' feedback not included above | 11.03 – Feedback to encourage deeper thinking |
| 4. Specific negative feedback | Negative feedback containing specific information about the performance or level of understanding of the student. | 6.28 - 'You are talking that is a 1'<br><br>50.18- Sit still, that's a 2 |
| 4a. Discrepancy feedback | Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | |
| 4b. Progress feedback | Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |

| 4c. Otherwise | Other 'negative' feedback not included above | 0.12 - 'Put that on your desk, on your desk, on your desk' |
|---|---|---|
| | | 0.23 – Look. 'On your desk' |
| | | 2.34 – 'x, put that away' |
| | | 4.40 – 'Waiting for x. Thank you' |
| | | 24.02 – 'Sshh'- sound |
| | | 26.40 – 'So much dobbing. Is that hurting you?' |
| | | 27.54 – 'Sshh'- sound |
| | | 28.46 – 'xcuse me x' |
| | | 29.20 – 'Sshh'- sound |
| | | 29.37 – 'Sshh'- sound |
| | | 29.45- 30.40 – Lots of feedback about being quiet (during partner sharing) |
| | | 30.5 8 - 'Sshh'- sound |
| | | 31.42 - 'xcuse me', sshh- sound |
| | | 34.40 - 'Sshh'- sound |
| | | 35.17 – 'Sshh'- sound |
| | | 47.48 - 'Sshh'- sound |
| | | 48.30 - 'Sshh'- sound, 'Voices off' |
| | | 48.44 - 'Sshh'- sound |
| | | 49.20 - 'Sshh'- sound |
| | | 49.57 - 'Sshh'- sound |
| | | 50.07 - 'Sshh'- sound |
| 5. Other interventions: | Example: Questions, brief instructions. | 3.03 – 'Year 2's Super 6, eyes to me. Hand up. Eyes to me, Super 6' + Modelling folded arms |
| | | 4.40 – Hands down x. x, x. Look |
| | | 4.41 – 6.06 – 'If someone is trying to get you off task, what can you do?' Ask for clarification & deeper thinking. |
| | | 6.35 – 'Put your hands down' |

| | | |
|---|---|---|
| | | 8.34 – 'Hands down' |
| | | 9.30 – x |
| | | 10.25 – 'x, Hands down' |
| | | 11.36 – 'Stop talking or you'll be in buddy class' |
| | | 12.21 – 'Off to buddy class' |
| | | 13.20 – 'x, sit down' |
| | | 13.20 – x, x |
| | | 18.40 - 'Hands down, thank you' |
| | | 18.42 - 'x, hands down, thank you' |
| | | 22.54 – 'x, why not' |
| | | 26.58 – x |
| | | 29.45 – x |
| | | 30.40 – 'No talking x' |
| | | 30.40 - Signal to begin |
| | | 33.20 – 'Stop calling out' |
| | | 34.20 – 'x, I need you to sit down' |
| | | 34.30 – x |
| | | 38.48 - x |
| | | 40.15 - x |
| | | 43.07 - x |
| | | 47.57 - x |
| | | 48.44 – 'x, please put this away' |
| | | 48.53 - x, x, x, x |
| | | 49.20 – 'Sit down, sit down' |
| | | 50.14 - x |
| 6. Body language | Examples: Smiling, nodding, head shaking. | 0.27 - Finger to mouth to signal silence |
| | | 1.05 - Finger to mouth to signal silence |

| | | |
|---|---|---|
| | | 1.30 - Modelling folded arms |
| | | 2.05 - Finger to mouth to signal silence |
| | | 4.40 - Hand gesture to put hands down |
| | | 4.41 - Modelling folded arms |
| | | 6.06 – x, Finger to mouth to signal silence |
| | | 6.28 - Hand gesture to stop |
| | | 8.52 - Finger to mouth to signal silence |
| | | 8.5 – Smile and thumbs up |
| | | 9.31 - Finger to mouth to signal silence, look |
| | | 10.15 - Finger to mouth to signal silence |
| | | 11.13 - Finger to mouth to signal silence |
| | | 14.49 - Finger to mouth to signal silence |
| | | 14.59 - Finger to mouth to signal silence |
| | | 15.19 – x, Modelling folded arms |
| | | 15.31 - Finger to mouth to signal silence |
| | | 15.37 - Modelling folded arms |
| | | 16.24 - Hand gesture to stop |
| | | 18.33 – 19.16 - Modelling folded arms, look |
| | | 22.44 - Hand gesture to stop |
| | | 24.04 - Hand gesture to put hands down |
| | | 26.03 - Hand gesture to stop |
| | | 26.24 – Point to sit down |
| | | 27.54 - Hand gesture to stop |
| | | 28.24 - Hand gesture to put hands down |
| | | 28.46 - Hand gesture to stop |
| | | 29.02 - Modelling folded arms |
| | | 29.22- Thumbs up |

