

DISCOVERING DESIGN POSSIBILITIES THROUGH A PEDAGOGY OF MULTILITERACIES

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Abstract

Research and educational policies have alerted teachers to the importance of multiliteracies. Communication in society today is characterised by rapidly changing and emergent forms of meaning-making in a context of increased cultural and linguistic diversity. This paper responds to these imperatives, releasing key findings of a critical ethnography concerning interactions between pedagogy and access to multiliteracies among culturally and linguistically diverse learners. Data collection involved 18 days of lesson observations over 10 weeks using field and journal notes, continuous audiovisual and audio recording, and the collection of cultural artefacts. Semi-structured interviewing was also conducted with the teacher, principal, and four students. Data analytic tools included low and high inference coding and pragmatic horizon analysis. Findings concerned the use of overt instruction and situated practice in the teacher's enactment of the multiliteracies pedagogy. This had a significant influence on the learners' ability to access clay animation movie designing. Comparisons are made between the learning that occurred for students of the dominant, Anglo-Australian, middle-class culture, and for those who were not. The conclusion addresses relevant literature concerning how to apply the multiliteracies pedagogy to enable meaningful designing.

Keywords

Multiliteracies, pedagogy, learning, design, diversity, critical ethnography

The students in a grade six class had observed a segment of the clay animation movie *Chicken Run*, which was followed by a guided discussion of the multimodal text.

1. Teacher: What events happened in the movie? Great to see your hand up.
2. Cody: I saw the chickens trying to go under the fence.
3. Teacher: The chickens...tried to go under the fence. What else happened in this plot?
4. Child: They tried four times to get away.
5. Teacher: Four times unsuccessfully. How else did they escape?
6. James: Underground.
7. Teacher: Underground. They're digging a hole underground, or digging under the fence. What's another way they tried to escape? There are two more ways.
8. Ryan: When they were in the trough.
9. Teacher: The trough?
10. Ryan: Yes.
11. Teacher: They were hiding underneath the trough where the legs were just going and they were trying to get out - upside down. Sam?
12. Sam: They dressed up as a clay person.
13. Teacher: Who were they dressed up as?

14. Children: Mrs Teedie
15. Teacher: What is the message that the movie creators are trying to get across to you? What does he really want you to think about during this movie, Warren?
16. Warren: Not to stop trying.
17. Teacher: You're not to stop trying. Don't give up. Oh, Excellent!

This paper reports significant findings of a study that investigated a teacher's enactment of the multiliteracies pedagogy in the context of a series of media-based lessons in which students designed claymation movies. The pedagogy of the New London Group involves four related components: situated practice, overt instruction, critical framing and transformed practice (New London Group, 2000). Situated practice involves building on the lifeworld experiences of students, situating meaning making in real world contexts. Overt instruction guides students to use an explicit metalanguage of design. Critical framing encourages students to interpret the social context and purpose of designs of meaning. Transformed practice occurs when students transform existing meanings to design new meanings (New London Group, 1996).

The focus of this paper is the teacher's use of overt instruction and situated practice and their relations to students' access to multiliteracies observed in a culturally and linguistically diverse class. The findings primarily concerned the separation of situated practice and overt instruction. Comparisons are made between the learning that occurred for students of the dominant, Anglo-Australian, middle-class culture, and for those who were not. The reporting of this research is timely, because the multiliteracies pedagogy, first conceived by the New London Group (1996) and further developed by Cope and Kalantzis (2000a), is already an important part of Australian educational policy initiatives and is being enacted in schools (Anstey, 2002; Board of Teacher Registration Queensland, 2001; Queensland Studies Authority, 2005).

In 1996, the term 'multiliteracies' was coined by the New London Group in a seminal article published in the *Harvard Educational Review*. This landmark article served as a catalyst for global change in literacy research, policy, curriculum and pedagogy. Multiliteracies concerns rapidly changing forms of multimodal communication and meaning-making tied to mass media, multimedia, and the Internet. There is an increasing plurality of text forms, both monomodal and *multimodal* (1996). We have traditionally thought about literacy as something you do with words on paper. But in society today, texts are often multimodal; that is, they combine words with visual, audio, spatial, and gestural modes to communicate meaning in a richer way. Multiliteracies also concern cultural and linguistic diversity and the wider circulation and variety of texts that result. This is a response to the movement of people across national boundaries through cultural globalisation. As society is becoming more globally connected, diversity within local contexts is increasing (Cope & Kalantzis, 2000a).

These changes to the global context have important consequences for the goals and pedagogy of literacy education, which should reflect the textual practices of the wider community. These practices include interpreting environmental print, reading a novel, critiquing advertising, using machines (fax, photocopiers, voicemail), interpreting public transport information, writing a memo, following directories and maps, emailing, writing a list, navigating the Internet, critiquing websites, and digital photography. Similarly, word processing, PowerPoint presentations, website construction, video-gaming, using spreadsheets and databases, dramatic and vocal performance, interpreting body language, and oral debating are a sample of the culturally and linguistically diverse textual practices required for participation in society.

