

## PRE0135

### A mirror has many faces: Negotiating a classroom community of learners through reflection

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Pedagogical approaches developed from Vygotskian and neo-Vygotskian theories emphasise the importance of reflection within the learning process. Through focusing on the ways in which language socially and culturally constructs the experiences and emerging identities of learners, reflective writing and discussion create vehicles for scaffolding students' classroom-based learning. Students are able to assume increased responsibility for their learning through a heightened awareness of both personal and shared meanings, as well as metacognitive strategies, as they move towards becoming 'experts' within the classroom community.

This paper will consider possibilities for supporting students' reflection through sharing the experiences of one fifth grade class currently engaged in learning science as a community of learners and participating in an ethnographic research project. In this project, strategies to encourage reflection have included journal writing, two-way postcards, use of the left-hand side of the page of class work books, peer interviews and collective reflection through class discussions. Qualitative analysis of fieldnotes, reflective writing and interviews strongly suggests that students need specific 'thinking time' in order to engage in productive reflection. The students' awareness of their learning and feelings about learning is evident, but articulation of analytical thinking is more limited. We conclude that reflection appears to be an important activity towards negotiating this classroom learning community because of the challenges to students' and teachers' identities as learners.

#### Introduction

While reflective pursuits such as journal writing are often considered private, solitary activities, the purpose changes when reflection is used as a means of communicating thoughts and reactions in schools and classrooms. For example, a teacher's evaluation of a teaching/learning program is a reflective activity, while the sharing of this evaluation with colleague teachers and subsequent submission to the school's principal constructs the reflection as a channel for communication. In this sense, reflection is being shared to enable insight into the teacher's perceptions of the processes of teaching and learning, the effectiveness of program design and its implementation. It is a part of a professional conversation or dialogue. A second example of reflective activity is found in the classroom is found when students keep learning journals. In this situation, the purpose is usually to raise self-awareness of the learning process - initiating an internal dialogue - as well as to share

with the teacher one's perceptions of an experience of learning. The student's perceptions of an 'audience' for the journal will determine what s/he chooses to write. The amount of control given to the student over what to include in the journal will also create boundaries around what is perceived as relevant to share within the culture of the classroom. In both the case of the teacher's evaluation and the student's learning journal, the choices being made about content and expression are contributing to the construction of the writer's identity, in the eyes of the writer and the other participants in the learning experience who will share that piece of writing.

Reflection is an important part of creating a classroom learning community that focuses on learning as the creation of meaning through on-going negotiation. Through reflective discussion and writing, students and teachers become aware of the choices and responsibilities within the processes of learning and teaching. Such reflection helps children to explore and create identities as learners within and beyond the classroom. Conceptualising the classroom as a community of learners acknowledges the multiple roles and voices of those who participate (Brown, 1997). Reflective dialogue, whether written or spoken, provides an opportunity for teachers to get to know their students in ways that can support their learning and acknowledge differences and similarities.

The purpose of this paper is to discuss the ways in which strategies for articulating reflective thinking are being used by students, a teacher and a researcher to enhance the creation of a learning community in a year 5 classroom. After contextualising the present study in relevant literature relating to learning communities, reflection and identity, background information pertaining to the study and details of the strategies for reflection will be presented. This will be followed by an exploration of identity construction through reflection within a classroom community of learners, using qualitative data from three individual case studies. Comments on the ways in which both teacher and researcher view the role of reflection in the negotiation of their own identities within the classroom community will also be made.

### **Co-constructing identity within a learning community: Reflection as an integral process**

The underlying notion in a classroom community of learners is that "learning is a process of transformation of participation in which both adults and children contribute support and direction in shared endeavours" (Rogoff, Matusov & White, 1996, p. 389). Children are seen as successful learners when they begin to talk and think in the ways that are valued by particular communities, through engaging in jointly constructed activities that are meaningful within those communities (Renshaw & Brown, 1997) and by contributing to change within those communities. Strategies for reflection may provide a vehicle for a shift from regulation by others to self-regulated participation within a learning community, as students become more aware of and able to purposefully negotiate their participation, and thus the construction of identity.

In relation to the Fostering Communities of Learners (FCL) project, perhaps the best known of the learning community investigations, Ann Brown (1997) has identified reflection as one of six 'first principles' of learning that contribute to the development of a culture of learning within the classroom. Gaining insight into their own strengths and weaknesses enables learners to be effective (Brown, 1994), as they are then able to develop and access their own learning strategies. To this extent, FCL classrooms are intentionally metacognitive environments and research, sharing and consequential tasks are "subsumed under the overarching concept of reflection" (Brown, 1997, p. 405). Students are provided with opportunities to monitor their own and others' comprehension and progress. Through such collaboration, *all* activities within the classroom community offer possibilities for reflection as students are encouraged to query, wonder and make inferences (Brown & Campione, 1996).

In time, Brown (1997) claims that reflective activities within the learning community become internalised, thus fostering self-reflective practices and personal theories of learning.

Within the same learning context, individuals may experience differences in their perceptions of learning (Hogan, 1999). Another important aspect of Brown's notion of a community of learners is that individual differences are recognised, valued and fostered (Brown, 1994, 1997). Encouragement of diversity contributes richness to classroom activities by offering children opportunities to develop expertise and interests as they work towards a broader, shared goal of understanding. The diverse nature of the classroom community contributes to the interdependence of learners, as achieving the shared goal is impossible without collaboration. "This interdependence promotes an atmosphere of joint responsibility, mutual respect and a sense of personal and group identity" (Brown, 1994, p. 10), as expertise is distributed in both social and material terms (Roth, 1998).