| | | 30.40 - Hand up, Modelling folded arms |
| | | 31.07 - Hand gesture to stop |
| | | 33.01 - Hand gesture to put hands up |
| | | 33.11 - Finger to mouth to signal silence |
| | | 34.28 – Finger gesture to stop |
| | | 35.31 - Finger to mouth to signal silence |
| | | 37.00 – Hand gesture to signal silence |
| | | 37.36- 37.45 – Look |
| | | 38.46 - Finger to mouth to signal silence |
| | | 42.36 - Finger to mouth to signal silence |
| | | 43.41 - Hand gesture to stop |
| | | 46.27 - Finger to mouth to signal silence. Hand gesture to stop |
| | | 46.30 - Modelling folded arms, look |
| 7. Non-verbal feedback | Examples: Proximity, using hand signals, pointing to work. | 0.52 - Proximity for desired behaviour |
| | | 1.14 -  Physical assistance to help a std into the desired position |
| | | 8.46 - Physical assistance to show a std to stop |
| | | 28.34 - Physical assistance to help a std look into the desired direction |
| | | 30.58 - Physical assistance to show a std to stop |
| | | 34.54 – Fingers in ears to show that it is too loud |
| | | 36.50 - Physical assistance to help a std into the desired position |
| | | 42.29 – Point finger to show direction |
| 8. Other, non-specified feedback | Other interventions and or embodied feedback not included above | 1.07- x, Count (1, 2, 3 Magic) |
| | | 2.28 - Count (1, 2, 3 Magic) |
| | | 3.03 - Count (1, 2, 3 Magic) |
| | | 4.40 – x, that's a 2. Count (1, 2, 3 Magic) |
| | | 6.24 - Count (1, 2, 3 Magic) |

| | | |
|---|---|---|
| | | 6.28 – 'You are talking that is a 1' Count (1, 2, 3 Magic) |
| | | 7.15 - Count (1, 2, 3 Magic) |
| | | 8.20 - Count (1, 2, 3 Magic) |
| | | 10.24 - Count (1, 2, 3 Magic) |
| | | 11.22 - x, 4. Count (1, 2, 3 Magic) |
| | | 11.36 - 5. Count (1, 2, 3 Magic) |
| | | 13.44 - Count (1, 2, 3 Magic) |
| | | 26.05 - x, that's a 3. Count (1, 2, 3 Magic) |
| | | 26.12 - Count (1, 2, 3 Magic) |
| | | 26.50 - x, Count (1, 2, 3 Magic) |
| | | 28.46 – 'x, another one, and a one' Count (1, 2, 3 Magic) |
| | | 35.36 - Count (1, 2, 3 Magic) |
| | | 39.14 – 'Count, count, count, count, count' Count (1, 2, 3 Magic) |
| | | 44.16 - Count (1, 2, 3 Magic), look |
| | | 45.37 – 'Count, count' Count (1, 2, 3 Magic) |
| | | 47.33 - Count (1, 2, 3 Magic) |
| | | 48.53 - Count (1, 2, 3 Magic) |

| Feedback type | What could this look/sound like | Observed behaviour (Notes from the researcher) |
|---|---|---|
| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 2.23 – 'Fantastic!'<br><br>5.47 - 'Thank you, so much better'<br><br>9.20 – 'Well done'<br><br>9.35 – 'x, beautiful.<br><br>11.15 – ''Thank you'<br><br>18.45 – 'Great!'<br><br>19.18 – 'Good idea'<br><br>21.26 – 21.33 – 'Great ideas guys.'<br><br>22.19 – 'Good thinking face'<br><br>23.23 – 'Awesome'<br><br>27.39 – 'Good'<br><br>38.08 – 'Well spotted x'<br><br>40.03 – 'Absolutely'<br><br>43.49 – 'x, superstar, x, superstar, x, x, incredible'<br><br>45.27 - 'Good'<br><br>47.22 – 'Well done x<br><br>49.38 – 'Ah, good, I like it'<br><br>49.43 – 'Well done x'<br><br>50.55 – 'Good'<br><br>51.07 - 'Awesome, well done' |
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | |

| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of understanding of the student. | 00.40 - 00.52 – 'I love how the two girls are sitting next to you, wonderfully Super 6' 'I love how the people behind you are sitting Super 6, fantastic Super here'<br><br>5.38 – 'x, I love how you are sitting Super 6. I love how x is sitting the whole time, no wriggling, no moving around, just sitting Super 6'<br><br>7.11 – 'Much better x, thank you for sitting Super 6'<br><br>9.15 – 3.35 – 'Fabulous sitting Super 6 x, thank you.' 'x, still sitting Super 6'<br><br>9.36 – 'Thank you for putting your hand up and not calling out'<br><br>23.47 – 'x, that is awesome' Then explaining why the answer is awesome<br><br>26.28 – 'Again, the girls in the middle are doing a wonderful job. Thank you x, x, x.'<br><br>48.10 – 'x, fabulous. You already have three people'<br><br>x has four people already.' |
|---|---|---|
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 35.36 – 'I love how quietly you were sitting and listening. That is awesome'<br><br>36:22- 'Awesome Year 2's, that is nice and quiet'<br><br>48.20 – 49.38 – (Names), explicit feedback to work<br><br>49.43- 50.55 - Explicit feedback to work and suggestions |
| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 18.25 – 'x, I love how you are participating this semester, it's really great to see that you keep putting your hand up and you keep answering questions. And I love the smile, it makes me so happy!' |
| 3c. Otherwise | Other 'positive' feedback not included above | 3.30 – 'I love the wide grin on your face, so obviously, thinking about it, makes you happy.'<br><br>5.23 – 'Just like x was smiling x was smiling when he said it'<br><br>8.08 – 'I like that answer'<br><br>12.02 – Asking for clarification<br><br>12.35 – 'Can you repeat this please?' |