While collaboration is a key notion for the establishment of a classroom learning community, other classroom-based research has more specifically addressed issues of resistance. In his research project focused on children learning engineering science, Roth (1998) initially experienced difficulties with students adjusting to the more open style of his science lessons, compared with more traditional approaches to teaching and learning in other subjects. More specifically, difficulties arose where students expected to be given the 'right' answers immediately by the teacher and where students thought too much time was given to voicing ideas. The degree of participation in conversations varied, even at the end of the unit. The issue of participation is one also addressed by Yerrick (1999), who found that within his science classroom, the 'lower track' students' disengagement with school was complicated by their resistance to changes in curriculum, the school as an authority figure and their increased sense of alienation. Brown and Renshaw (1997) acknowledge the importance of creating space for resistance within classroom learning communities. They acknowledge resistance as a legitimate form of membership that enables change to take place within the community through the tension and contestation which results as a consequence (Brown & Renshaw, 1997).

We contend that the means by which a child builds an identity as a learner and a legitimate participant in the activities of the classroom community exist within the discourse of the classroom, through dialogue. As Lave and Wenger (1991) and Renshaw and Brown (1997) argue, the construction of identities is central to the social activity of learning, as people relate to others through their participation in communities of practice. These relationships are built over time and are dynamic, thus enabling change in a learner's identity and participation, as well as both creating and responding to changes within the learning community. Through reflection, students are able to explore what it means to learn and take increasing responsibility for their own active participation in the learning process. We view strategies to foster reflection as linguistic, dialogic tools that enable negotiation of classroom learning and make possible interpretation of the setting and meanings (Roth, 1998). In turn, this contributes to the development of identities as learners, with language used to express both the identities and attitudes of participants (Cazden, 1988).

Reflection is a particular type of dialogue that contributes to the system of communication within the classroom, or classroom discourse (Cazden, 1988). This type of dialogue may not necessarily be compatible with the ways in which students and teachers are used to talking and writing, either in school or as part of their every day life. As Yerrick (1999) claims, learning to talk and act differently takes time and practice, and it may be perceived differently by the members of a classroom community. The value and purpose of this type of dialogue will also be perceived differently by individuals, and this will affect the ways in which teacher and students express their senses of identity.

## **The classroom context of the research project: Supporting the development of a reflective classroom community of learners**

The creation of a classroom community in this present research project was a part of a broader qualitative study. This study drew on both ethnographic and design experiment approaches, in that the researcher was a participant observer who was a temporary visitor to the classroom and engaged in on-going programming, team-teaching and evaluation of lessons with the classroom teacher. The primary aim of the study was to explore the processes by which interest in learning develops by focusing on the creations of meanings and value of learning in one specific grade 5 classroom at Heathville College, an independent girls' school in Sydney, Australia.

### The classroom community

In the main phase of the study, 26 students and their teacher were observed participating in Science and Technology lessons over a 6 month period from January - June 2001. The content of the students' Science learning was focused on electricity and energy resources in term 1, and egg-laying animals and conservation issues in term 2. The students were from lower-middle/middle-class families and diverse ethnic backgrounds, including Vietnamese, Greek, Spanish, Italian, Korean, Lebanese and Indian. Data was gathered through the field notes of the researcher, written reflections of the students and teacher, semi-structured and informal, incidental interviews, and audio and video-taped segments of interaction in classroom-based activities.

Over the 11 month period of the pilot and main study phases of the project (August 2000-June 2001), the classroom learning community began to emerge through the use of learner-centred approaches, including an Interactive Teaching Approach (Biddulph & Osborne, 1984), which centres on learners' own questions as the foundation for learning units. As pedagogic and research aims and agendas were negotiated between the teacher and researcher, and meetings were held to re-evaluate and make adjustments to the design of the units, the relationship between the researcher and the teacher evolved. Initially the roles of researcher and teacher in each lesson were quite distinct. As the weeks passed, however, mutual trust and intuitive rapport were forged and with this came a merging of roles, with neither being as well defined as before. The researcher's presence in the classroom became more than just one of observer and the teacher often posed questions and provided feedback that contributed to the focus of the research. Through the researcher's data gathering activities in the classroom, students quickly recognised her as a fellow learner, but one with greater expertise. The concept of the teacher as an expert learner was modelled through admissions of not knowing all the answers, actively seeking information alongside the students and drawing upon support from experts outside the learning community. Similarly, the value of reflection was authenticated by the exchange of learning journals between the teacher and the researcher. The students bore witness to the researcher keeping a reflective journal, which acknowledged her own role as a learner in the classroom and made explicit the value placed by the researcher on written reflection.

### Reflection

Reflection as a more formalised, explicit process was introduced to the students by reading an extract from John Marsden's (1987) novel *So Much to Tell You*. A discussion ensued shortly afterward, identifying what the class thought journal writing and reflection involved. This was recorded by the researcher on a poster to be displayed in the classroom (figure 1). The class then jointly wrote a reflection about their first week in year 5 (figure 2). Although the students were taught about the process of writing reflectively, it soon became apparent that there some class members who were more 'natural' reflectors and others who found the

process equivocal. Those in the latter group subsequently made attempts to learn how to reflect in a way that clearly communicated their ideas. Since reflection draws upon higher order thinking skills and demands critical, analytical and evaluative thinking, these students needed access to language skills to interpret and make meaning of their classroom-based experiences and communicate this either during shared discussion or private written reflection.