| | | 13.08 – Repeat the stds sentence, then: 'Is that what you are saying?' |
|---|---|---|
| | | 13.23 - Asking for clarification |
| | | 19.44 – 21.16 – 'That's an interesting point.' Asking for clarification. Question to deepen students understanding. Paraphrase |
| | | 36.05 – 'Can you say that again please? Loud' Asking for deeper thinking |
| | | 41.36 - Asking for clarification |
| 4. Specific negative feedback | Negative feedback containing specific information about the performance or level of understanding of the student. | 00.56 – 'x, whole body attentive listening. This means arms folded, legs crossed' |
| | | 12.52 – 'x, please stop talking' |
| 4a. Discrepancy feedback | Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 10.48 – 'Stay where you are, put your hand up and ask to move. That would be the right thing to do.' |
| | | 41.05 – 'x, I am getting tired to talk to you about sitting Super 6. You are nearly in Year 3' |
| 4b. Progress feedback | Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 00.36 – x, I just asked you to sit Super 6. Thank you' |
| | | 1.02 – 'I am still waiting for you to show me attentive listening' |
| | | 1.18 – 'You are still not sitting Super 6' |
| | | 3.45 – 'x I am still waiting' |
| | | 9.35- 'Waiting, waiting, waiting. Waiting for x. Waiting for x' |
| | | 17.23 – 'x, you need to pay attention to the front and sit Super 6 ' |
| 4c. Otherwise | Other 'negative' feedback not included above | 00.03 - Sshh- sound |
| | | 00.04 – 'Voices off' |
| | | 00.11 - Sshh- sound |
| | | 00.30 – 'Put your hands down' |
| | | 10.1 8 - Sshh- sound |
| | | 1.44 – 2.08 - 'If you have your hands up, you are not listening to what I am saying', 'If you are having your hand up, you are not listening to what I am saying, but you are thinking about what you |

| | | want to say' 'So, while I am speaking I would like you to put your hands down. I would like you to put your hands down. Thank you.' |
|---|---|---|
| | | 3.42 - Sshh- sound |
| | | 4.19- Sshh- sound |
| | | 5. 02 - Sshh- sound |
| | | 5.32 - Sshh- sound |
| | | 5.47 - x, look to show disapproval. 'Thank you' |
| | | 6.39 – 'Excuse me, sshh, not your turn' |
| | | 6.55 – 'Excuse me' |
| | | 7.02 – x, Sshh- sound |
| | | 7.35 – 'Oh, Sshh- sound, not your turn' |
| | | 8.17 – 8.20 - Sshh- sound |
| | | 8.35 - 'Excuse me' |
| | | 9.15 - Sshh- sound |
| | | 9.35 - Sshh- sound |
| | | 10.40 – 'Ah, excuse me' Sshh- sound |
| | | 12.34 – x and x |
| | | 15.25 - Sshh- sound |
| | | 21.40 – 'Thinking is not talking. Thinking is thinking.' Sshh- sound. 'Talking is not thinking' |
| | | 22.09 – 'Put your heads down, that is not thinking' |
| | | 22.25 - Sshh- sound |
| | | 22.36 – x |
| | | 24.39 – x |
| | | 25.26 - Sshh- sound |
| | | 26.01 - Sshh- sound |
| | | 26.11 - Sshh- sound |
| | | 27.57 - Sshh- sound |

| | | 44.44 - Sshh- sound |
|---|---|---|
| | | 44.48 - 'Voices off' Sshh- sound |
| | | 45.08- 'Excuse me' |
| | | 45.32 - Sshh- sound |
| | | 47.50 - Sshh- sound 'Voices should be switched off' |
| | | 52.27- 'Excuse me. Stop!' |
| 5. Other interventions: | Example: Questions, brief instructions. | 00.17 – 'And eyes on me' |
| | | 00.17 – x sit somewhere else |
| | | 1.34 – 'Put your hand down' |
| | | 1.52 – x come over here, pointing to a spot to sit |
| | | 2.29 - x come over here, pointing to a spot to sit |
| | | 2.39 - x please sit next to x |
| | | 2.55 – 'Put your hand down' |
| | | 4.16 – x |
| | | 9.44 – 'x, please sit Super 6' |
| | | 11.40 – 'Follow my finger' |
| | | 13.14 – 'x move here' |
| | | 26.21- Signal to begin, folded arms to model desired behaviour |
| | | 26.43 – 'Super 6' x' |
| | | 27.39 – Signal to begin |
| | | 31.47 – 'Put your hand down' |
| | | 43.49 - Signal to begin, folded arms to model desired behaviour |
| | | 47.02 – x |
| | | 47.11 – 'x, sit down' |
| 6. Body language | Examples:  Smiling, nodding, head shaking. | 00.25 – Folded arms for desired behaviour |
| | | 00.33 - Finger to mouth to signal silence |
| | | 1.32 - Finger to mouth to signal silence |

| | | 2.49 – Hand to signal stop. 'Stay where you are' |
|---|---|---|
| | | 6.39 – Hand signal to stop |
| | | 6.51 - Finger to mouth to signal silence |
| | | 6.55 - Hand signal to stop |
| | | 7.07 - Finger to mouth to signal silence |
| | | 7.15 – 7.19 – Hand gesture to stop |
| | | 7.35 - Hand gesture to stop |
| | | 7.59 - Finger to mouth to signal silence |
| | | 8.17 - Hand gesture to stop |
| | | 8.35 - Hand gesture to stop |
| | | 8.48 – x, Hand gesture to stop |
| | | 9.35 - Finger to mouth to signal silence |
| | | 9.35 - Hand gesture to stop |
| | | 9.57 - Hand to signal stop, finger to mouth to signal silence |
| | | 10.42 - Finger to mouth to signal silence |
| | | 11.01 - Finger to mouth to signal silence |
| | | 11.29 - Hand gesture to stop |
| | | 11.40 - Clapping hands to show confusion + facial expression |
| | | 11.45 - Hand gesture to stop |
| | | 12.58 - Hand gesture to stop |
| | | 13.17 – Modelling of desired behaviour |
| | | 13.59 - Hand gesture to stop |
| | | 14.54 - Finger to mouth to signal silence |
| | | 16.20 - Finger to mouth to signal silence |
| | | 16.56 - Hand gesture to stop |
| | | 19.09 - Finger to mouth to signal silence |
| | | 20.08 - Finger to mouth to signal silence |