**Figure 1** *5W's thoughts about journal writing 2/2/01*

What do 5W think about journal writing?

Free to write

Writing about yourself and what happens to you

Sharing your thinking

Writing about feelings

Asking questions

Writing to explain why you do or don't like something

Report about what is happening and your own comments about his

**Figure 2** *5W class reflection 2/2/01*

My first week in Year 5 has been great. It's all new so it's not boring. People have made a lot of friends. We've met a lot of new people. We did a lot of new activities and fun things, such as sport, our title pages, learning Chinese. I wonder if Year 5 will stay this fun? BYE!

A variety of strategies to develop and foster reflection was made available to the students. The decision to utilise these particular strategies was made by the class teacher and researcher following a staff workshop at the school in which teachers shared techniques for reflection used in their classrooms and from professional reading (for example, Wilson & Wing-Jan, 1993; Moon, 1999). The purpose of these reflective techniques was to both help the students to become more aware of their learning processes and preferences, as well as to provide the teacher and researcher with insight into students' perceptions of learning. The strategies used with the year 5 students in the present study are described briefly below.

Left hand page for reflection: One technique which has been advocated is the Left Hand Page (LHP) technique (Ryan, 2001). The students used the left hand side (ie the backs of the pages) of their Science books to record their insights, experiences, questions and theories. These recordings by students were usually prompted by the teacher and/or researcher, with explicit questions to guide reflective comments devised by the teacher, researcher and/or students. The students sometimes discussed responses with a partner or small group but recordings were made individually. Using this LHP technique, reflection formed an integral part of the lesson because students' reflections appeared directly opposite any written work from that lesson.

Two way postcards: The students also utilised two-way postcards as a means of communicating with either the researcher or their teacher. The post cards were accessible to all and, unlike the LHP reflections, could be used at any time throughout the day, not only during Science lessons. Some students opted to take them home and post their reflections in the class letterbox the following day. A response from the teacher or researcher in the form of a comment and/or questions would then be posted back to individual students. The students created a 'pocket' inside their learning journals to store these postcards, enabling them to keep them and refer to them in the future.

Reflective learning journals: A third strategy was the use of reflective journals, an exercise book devoted to recording individual thinking about learning. This complemented other techniques and journals were used to advocate the same primary aim in establishing a classroom community; that learning should be a process that is both meaningful and reflective. Journal entries were made by students in relation to different subjects, thus reinforcing the concept that reflection is a part of learning in the classroom across all Key Learning Areas. However, it is also important to acknowledge that the curriculum in other subjects was not explicitly organised upon the notion of the classroom as a learning community.

Trajectory graphs: Towards the end of the unit, students were given a blank graph and a list of the activities undertaken in each Science lesson for the term. On the vertical axis was a 7-point Likert scale with responses ranging from 'not interested at all' to 'very interested'. On the horizontal axis was a number corresponding to each activity on the list. The students retrospectively charted their interest in the different activities and some of the students subsequently reflected on their reasons for rating tasks in individual interviews with the researcher.

Peer interviews: Although not used extensively, peer interviewing was another strategy used to facilitate expression of reflective thinking. Students were selected by fellow students to tape record oral responses to questions pertaining to their learning in Science and Technology. The students conducting the interviews constructed the questions for their peers, within the broad guideline of finding out about their experiences in science for the term.

Collective reflection in class discussions: Finally, in whole class discussions, questions posed by the teacher would often demand reflective thinking from students. For example, asking, "Why were you pleased with your final product?" or "What made you decide to work in a group rather than individually?" stimulated articulation of reflective thinking and also provided insight into learning processes. It was observed by the teacher that in term 4, 2001, providing prompts for reflection was a role increasingly taken by the students, as they sought justification from their peers for their thinking. In the second lesson of the unit where the students were sharing their questions about bridges, Cathy gave a very brief answer to a peer's question. Marie immediately stepped in, asking, "But *why* do you think that? Don't forget that you need to tell us *why*."

These strategies were utilised by the teacher and researcher to explicitly foster students' reflection upon their learning within a classroom community of learners. There was diversity in the ways in which individual students made use of the different techniques to position themselves within the classroom community and to communicate their identities as learners. Consideration is given in the following section of the paper to the ways in which three members of the class used strategies for reflection.

## **Emergent identities through reflection: Considering Eleni's, Michaela's and Jacqui's participation**

A classroom community is made up of many individuals and is defined by the contributions that each member makes. Reflection enables the students to explore the nature of these contributions and assert their identities as learners in the classroom. Through reflection, Eleni, Michaela and Jacqui were three students who revealed the distinct ways in which they participated within the learning community and in doing so, how the context of the learning community contributed to their self-perceptions as learners. In this section of the paper, consideration will be given to each of these students and the ways in which they constructed legitimate identities as members of the 5W learning community through their use of reflective strategies, as well as, reciprocally, the ways in which the learning community responded to their needs.

### Eleni, who simply loves learning

In observing Eleni in both the classroom and playground, she is an effervescent and energetic student who physically bounces up and down when sharing an experience, her entire face aflame with her eagerness to tell whoever will listen. Eleni's success as a learner has been recognised by her family and the school community from a young age, when she was enrolled in kindergarten as an early entrant, two years younger than her classmates. This ongoing support from her family and school has reinforced Eleni's identity and she sees herself as an able student who embraces challenges and investigative activities. This is revealed through her reflections and classroom engagement. On 24/2/01, she wrote an LHP reflection that began "I was really switched on today so I figured out how to attach the wires so two light bulbs would light up" (Eleni's science book). While this comment indicates her confidence in her ability to learn, it also incorporates a clever play on words using 'switched on' in the context of investigating electrical circuits. Eleni is an alert and articulate member of the classroom community, who is confident in her use of language for different purposes.

Eleni displays a passion for learning generally and several reflections indicate learning and fun as synonymous to her. When asked to describe what the class had been doing in science term 2, Eleni did not respond specifically, but wrote in her reflection, "Very, very, very, very, very fun work!" (15.6.01). She loves to seek new and interesting information, whether working individually or with peers. In the first week of school, in response to the researcher's and teacher's question, "How do you like to learn?", Eleni recorded that,

"I like to learn by reading books, playing educational games, having someone explain to me and by doing experiments. I like learning when we work in groups, when it is quiet and when I get a chance to talk. I like learning when I meet new people and especially learning with them" (Eleni's journal entry, 2/2/01).

Eleni's trajectory graphs, which chart her perceptions of her interest in the Science lesson activities, indicate that she is consistently interested, with very little change in the high ratings of interest she has recorded. Comments on the LHP of her science book reflect this, with generalisations such as, "I was interested in everything I worked on and I had fun" (Eleni's science book, 24/2/01). This positive identification with her classroom-based learning was maintained, as her peer interview with Stephanie (6/4/01) revealed:

**Stephanie:** The next person to be interviewed is Eleni. (pause) Now Eleni, did you enjoy this term's science and technology lessons with Ms Pressick?

**Eleni:** I loved it. It was so much fun. And I loved it because we got to do so many experiments and stuff. It was so much fun! (last sentence in a silly voice)

Eleni's enjoyment of learning extends beyond the classroom. After the first few Science lessons in term 1, she revealed her curiosity and wonder for scientific phenomena beyond the classroom. At home, she had a video on electricity and knew the chemical composition of a battery, knowledge that was far beyond any of the other students in the class. In term 2, when reflecting on her choice of the echidna as her egg-laying animal, she commented in discussion with peers that, "I should have done turtles because I've got some turtles (at home) and I could have done 24 hour observations!" (Eleni overheard by the teacher, teacher's notes 1/6/01). Eleni has also valued opportunities for excursions and interaction with expert visitors to the classroom.

Eleni's overt passion for learning sometimes appears to be perceived by her pre-adolescent peers as over-enthusiasm. At times, this has resulted in her peers deciding to isolate her during group tasks in the classroom, as well as in the playground. Eleni used reflection in the form of a postcard to communicate her feelings about her social identity within the classroom. She wrote to her teacher to voice her sadness in not being accepted by the other students in the class. She felt that she didn't have any real friends and was confused because she couldn't understand why this was so. Given Eleni's perception, as revealed in her reflection quoted above, that school-based learning provides her with opportunities to meet new people and learn with them, she is sensitive to the ways in which she is included or otherwise in group activities. As she perceives learning as a social activity, she needs people to share this with her. Eleni certainly has understandings and ideas to contribute to the learning community, valued by her teacher, but the other students in the class don't always acknowledge or value this. In a design, make and appraise task in term 4, Eleni was observed by her teacher as she skirted and bounced around the outer circumference of a small group, excitedly offering ideas and suggestions. The other four members - Philippa, Cathy, Marie, Michaela - ignored her existence. When she began to complain to the group (but while the teacher was observing) that they wouldn't let her do anything, Marie gave an exasperated sigh and passed her something to appease her. Gaining acceptance within the learning community but maintaining her strong identity as a competent, passionate learner who actively seeks new understandings has continued to challenge Eleni.

One possibility for gaining further social acceptance within the learning community may be for Eleni to take advantage of opportunities to support other learners in her participation in the community, so that her ideas may become more valued by her peers. Her teacher noted in the second last lesson in term 2 the following observation:

"'I'm bored!' (Eleni, overheard by the teacher). She had finished her enclosure but was not that interested helping anybody else. We found Alice, who was in need of some assistance, and Eleni agreed to aid her in making a part of her (Alice's) enclosure. Eleni wasn't that keen on helping anybody who had done the same animal as she had done – she was ready to learn something new" (teacher's notes 22/6/01).

A classroom learning community structured to enable negotiation within students' learning has provided choices that enabled Eleni to create challenges in her own learning. For example, following the main phase of the research project, the class participated in the Australian Science Teachers' Association 'SPECTRA' awards program, where there is choice amongst topic-based activities. Eleni's LHP reflection stated, "I wanted to do

something really, really hard so I chose Physics...I loove science!" (Eleni's science book, undated term 3).

#### Michaela, who will resist and become involved when it suits her

Michaela is a student who participates "on the edges of the collaborative classroom" (Brown & Renshaw, 1997, p. 2) during Science lessons and both her observed engagement in tasks and reflections often revealed her efforts to maintain this identity during terms 1 and 2. In her interaction within the classroom community, Michaela asserted herself as wilful, demanding and stubborn, qualities which sometimes helped her to persist in her learning and achieve new understandings which were contributed to the classroom community of learners. At other times, these qualities isolated her from participating collaboratively with her peers.