| | | |
|---|---|---|
| | | 22.25 - Finger to mouth to signal silence |
| | | 24.39 - Hand gesture to stop |
| | | 25.20 - Finger to mouth to signal silence |
| | | 26.41 - Finger to mouth to signal silence |
| | | 27.49 - Hand gesture to stop |
| | | 28.51 - Hand gesture to put hands down |
| | | 42.06 - Finger to mouth to signal silence |
| | | 42.20 - Hand gesture to stop |
| | | 45.32 - Finger to mouth to signal silence |
| 7. Non-verbal feedback | Examples: Proximity, using hand signals, pointing to work. | 00.27 – Point to a spot to sit |
| | | 3.45 – Modelling folded arms |
| | | 9.44 – Proximity (private talk) |
| | | 13.14 – Proximity |
| | | 15.33 – Proximity + Hand gesture to stop |
| | | 15.42 - Proximity, then physical assistance to help a std into the desired position |
| | | 17.33 – Look |
| | | 20.02 – Proximity |
| | | 21.26 – Hand signal to put heads down |
| | | 23.17 – Proximity |
| | | 26.28 – Look, modelling folded arms |
| | | 41.50 – Look |
| | | 45.10 – Look |
| | | 47.56 - Look |
| 8. Other, non-specified feedback | Other interventions and or embodied feedback not included above | 00.03 - Count (1, 2, 3 Magic) |
| | | 7.04 – 'x That's a 1' Count (1, 2, 3 Magic) |
| | | 10.46 - ' x 2' Count (1, 2, 3 Magic) |
| | | 12.58 - ' x 1' Count (1, 2, 3 Magic) |

| | | 17.01 - Count (1, 2, 3 Magic) |
| --- | --- | --- |
| | | 24.39 - Count (1, 2, 3 Magic) |
| | | 28.07 - ' x That's a 3' Count (1, 2, 3 Magic) |
| | | 40.37 'x, 3'(1, 2, 3 Magic) |
| | | 45.12 - Count (1, 2, 3 Magic) |
| | | 51.20 – 'x, write your name' |

| Feedback type | What could this look/sound like | Observed behaviour (Notes from the independent reviewer) |
|---|---|---|
| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 9:58 – 'Thank you for sharing that'<br><br>10:37 – 'Yeah, good'<br><br>12:34- 'Thank you very much for sharing that'<br><br>22:40- 'x, beautiful'<br><br>22:42- 'Thank you x, thank you x, thank you x'<br><br>22:39- 'Awesome'<br><br>24:25- 'Thank you'<br><br>36:50- 'Thank you'<br><br>37:16- 'x, I am impressed, well done, good job buddy. X, well done'<br><br>37-50- 'Thank you'<br><br>39:30- 'Good job'<br><br>39:42- 'Fantastic'<br><br>39:53- 'Thanks x'<br><br>41:30- 'x, I love what you are doing'<br><br>45:19- 'Beautiful, well done x, well done x, well done x'<br><br>46:49- 'Thank you'<br><br>47:50- 'Absolutely'<br><br>50:10- 'Well done Year 2's awesome' |
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | 2:20 - 'Ah, 'scuse me'<br><br>49:19- 'scuse me' |

| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of understanding of the student. | 00:19 – Ladies I love how you are sitting with your legs crossed and arms folded.<br><br>00:24 – I love how X is sitting. Thank you X, thank you X, thank you X<br><br>1:51 – I love how you explained to me why you came up with this. Thank you<br><br>4:42 – 'Thank you for putting your hand up buddy'<br><br>6:52 – 'I love how you're sitting Super 6, you are sitting beautifully as well, thank you. Thank you X'<br><br>16:15- 'X, I love how you are sitting, I am going to give you a Dojo point'<br><br>37:16- 'x, straight on to working'<br><br>39:00- Well done x, you must have thought about it while we were talking about it on the mat. It shows me that you were processing your thoughts'<br><br>45:42- 'Thank you x, I love how you have your arms folded'<br><br>46:41- 'x is doing the right thing. x is waiting until everyone (interrupted speech, counting of a student), is showing attentive listening.'<br><br>47:36- 'I love that. Can you explain that further?'<br><br>48:21- 'That is such a fabulous statement, x' |
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired | 13:40 – 'Yes, give yourself another tick, I really love how you put your hand up, thank you'<br><br>24:02- 'Love that. It shows me that you are interested in what we are learning. Give yourself another tick'<br><br>45:39- 'Awesome, x, that's another tick x, sitting beautifully Super 6' |

| | level of achievement | |
|---|---|---|
| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 13:12 – Thumbs up, 'much better, thank you' |
| 3c. Otherwise | Other specific positive feedback. | 5:21 – Reward tick chart<br><br>7:40- Asking for clarification & deeper thinking<br><br>10:42 – 'X, give yourself another tick'<br><br>45:11- "I like your negotiating skills' |
| 4. Specific negative feedback | Negative feedback containing specific information about the performance or level of understanding of the student. | 3:18 – Confirm expectations for desired behaviour<br><br>3:22 – 'The reason why you didn't hear me was because you interrupted' |
| 4a. Discrepancy feedback | Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired | 2:40 – X, please sit down'<br><br>12:58- Teacher reminding student of expectations<br><br>17:25- 'If you are not having your eyes on me, you are not listening with you whole body'<br><br>20:20- 'I can see your hand, no need to call out' |