Michaela's reflections established her as a learner for whom engagement and interest are dependent on her sense of a personal connection with the topic and/or task. In a reflective interview with the researcher in term 1, Michaela discussed at length her choice to focus on Ned Kelly in her Social Studies unit. She pointed out that when she had been younger and living in Victoria, she had lived just near where his last stand took place. She identified Social Studies as being one of the subjects she was really enjoying in term 1. This need for personal connection was reinforced in a written reflection made in response to the statement, "Tell me anything else you'd like about your learning this term". Michaela wrote "Where all the wires and electricity are in my house" (16/3/01). During the term 1 Science unit, Michaela's positive engagement was observed during the time she chose to design and make a torch. Her own enjoyment of this task was reflected in both the high rating of perceived interest she gave this task when creating her interest trajectory and in mentioning this activity in her peer interview. In conversation with the researcher during these lessons, Michaela revealed that she was intending to take her torch on the school Dads' and Daughters' camp in a few weeks' time. Michaela's engagement in tasks within the classroom learning community was again related to her sense of personal connection and future utility.

Michaela revealed through the creation of her trajectory graphs that she was a student whose interest in learning soars and dives within a learning unit. Within one lesson, she would rate her interest across three different tasks as changing from 'not at all interested' to 'very interested' then back to 'not at all interested' again. She noted in a written reflection that, "It interests me when we are doing exsperaments (sic) and fun things but all the rest is boring" (16/3/01).

Michaela is an influential member of the classroom community, in that both positive and negative opinions of her learning are often articulated in class discussion and small group activities. Sometimes, this may be ignored by other students, who continue to engage in the task at hand, such as when Michaela did not succeed in changing her two peers' minds about the form that their energy conservation awareness campaign would take and she herself retreated to non-participation. At other times, such as when planning which exhibits to visit during an excursion to Taronga Zoo, Michaela's resistance and refusal to compromise made reaching a collaborative decision difficult for others. The teacher and researcher have been trying to maintain productive learning in the classroom community, while still acknowledging Michaela's choice to be resistant. For example, the researcher noted in her own journal following the excursion to Taronga Zoo that,

"When some of the girls wanted to go down to view the birds at pond level, Michaela tried to sway them not to go down, because it was boring. I commented to her that she could sit at the top of the steps and wait for the group if she did not want to come down. She sat with her arms folded

defiantly, with a scowl. However, when we were all down there, she did follow us down a couple of minutes later." (31/5/01, p. 69, book 2)

It appears to be accepted amongst her peers that this is 'just the way that Michaela is' during Science. However, when Michaela is positively engaged in the learning of the classroom community, such as when she engaged in the designing and making of her torch, her excitement becomes infectious for those around her.

The classroom community offered Michaela opportunities for choice in and control over her learning. Her resistance was recognised as a legitimate form of participation by the students, teacher and researcher, who rarely challenged Michaela and accepted her decisions not to actively participate in tasks; generally, they completed group tasks without her input if she chose not to engage. The teacher and researcher tried to support her re-entry into activities, but this was not always successful. On a day when her teacher had asked her to participate in a fundraising activity against her will, Michaela later reflected, "It's fun when Ms Pressick's around because she is nice and I know she doesn't force you to do something you don't want plus she lets you be with your friends" (15/6/01). In the long term, both the teacher and researcher sought ways of promoting Michaela's identification with the activities of the classroom community by trying to broaden opportunities for on-task participation within the framework of classroom-based units. This would be potentially for the benefit of all learners within the class. However, Michaela still perceived elements of the classroom as strongly controlled by the teacher and researcher. This was demonstrated in one of her written reflections, when she commented that, "I only like stuff when I'm with my friends. That's the only way you'll make me happy" (15/6/01).

#### Jacqui, who is a 'hands-on' learner - no writing and no 'whys', thanks!

Jacqui enjoys interacting with the teachers at her school and sharing personal anecdotes in her conversations. She experiences difficulty with many areas of the curriculum and has developed strategies for task avoidance in the classroom, especially where written work is involved. Jacqui's academic program is modified to suit her specific learning needs and she is usually happy to accept modifications. She welcomes peer and teacher support, responding particularly well to encouragement and praise. Jacqui enjoys close friendships but these are often turbulent and she is frequently involved in playground disputes. Jacqui does not tend to deal with such social situations in a diplomatic or reasonable way, which often results in her being upset at the end of recess or lunch when it is time to recommence classroom work.

Within the classroom learning community, Jacqui has often struggled to establish her identity through reflection as a result of her difficulties in articulating her thinking in written and spoken language. In the first week of term 1 during approximately ten minutes provided for reflection in response to the question, "How do you like to learn?", Jacqui's complete entry was two words long: "About art" (Jacqui's journal, 2/2/01). Cazden (1988) comments that rather than seeing deficiencies in the child, cultural differences in expectations of language use need to be acknowledged. For Jacqui, reflection as a way of establishing a learning dialogue was unfamiliar at the beginning of the year and she has continued to experience difficulty trying to grasp this way of using language. However her teacher has noted that there has been some progress towards Jacqui being able to express herself more competently in reflections. In reflecting on why this might be the case, the teacher has observed that there is no 'right' answer when reflecting on learning and as Jacqui has recognised this, it has enabled her to write and express herself more freely.