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|---|---|---|
| | level of achievement. | 21:30- 'Don't yell'<br><br>21:42' 'x, come on buddy, sit up. Sit up straight. That's 2 ticks. Stop. That's not how you earn a tick. Turn around'<br><br>37:10- 'What should you be doing?'<br><br>40:11- 'x and x, please don't talk'<br><br>42:05- 'Waiting for x, waiting for x, waiting for x'<br><br>46:10- 'I am waiting for x and I am waiting for x and for x' |
| 4b. Progress feedback | Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
| 4c. Otherwise | Other specific negative feedback | 00:12 – ' Sh'- sound<br><br>00:31 - Calling name to remind them of the desired behaviour<br><br>00:38 – ' Sh'- sound<br><br>1:16 – 'Sorry, Finger to mouth to signal silence<br><br>2:39 - ' Sh'- sound<br><br>2:53 - ' Sh'- sound<br><br>2:59 - Calling name, hand to signal stop, 'Excuse me'<br><br>3:11 - Hand to signal stop, 'Excuse me'<br><br>5:08 - 'Sit Super six please' |

| | | |
|---|---|---|
| | | 5:33 - Hand to signal stop 'Sorry, I'm going to get a little bit cross now. Don't talk', Finger to mouth to signal silence |
| | | 5:33 - Confirm expectations for desired behaviour |
| | | 9:02 – ' Sh'- sound |
| | | 9:35 – Calling name |
| | | 10:40- ' Sh'- sound |
| | | 12:15 - Calling name to remind them of the desired behaviour |
| | | 12:58- Finger, proximity |
| | | , Name, 'Stop!' |
| | | 14:52 - ' Sh'- sound |
| | | 15:09- ' Sh'- sound |
| | | 5:16- 5:31 – Counting down from 5, signal to begin, 'Voices are off, thank you' |
| | | 18:06- Calling name |
| | | 1:46- ' Sh'- sound |
| | | 6:38 - Sh... Finger to mouth to signal silence |
| | | 19:00- ' Sh, Super 6' |
| | | 20:15- 'x,  Sh' |
| | | 20:42- ' Sh'- sound |
| | | 20:50- ' Sh'- sound |
| | | 21:12- ' Sh'- sound |
| | | 21:07 – 'Sitting up, please' |
| | | 21:16- Calling name to remind them of the desired behaviour |
| | | 22:25- Counting down from 5 |

| | | |
|---|---|---|
| | | 24:04- ' Sh.... I'm still waiting' |
| | | 32:07- ' Sh'- sound |
| | | 34:38- Counting down from 5 |
| | | 36:40- ' Sh'- sound |
| | | 37:45-' Sh'- sound |
| | | 38:55- -' Sh'- sound |
| | | 43:55– ' Sh'- sound ,Counting down from 5 |
| | | 45:13- Counting down from 5 |
| | | 45:33- ' Sh'- sound |
| | | 45:46-' Sh'- sound |
| 5. Other interventions: | Example: questions, brief instructions | 00:33 – 'Eyes to me' (paired with a visual prompt) |
| | | 01:01 – 'Put your hand down' (paired with a visual prompt) |
| | | 13:56- 'Put your hand down' (paired with a visual prompt), 'Put your hands down guys' |
| | | 25:24- 'x, put your hand down please' |
| | | 25:27- 'Please put your hand down. X, too' |
| | | 31:12- Put your hand down |
| | | 38:55- 'Come on x' |
| | | 46:20- 'Put it down' |
| | | 46:24- 'Sit down' |
| 6. Body language | Examples: smiling, nodding, head shaking. | 3:09 – Look |
| | | 8:15 – Physical contact to move a std |
| | | 9:05 – Model Super 6 |
| | | 14:25- Name, then model Super 6, thumbs up |

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| 7. Non-verbal feedback | Examples: Proximity, using hand signals, pointing to work. | 00:12 - Finger to mouth to signal silence |
|---|---|---|
| | | 00:32 - Finger to mouth to signal silence |
| | | 2:03 – Hand to signal -stop, then, finger to mouth to signal silence |
| | | 2:20 - Hand to signal- stop |
| | | 2:43 - Finger to mouth to signal silence |
| | | 3:32 - Hand to signal- stop |
| | | 9:08 - Finger to mouth to signal silence, shaking head |
| | | 10: 31 - Finger to mouth to signal silence |
| | | 13:55 - Finger to mouth to signal silence |
| | | 34:51- Finger to mouth to signal silence |
| | | 40:45- Finger to mouth to signal silence |
| | | 41:23- Finger to mouth to signal silence |
| 8. Other, non-specified feedback | Other interventions and or embodied feedback not included above | 6:11 – Count |
| | | 8:45 – Calling a name and finger to mouth to signal silence |
| | | 10:05- 'x, that's a 1 |
| | | 11:45 – Physical contact to encourage std to sit up |
| | | 16:35- 'x, 1' |
| | | 17:01- 'x, 2' |
| | | 17:33- 'x, that's a 1, x that's a 2, x that's a 1' |
| | | 18:04- 'x, move' |
| | | 21:26- 'x, that's a 1 |
| | | 22:20- 'x, that's a 3' |
| | | 31:57- 'That's a 1' |
| | | 32:34 -'That's a 4' |
| | | 32:38 - 'That's a 4' |

| | | 34:41 - 'That's a 3'<br><br>35:55- Count<br><br>47:13 – 'That's a 1 |
| --- | --- | --- |

Lesson 5: Video 5

| Feedback type | What could this look/sound like | Observed behaviour (Notes from the researcher/ independent reviewer) |
|---|---|---|
| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 0:17- Well done x

1:08 – Well done, good idea x

1:22- Well done (teacher paraphrase what was said), good job

1:37- Beautiful

2:07- (Teacher paraphrase what was said), beautiful)

2:28- Good

3:25- Fantastic

3:42- Great, good stuff

5:40- Fantastic (teacher paraphrase what was said)

11:05- Good job, well done

11:17- Well done

12:12- Well done

12:50- Beautiful, x, x, x, x, x, x, x

13:24- Well done

14:00- Well done

14:48- Well done, good job

17:35- Absolutely

24:14- Thank you x

31:16 – Well done, sssh

31:22 – Good job |
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | |
| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of | 6:01- Wow, what a great idea, thank you

7:25- Good question |

| | understanding of the student. | 10:37- x has already started, x has finished it, well done |
|---|---|---|
| | | 12:31- Thank you x, I love that you are sitting Super 6 |
| | | 12:42- x, sitting Super 6. Well done |
| | | 12:45- Thank you x, sitting Super 6 |
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | |
| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 3:30 – I love that you remember buddy |
| | | 11:30- x, 3 times you did it, well done |
| | | 23:57- x, I love how you are thinking |
| 3c. Otherwise | Other 'positive' feedback not included above | 16:37- Positive gesture |
| 4. Specific negative feedback | Negative feedback containing specific information about the performance or level of understanding of the student. | 15:35- 15:46- If you are fiddling you are not thinking. |
| | | If you are fiddling you are not thinking, hands down. 'Cause right now you are thinking about what you want to say |
| | | 29:44- x, if you continue to talk, you're out straight away |
| 4a. Discrepancy feedback | Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 11:17- Have another look (teacher checking spelling) |
| | | 13:04- x, waiting for you to sit Super 6, waiting for x to sit Super 6, waiting for x |
| | | 20:39- Look, 'I am not sure what you are doing, but you are not showing me attentive listening' |
| | | 24:00- If you are watching x, then you are not thinking |
| 4b. Progress feedback | Negative feedback comparing the performance or level of | 3.16 - 4.40 – 'I am not impressed. Not happy. Hands down. I am not impressed with (state undesirable behaviour). This is not acceptable. |

| | | |
|---|---|---|
| | understanding of the student with their earlier performance or level of understanding. | We are going to sit (hand movement) Super 6, stay Super 6, show attentive listening. That is what we do, that is the Tribes agreements' <br><br> 11.36 – 12.08 – Year 2's, I am not sure what is happening today, but this… I am not sure if you need a break because you have been working hard this morning, but this is not the class I am used to. <br><br> 14.36 -  I find it distracting when lots of people talk. I can't concentrate. |
| 4c. Otherwise | Other 'negative' feedback not included above | 10:30- Counting down from 5, signal to begin <br><br> 32:49 - Counting down from 5, signal to begin <br><br> 38:31 – No need to yell |
| 5. Other interventions: | Example: questions, brief instructions. | 0:47- x <br><br> 2:19- x <br><br> 2:47- On your bottom, thank you <br><br> 3:15- x <br><br> 4:25- x <br><br> 5:13- x <br><br> 5:24-5:30- x <br><br> 6:55- x, sit on your bottom please <br><br> 7:05- x <br><br> 7:17-Sshh- sound <br><br> 7:46- x, eyes to me <br><br> 8:12- x, sit on your bottom please <br><br> 8:24-Put your hands down <br><br> 10:17-Sshh'- sound <br><br> 10:47-x, Sshh- sound <br><br> 12:06- x, Sshh- sound <br><br> 12:49- x, eyes to me, x, eyes to me <br><br> 15:09- x, put it in the bin |

| | | |
|---|---|---|
| | | 15:20-x, Sshh- sound |
| | | 15:50- x, put that on my desk please |
| | | 17:44- x, x, then model desired behaviour |
| | | 18:55- Sshh- sound, finger to mouth to signal silence |
| | | 19:03- x |
| | | 21:21 – x, stop calling out |
| | | 2:11- x |
| | | 22:32- x, move somewhere else please buddy |
| | | 23:26- x |
| | | 24:00- Put your hands down, - Sshh- sound |
| | | 24:34- x, that's a 1 |
| | | 24:41- x |
| | | 25:26 – Leave it |
| | | 25:29- 1 |
| | | 25:50- x, you need to top being silly |
| | | 27:50 – Look, 1 |
| | | 28:21- x, Super 6 |
| | | 28:42- Sshh- sound, that's a 2 |
| | | 28:52- Sshh- sound |
| | | 29:11- Look |
| | | 29:55 - Sshh- sound, waiting |
| | | 30:31 Sshh- sound, 2 |
| | | 30:54 – 3 |
| | | 33:11- Sshh- sound |
| | | 33:16- Sshh- sound |
| | | 33:20- Sshh- sound, need to be quiet |
| | | 35:09- Sshh'- sound |