Jacqui's most positive classroom experiences often involve her active participation in practical tasks. However, overall, she appears to be unsure about the value of her

contributions to the learning community. In reflecting on the question, 'How did you feel about today's lesson?' after small group tasks focused on creating electrical circuits, Jacqui wrote her longest reflective response (spelling and grammar student's own):

"I felt exsited about doing it tell it is not working you feel like you are dame doing it if you do it rong. How you did make it work? By putting the wires in the riet wone but it worked. I felt so happy it worked" (LHP reflection, 23/3/01).

[ "I felt excited about doing it 'til it is not working. You feel like you are dumb doing it if you are wrong. How did you make it work? By putting the wires in the right one. But it worked. I felt so happy it worked." ]

Jacqui evidently felt positive about her success following this task which contributed to her sense of happiness and capability as a learner. However, this was a fragile identity. Later in the term, the teacher noted in her reflections that Jacqui asked her as she was passing her in the classroom, "Sometimes in Science I get mixed up, so is that alright?" (teacher's notes, 15/5/01). Jacqui has remained a tentative participant when language-related tasks are the focus of learning community activities.

In her participation in the classroom community, Jacqui appears to be being strongly influenced by Michaela, with whom she has an unstable friendship. During her peer interview in the playground, Michaela was standing nearby and the following conversation took place:

**Stephanie:** This is Stephanie interviewing Jacqui about what she liked about, she liked about science and technology this term. What *did* you like about science and technology this term Jac?

**Jacqui:** Well, I liked about science and technology, you do lots of fun stuff and you, um, like do, you can do, um torches, you can do um, activities and all that.

**Stephanie:** *Why* did you like it?

**Jacqui:** It's really, really fun, that's why I like it. Um, sometimes, most of it's *boring*.

**Stephanie:** Um, were there any bits that you really *didn't* like in science and technology? Can you tell me those?

**Jacqui:** Yeah, um one thing. And no whys! Talking (brief pause) about what we're doing, we, um, like

**Michaela:** Takes a long time.

**Jacqui:** 'cause it takes a long time if you talk, and people just want to um, people want to do stuff like, do their own thing.

**Stephanie:** Yeah, um, (pause)um.. what electrical product did you make for your project?

**Jacqui:** A torch.

**Stephanie:** Was that fun making a torch?

**Michaela:** No.

**Jacqui:** No. Because it is very boring, 'cau - Oh, I liked doing the torch, but the things you get mixed up with.

(inaudible - unclear who is mumbling quietly in background)

**Stephanie:** Well, um that was Jacqui's interview and now it's Stephanie again interviewing Michaela. Alright, I'll just find her. Where is Michaela? Alright, hi Michaela.

This peer interview emphasises Jacqui's enjoyment of practical activities over written and oral tasks, as she identifies reflective discussion was a boring aspect of science lessons, whereas making a torch as one of the highlights. The presence of Michaela during the interview and her 'prompting' of Jacqui's responses is sometimes accepted by Jacqui as she answers. However, she is not completely dominated by Michaela. While she initially accepts Michaela's suggestion of 'No' in response to her enjoyment in making a torch, once she realises what she is saying, Jacqui does not hesitate to correct her response so that it more accurately reflects her own experience.

The approaches to learning being encouraged by the teacher and researcher within the classroom community suit Jacqui, in that they enable her to engage in hands-on investigations and design and make tasks and provide her with time to work in small peer groups. Unlike Michaela, choice appears to be somewhat overwhelming for Jacqui, who prefers to allow the decisions to be made for her by other students, such as Michaela, who have more dominant, assertive identities within the learning community.

Reflection in the classroom learning community has provided the teacher and researcher with valuable insight into the ways in which the students are constructing identities as learners. Through the students' reflection as well as through their own, the processes by which the teacher's and the researcher's identities are also being constructed have become more transparent. The following two sections of the paper focus on the identities of the teacher and researcher in this classroom community.

### **'Go ask the teacher': Renegotiating the identity of the teacher within the classroom community and the usefulness of reflective strategies for her teaching**

A teacher is traditionally seen as the person in a classroom who makes all of the decisions about the learning content, formulates judgements about the ways in which students should learn and makes assumptions about where their interests lie. Classroom-based learning is restricted within the parameters of what the teacher decides students should know. In a traditional classroom, there is an imbalance in the amount of control and power that the teacher has compared to the student. The distinction between more traditional pedagogical approaches and approaches that conceptualise the classroom as a community of learners is that control over and responsibility for learning is ideally shared between the teacher and students. Through participation as a co-member, the teacher in a classroom community contributes to creating a context that acknowledges learning as a social process, with the purpose of constructing shared meanings.

As the classroom community began to emerge, distinctive changes were obvious in the ways in which the teacher viewed her role and was perceived by students in the classroom. When control was shared and choices were possible, a new relationship was established

between the teacher and students, in that they were now co-learners in the classroom. However, the teacher, as the more experienced learner, still maintained responsibility for the overall organisation of the curriculum and held power in being able to establish boundaries in the students' learning. Such boundaries existed, for example, in the range of choice available and the implementation of instructional goals from the syllabus documents. However, the interaction observed between classroom community members showed that most students felt that their understanding was being supported by their teacher and each other. Through the teacher's expectations that they become more actively involved in classroom decision-making, the students became more aware of their responsibility for learning and consequently expected and welcomed greater control. Students' pleas for assistance from the teacher lessened and they began to collectively problem solve, develop theories and share ideas. As the year progressed, the teacher became a last resort for assistance and clarification rather than the first person to see if there was a problem during small group activities. Suggestions of 'Go ask the teacher' were replaced by students first attempting to seek one another's help. The teacher began to find herself in a role that involved posing questions to small groups and the class that helped to raise awareness of the understandings that were developing and the processes of learning.