| | | 35:47- Sshh- sound |
|---|---|---|
| | | 36:07- Sshh- sound, finger to mouth to signal silence |
| | | 36:27- Sshh- sound, finger to mouth to signal silence |
| | | 36:45- Sshh- sound |
| | | 37:16- Can you sit up |
| | | 39:06- Look |
| | | 39:15-x |
| | | 39:20- Look |
| | | 39:58- That's a 4 and that's a 1 |
| | | 40:33- Stop calling out |
| 6. Body language | Examples: smiling, nodding, head shaking. | 1:05- Hand gesture to signal to sit down |
| | | 4:21- Finger to mouth to signal silence |
| | | 5:24-5:30- Look, x |
| | | 8:40- Finger to mouth to signal silence |
| | | 11:17- Thumbs up |
| | | 13:24- Thumbs up |
| | | 14:48- High five |
| | | 16:39- Finger to mouth to signal silence |
| | | 16:59- Finger to mouth to signal silence |
| | | 17:22- Nodding |
| | | 17:35- Finger to mouth to signal silence |
| | | 21:41- model desired behaviour |
| | | 22:16- model desired behaviour |
| | | 22:19 - model desired behaviour |
| | | 24:10- Finger to mouth to signal silence |
| | | 25:14-Look |
| | | 25:21- Head shake |

| | | 25:56- Folded arms, look |
|---|---|---|
| | | 26:06- Finger to mouth to signal silence, stop calling out |
| | | 29:19- Finger to mouth to signal silence |
| | | 30:04- Finger to mouth to signal silence |
| | | 31:46 - Finger to mouth to signal silence |
| | | 32:49- Arms folded |
| | | 33:37 - Finger to mouth to signal silence |
| | | 38:48- Gesture to move, gesture to sit Super 6 |
| | | 39:20- Look |
| 7. Non-verbal feedback | Examples: Proximity, using hand signals, pointing to work. | 22:16- Proximity<br><br>22:19- Proximity |
| 8. Other, non-specified feedback | Other interventions and or embodied feedback not included above | |

Lesson 6: Video 6 a

| Feedback type | What could this look/sound like | Observed behaviour (Notes from the researcher/ independent reviewer) |
|---|---|---|
| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 0:50- Thank you<br><br>2:36- Fabulous<br><br>3:03 – Thank you<br><br>4:08 – Fabulous, thank you<br><br>4:44- Good<br><br>4:54- Good<br><br>5:21- Good<br><br>5:33- Awesome<br><br>5:59- Awesome<br><br>6:15- Awesome<br><br>6:18- Well done<br><br>7:16- Good, awesome<br><br>9:04- Fabulous<br><br>13:02- Fantastic<br><br>15:57- Good, well done<br><br>16:47- Absolutely<br><br>28:10- x, fabulous, x, good stuff |
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | 12:02- 'scuse me<br><br>28:04- 'scuse me |
| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of understanding of the student. | 1:12- Thank you for putting your hand up<br><br>7:47 – I love how x us siting, fabulous. X, sitting beautifully, so is x and x. Thank you<br><br>11:35- Fabulous, good thinking |

|  |  | 11:55- Well done those people who have used their context clues and read the screen already

13:45- Asking for clarification

18:48- x, fabulous sitting Super 6. X, awesome Super 6

19:22- Good question

20:33- I love that you have your hand up and not calling out, thank you buddy |
| --- | --- | --- |
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 10:12- I am really impressed Year 2's how quietly you are sitting, how you are showing attentive listening

26:47- Well done Year 2'. That is possibly the quietest pairing that I have seen in a long, long time |
| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | 17:28- Thank you for keeping your hand up buddy

17:49- Thank you, much better, not calling out |
| 3c. Otherwise | Other 'positive' feedback not included above | 24:10- That is a super good point, x |
| 4. Specific negative feedback | Negative feedback containing specific information about the performance or level of understanding of the student. | 6:30- x, can you stop that please, thank you

12:22- You can stop calling out

15:01- I need you to sit Super 6 and stop playing around. Thank you |
| 4a. Discrepancy feedback | Negative feedback comparing the performance or level of understanding of the student with some predefined goal or | 11:19- x, Super 6. That is twice now that I had to interrupt x, because people are not sitting Super 6. Thank you, x

24:55 – Ssh, when you are thinking, you are not talking

25:25- 25:28 – Hands down, we're thinking, followed by gesture to put hands down |

| | | |
|---|---|---|
| | desired level of achievement. | 27:00- Guys, x, not talking |
| 4b. Progress feedback | Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
| 4c. Otherwise | Other 'negative' feedback not included above | 0:07- 'Sh'- sound<br><br>4:19- Who's humming? Please stop<br><br>6:51- x, leave your shoes please<br><br>9:23- x, have you listened to anything anyone has said?<br><br>12:02- Counting down from 5<br><br>17:24- Sshh- sound, finger to mouth to signal silence<br><br>20:30- Please don't call out<br><br>28:00- Counting down from 5 |
| 5. Other interventions: | Example: questions, brief instructions. | 0:18- Look<br><br>0:45- x, can you move somewhere else please? Just move here, at the front<br><br>3:03- x, x, eyes to me. It doesn't really matter<br><br>4:05- Come and sit down please<br><br>4:13- Put your hand down<br><br>4:29- Please come and sit down<br><br>4:36- On your bottom<br><br>4:40- On your bottom<br><br>5:30- Put your hand down<br><br>5:45- x, sit Super 6<br><br>6:05- Put it on your wrist |

| | | |
|---|---|---|
| | | 7:37- Can you please not sit next to x |
| | | 7:42- x, x, finger to mouth to signal silence, Super 6, eyes to me |
| | | 8:57- Super 6 |
| | | 9:07- x |
| | | 9:50- x |
| | | 10:01- Stop moving around please |
| | | 11:15- x |
| | | 11.48- (Name), (Name) eyes to me. It doesn't really matter what they are doing over there. You should be focusing on your own group. |
| | | 12:02- Finger to mouth to signal silence, Super 6, eyes to me |
| | | 12:38- x |
| | | 13:12- Sit down |
| | | 17:30- x |
| | | 17:54- x |
| | | 19:01- x, gesture eyes to me |
| | | 21:14- Sshh- sound, finger to mouth to signal silence |
| | | 22:11- x |
| | | 25:15- Put your head down |
| | | 25:51- x, please put your hand down |
| | | 26:02 Hand down |