The role of the teacher clearly changed through sharing the process of decision making with the students, using their interests and questions as the basis for the content of the learning unit. This was largely made possible through whole class/group discussion and individual reflection. When reflection became part of the equation, the teacher's identity no longer fit the traditional mould. When students were asked to reflect upon what they already knew, surprising information was often revealed about the learner. When students were given the opportunity to share this knowledge with their peers, questions were raised and facts were challenged. The teacher was given a sense of what his/her students already knew and what they aspired to know. Within this learning environment, metacognition was encouraged and reflection was necessary as a starting point for dialogic exchange that made negotiation possible within the learning community. Our commitment to the development of the learning community was fuelled by the ways in which the students responded in this environment. As the students' affective responses to learning and spontaneous expression of ideas became apparent, we felt that it was important to channel this by formalising it through structured reflection.

Reflection was an integral part of our Science and Technology lessons and it eventually became an essential component of our learning community. It became clear that our learning community could not solely exist without reflection and that reflection did not hold as much meaning if it were used in isolation. Reflection was used in a variety of ways and at different times. Sometimes the students were asked to reflect at the beginning of lessons, periodically throughout lessons or at the conclusion of a lesson. Opportunities were also offered to reflect outside of lesson time. Reflection enabled the students to make decisions about their individual learning styles and link experiences with previously learned knowledge. This was particularly useful when we set about designing the scaffold that would support the interest and learning needs of each individual. Reflection provided scheduled thinking time to assist students in making connections with prior experience and problem-based investigations. Consequently students were better able to develop scientific theories and test them. By allowing time for students to reflect individually and collaboratively, understanding was assisted and learning occurred.

The value of reflection was mirrored in the faces of many. It served to open the channels of communication and the teacher became astutely aware of each individual's thoughts and feelings about learning. This was particularly useful when it came time for the teacher to write the students' yearly reports. The teacher used insights gained from students' reflections to provide feedback for parents about their children as learners. Comments could

be made about students' perceptions of their learning, their school-based interests and the ways in which they constructed their identities within the learning community.

### **'Are you a real teacher?': Negotiating the identity of the researcher in the classroom and the usefulness of reflective strategies for the research project**

In embarking upon a classroom-based ethnographic study, the exact nature of the role that the researcher would play in the classroom was initially unclear. It had become evident during the pilot phase of the study that the silent observer busily taking notes at the rear of the classroom was not an option. As recorded in the researcher's reflective journal on 21/8/00,

"I found it difficult to just observe. With [the teacher] occupied by talking with individuals on the other side of the room, I could hear students asking one another questions that peers could not answer....Knowing that I could assist Natalie and Sonia with web searches and that I could ask Kirrily questions that might lead her to a more accurate conclusion ..... triggered my teaching role, a role to which I am accustomed" (pp. 10-11, book 1).

Many of the upper primary students at Heathville College knew the researcher because of her previous position as a classroom teacher and some of the girls in the year 5 class had been taught by the researcher as a casual relief teacher. As she sat taking notes or moved around the classroom to observe groups interacting, girls would also frequently engage the researcher in conversation and initiate requests for help. The students contributed to the construction of the researcher as an 'assistant teacher', as another adult in the classroom who could share in their learning, but who was not their own class teacher. However, it was also evident that the researcher's status as a teacher was not fully granted by the students at Heathville College.

At the outset of the project, it was explained to the year 5 students that the researcher would be in the classroom for every science lesson during terms 1 and 2 and that she was interested in finding out more about how students learn. She compared it to a project that they might do at school, as she had to collect information. Part of the information that she would collect would be their own written reflections. The students knew that they would also sometimes be audio and video recorded as they engaged in activities and that some students would be interviewed away from the classroom. The researcher was therefore not engaging in the types of activities that the students expected from a 'regular' teacher. As recorded in the researcher's own reflections on 4/5/01,

"I also had a conversation with Anne, a fellow PhD student, the other day, when she asked me whether the girls saw me as a teacher. That made me think - I answered yes and no at the time, and tried to give some reasons for my answer. Sometimes, I am a teacher in the classroom - I say organisational things, I give directions for completing tasks, I help respond to students' queries (they approach me and I approach them/circulate to assist) and I am co-planning/evaluating with [the two year 5 teachers]. Yet at the same time, I do things that teachers don't usually do - I hang around and chat in the playground, I don't usually enforce behaviour/discipline rules in the playground or classroom, I can withdraw to let [the class teacher] handle classroom issues and in talking one-to-one with girls, they have confided in

me in ways they may not a teacher. I am trying not to be too 'teacherish' so that they can speak with me less formally than their perception of speaking with a teacher normally. Yet I still have comments such as 'Can you teach us next year?' (Michaela) and I was there as a casual teacher for a day last term. So my role seems to be genuinely as teacher-researcher - fuzzy! I think the fact that the girls seek me out to share stories/work completed and vie for a position in the circle to sit next to me reflects the fact that they do enjoy my presence in the classroom/playground and see it in a positive, and possibly sometimes still novel, light" (p. 32, book 2).