| 6. Body language | Examples: smiling, nodding, head shaking. | 0:10- Finger to mouth to signal silence |
|---|---|---|
| | | 2:30- Look, Head shake |
| | | 7:24- Shaking head |
| | | 9:07- Finger to mouth to signal silence |
| | | 10:11- Look, x |
| | | 10:44- Finger to mouth to signal silence |
| | | 12:11- x and x, look |
| | | 12:14- Hand gesture to put hands down |
| | | 14:12- Finger to mouth to signal silence |
| | | 14:22- Hand gesture to stop |
| | | 16:03- Finger to mouth to signal silence |
| | | 18:52- Thumbs up |
| | | 20:30- Finger to mouth to signal silence, hand gesture to put hands up |
| | | 23:56- Finger to mouth to signal silence |
| | | 24:48- Hand gesture to put hands down |
| | | 28:00- Hand gesture for silence |
| 7. Non-verbal feedback | Examples: Proximity, using hand signals, pointing to work. | 5:49- Physical assistance to help a std into the desired position |
| | | 6:05- Visual prompt |
| 8. Other, non-specified feedback | Other interventions and or embodied feedback not included above | 13:09- That's a 1 |
| | | 25:35- That's a 1 |

Lesson 6: Video 6 b

| Feedback type | What could this look/sound like | Observed behaviour (Notes from the researcher/ independent reviewer) |
|---|---|---|
| 1. Non-specific positive feedback | Non-specific positive utterances, such as: "Well done!" and, "Great!" | 0:12- I love that, followed by paraphrasing the thought<br><br>0:59- You are on fire, x. Good stuff Well done, x<br><br>4:59- God stuff<br><br>5:08- Good point<br><br>8:26-8:45- Good, fabulous, great idea<br><br>8:52- Fantastic<br><br>9:11- Yes, good<br><br>18:31- Good stuff, I am impressed year 2's<br><br>20:001- Good, well done x<br><br>20:42- Awesome x, onto it |
| 2. Non-specific negative feedback | Non-specific utterances, such as: "Wrong!" and, "Not quite!" | |
| 3. Specific positive feedback | Positive feedback containing specific information about the performance or level of understanding of the student. | 0:59 - x, beautiful, x, fabulous, x, beautiful Super 6, thank you<br><br>17:02- Good<br><br>14:45- Thank you, x, that's really nice of you<br><br>20:12- That is awesome. Great spelling too<br><br>20:29- Fabulous. I can really see what you were thinking when you drew that |
| 3a. Discrepancy feedback | Positive feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement | 2:04- Fantastic. What a great idea. Why would you do that (checking for understanding). What a good idea<br><br>6:58- x, beautiful. Even when we are waiting you are still sitting Super 6. That is fantastic. You are showing such a great example to others. I am very impressed<br><br>16:31- Fabulous quiet working Year 2's<br><br>18:16- Awesome, x, up to doing her writing<br><br>18:23- x is up to labelling her picture, well done |

| 3b. Progress feedback | Positive feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
|---|---|---|
| 3c. Otherwise | Other 'positive' feedback not included above | |
| 4. Specific negative feedback | Negative feedback containing specific information about the performance or level of understanding of the student. | 6:12- x, you are not showing me attentive listening today<br><br>14:05- Sshh- sound, I can't see you working |
| 4a. Discrepancy feedback | Negative feedback comparing the performance or level of understanding of the student with some predefined goal or desired level of achievement. | 15:05- x, 4, Not very impressed |
| 4b. Progress feedback | Negative feedback comparing the performance or level of understanding of the student with their earlier performance or level of understanding. | |
| 4c. Otherwise | Other 'negative' feedback not included above | 0:51- Counting down from 5<br><br>6:39- Sshh- sound<br><br>6:50- Sshh- sound, thank you<br><br>8:47- Sshh- sound, x<br><br>13:02- Sshh- sound<br><br>13:33- Sshh- sound<br><br>14:38- Sshh- sound |

| | | 16:49- Sshh- sound, Sshh- sound |
| --- | --- | --- |
| | | 17:17- Sshh- sound |
| 5. Other interventions: | Example: questions, brief instructions. | 0:59- x, can you sit properly please, Super 6 |
| | | 0:13- Super 6 |
| | | 0:30- x |
| | | 3:15- x |
| | | 3:39- Put your hand down |
| | | 4:46- Sit down |
| | | 4:47 – Go and sit down |
| | | 5: 47- I need you to put that away please, thank you |
| | | 7:50- Sshh- sound, finger to mouth to signal silence |
| | | 7:54- Put your hand down, listening |
| | | 10:16- x |
| | | 11:25- Stop |
| | | 14:17- Sshh- sound, x, sit down |
| | | 15:20- x, do your work please |
| 6. Body language | Examples: smiling, nodding, head shaking. | 0:23- Finger to mouth to signal silence |
| | | 3:11- Finger to mouth to signal silence |
| 7. Non-verbal feedback | Examples: Proximity, using hand signals, pointing to work. | 12:02- Gesture where to sit |
| 8. Other, non-specified feedback | Other interventions and or embodied feedback not included above | 1:47- Count (1, 2, 3 Magic) |
| | | 11:19- Count (1, 2, 3 Magic) |
| | | 11:51- That's a 3 |
| | | 13:05- x, 2 |
| | | 18:09- Come on, x |