Michaela was particularly vocal in expressing her queries on a number of occasions. The researcher recorded in her journal that following her first visit to the classroom in term 1, 2001, Michaela approached her in the playground and asked her whether or not this was *university* research. Michaela also tended to sit close to the researcher on occasions such as when a guest speaker visited the classroom and would look over her shoulder at the notes she was taking. However, the main challenge to the researcher's status in the classroom came when she visited the class following the main phase of the study. Michaela asked the researcher whether or not she would 'tell on her' after she had observed an event that could result in Michaela being reprimanded by the class teacher. When the researcher responded that it was Michaela's responsibility to do the right thing, and turned away, Michaela challenged her by asking, "Are you a real teacher, or not?" When the researcher turned around with a smile, she caught Michaela smiling as well.

The researcher was also aware of the construction of her identity within the classroom community in relation to the class teacher. The researcher reflected in her own journal upon a conversation with the teacher, who had revealed her own initial sense of unease at the thought of being watched in the classroom. She likened it to being a practicum teacher again, with an observer judging her performance. However, as a result of co-programming with the researcher and the other grade 5 teacher, as well as a team-teaching approach during term 4 in the pilot study phase, the teacher became much more at ease with the researcher's presence and felt a sense of shared responsibility for the classroom activities. She began to refer to 5W as 'our class' and 'our girls' in discussions with the researcher. It appears as though this occurred at the same time as an increased sharing of responsibility for learning with the grade 5 students within the context of the classroom community. However, the researcher was also aware of her temporary presence in the classroom and the other demands placed upon the teacher as she taught across all Key Learning Areas and participated actively in the wider school community. These were demands that were not placed upon the researcher, for whom this research project was her major focus.

Evidence of reflective thinking was important to the researcher because it enabled her to gain insight into students' perspectives of learning. For the researcher, the intention was that students' written reflections would be photocopied and kept to contribute to the evidence gathered to support the development (or otherwise) of interest in learning. As the project progressed, it became evident that the optional postcards would provide limited insight into students' thinking and reactions, due to the brief and infrequent use the students made of this channel for communication. Of greater use to the researcher were the LHP reflections. These were generally in greater detail than postcards and tended to focus more on aspects of learning, as the students were often given specific lesson time to record their reflections on the LHP. The students became increasingly aware in both written reflections and class discussions of the importance of providing reasons for their contributions and this helped the researcher to gain insight into the perspectives of individuals within the classroom community. When the students conducted peer interviews in the playground at the end of term 1, it was evident that there was an awareness of providing specific details and justifying *why* you thought or felt something. For example, in Shalini's interview with Philippa

(6/4/01), Shalini attempts to probe some of Philippa's responses for more specific information:

**Shalini:** This is Philippa from 5W. Hi Philippa.

**Philippa:** (in a playful, silly voice) Hello, Shalini, how are you today?

**Shalini:** (playful voice in response) Good thanks! (getting down to business) 'kay. How did you find science and technology?

**Philippa:** Well I thought this..this unit was interesting, but there were some boring things.

(both giggle a little)

**Shalini:** What did you find interesting?

**Philippa:** Well, I found interesting that I found many new things

**Shalini:** Yeah

**Philippa:** that I didn't know. And you could make a product.

**Shalini:** Why did you find the product interesting?

**Philippa:** We could experiment with different materials and we weren't sure if it was going to work or not.

**Shalini:** Did you like experimenting?

**Philippa:** I *love* experimenting.

**Shalini:** Okay. What did you find boring?

**Philippa:** Boring? Well, there were, when we were doing stations, some of them were boring.

**Shalini:** Yeah. Okay. Thank-you Philippa, bye.

**Philippa:** (in a silly voice again) Thang-you, bye.

While both peer-peer interviews and researcher-student interviews provided insight into students' reflections on their learning, class and small group discussions also frequently involved the articulation of reflective thinking. These further enabled the researcher to gain an understanding of students' perspectives and developing identities for the purposes of the project.

### **Concluding comments : Towards a community that reflects the many faces**

When the focus of school-based learning is on the creation of meanings, strategies that encourage reflection help students to be more aware of the processes involved in reaching understandings. As students are given increased control over decision-making in their learning, they assume greater responsibility for the ways in which they participate within the

classroom community. This creates opportunities to explore their identities within the classroom and to use reflection to both construct and communicate these identities to other community members.

In the present study, some strategies for reflection were used more frequently and effectively by the classroom community overall. The most detailed and lengthy reflection came when students were allocated class time and it was strongly scaffolded by questions - either oral or written, devised by students, teacher or researcher. With strategies that utilised their own time, it was not evident that students valued written reflection, as they did not make extensive use of postcards over the duration of the research project. The peer interviews in the playground requested by the researcher also provided evidence that the students do not usually question one another in this way, as indicated by the 'silly' voices used in Shalini and Philippa's interview and Jacqui's instruction to her interviewer not to ask her 'why' questions. Spontaneous reflection or requests from the students to use strategies for written reflection in other subject areas did not occur. This possibly indicates that the students themselves have not come to value opportunities for reflection to the same extent as the teacher and researcher. Yet in class discussions, the students have started to use the language of reflection increasingly and over time, this may also result in their valuing of written reflection.

It is evident that within a learning community, individuals are able to construct and explore their identities as learners through participating in and contributing to the classroom discourse. When students are engaged in reflection, they gain insight into the roles that they play within the learning community, which in turn characterises that particular classroom community of learners. Shared reflection thus provides windows into learners' identities, just as the reflections record and mirror back to students themselves the ways in which meanings are made.

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