Key theorists from whom the research draws include the New London Group (1996), particularly Cope and Kalantzis' (2000b) multiliteracies pedagogy, Kress' (2000a; 2000b) theories of semiosis, multimodality, design and cultural transformation, and Gee's (1992; 1999; 2003) theories of discourses and power relations. This research is located in the socio-cultural literacy research tradition, following Vygotsky (1962; 1978), Heath (1983; 1986; 1999), and Street (1984; 1995; 1999).

Research Context

The research site was an upper primary classroom in a suburban state school, preschool to year seven, in Queensland, Australia. The school was situated in a low socio-economic area, and twenty-five nationalities were represented in the student cohort, from 24 suburbs. Eight per cent of the school's clientele were Aboriginal and Torres Strait Islander, which is significantly higher than the national figure from the most recent Census (ABS, 2003). The principal of the school was informed about current policy developments and professional development opportunities in multiliteracies, and sought to broaden the range of multiliteracies in the school.

Teacher

A professional development coordinator in multiliteracies identified potential teacher participants for this research through a multiliteracies scholarship project jointly funded by the Department of Education Queensland and a local learning and development centre. Participants were emailed to see if they were willing to be contacted by the researcher. A pilot study was conducted to trial the research and to identify a suitable teacher participant and a culturally diverse class cohort. The selected teacher participant had specialist knowledge and expertise in new, digitally mediated textual practice, and was continually sharing this knowledge with other teachers in the school. The teacher emphasised a belief in the significance of multiliteracies and the need for its application within the wider school locale.

Students

The observed Grade Six class was streamed on the basis of results in the *Queensland Year Five Test in Aspects of Literacy and Numeracy* (QSA, 2002). The class was composed of 23 lowest-ability students: eight females and fifteen males. Eight students whose literacy test scores were closer to average were withdrawn for literacy lessons with another teacher almost every day of the week. The 23 students were divided into six small groups to design a collaborative, clay animation movie. The eight average literacy-ability students were divided into male and female groups of four rather than integrated with the fifteen low-ability students because of the streaming arrangements. The fifteen low-ability students were divided into male or mixed gender groups.

Research Design

The overall design of the study was an adaptation of Carspecken's critical ethnography (Carspecken, 1996; 2001; Carspecken & Apple, 1992), which builds on the work of Habermas (1981; 1987). Stage 1 of this critical ethnography involved eighteen days of monological or observational data collection over the course of ten weeks in the multiliteracies classroom. The interactions in the collaborative groups operating simultaneously were recorded on multiple audiovisual and audio recording devices. Stage 2 was the initial analysis of data, including verbatim transcribing, coding and applying analytic tools to the monological data (outlined below). Stage 3 triangulated observational data with dialogical data, which involved 45 minute, semi-structured interviews with the principal, teacher, and a group of four students of Anglo-Australian, Thai, Sudanese, and Aboriginal ethnicity. The criterion for student selection was cultural and linguistic heterogeneity in order to examine the multiliteracies pedagogy in a local context of diversity (New London Group, 2000). Informal discussion with participants was also recorded. Dialogical data were transcribed and analysed using the analytic tools used in Stage 2, comparing observational and interview data. In Stage 4, the classroom data were interpreted in the light of macro-theories about society and extant literature about multiliteracies.

Data Collection and Analytic Tools

Data collection tools used during lesson observations included field notes to record verbatim speech, journalistic notes to record less detailed information unobtrusively soon after the events, continuous audio cassette recording and audiovisual recording to replay action and speech events after leaving the field. Cultural artefacts were collected (such as school policy documents, curriculum documents, CD-ROMs of the claymation movies, and photographs). Data analytic tools included low and high inference coding. Low-level inferences were couched in *in vivo* terms (members' own terms), rather than the researcher's sociological terms. A list of raw codes and their reference details were compiled and later reorganised multiple times into progressively tighter hierarchical schemes. The analytic criteria were drawn from the intersection of the data and literature about socio-cultural theory; namely, power, pedagogy, and discourse (Carspecken, 1996; Carspecken & Apple, 1992; Miles & Huberman, 1994).

Description of Lesson Sequence

The lessons applied the multiliteracies pedagogy involving situated practice, overt instruction, critical framing, and transformed practice (New London Group, 1996). The aim was to enable learners to collaboratively design a claymation movie — an animation process in which static clay figurines are manipulated and digitally filmed to produce a sequence of images of lifelike movement. The process occurs by shooting a single frame, moving the object slightly, and then taking another photograph. When the film runs continuously, it appears that the objects move by themselves. Famous claymation productions include the *Wallace and Gromit* films and *Chicken Run*.

The moviemaking technique involved planning a storyboard, sculpting plasticine characters, designing miniature, three-dimensional movie sets, filming using a digital camera, and combining music or recorded script with the film clips. After filming, the students digitally edited the movies with teacher assistance using Clip Movie software. The movies were presented using Quick Time Pro software and a data projector. The students were required to effectively communicate an educational message to their 'buddies' in the preparatory year level (age 4 ½-5). The movies were also presented at a school event for the parent community, having real, cultural purposes, and demonstrating the transformation of resources to create original, hybrid texts. See Figure 1 for a schedule of lessons (Cope & Kalantzis, 2000a).

Claymation Moviemaking	Design	Time
View Claymation Movies [Teacher displays movies from other students and discusses the strengths and weaknesses.]	Visual/Audio/ Gestural/Spatial	1 hr
Critiquing Claymation Movies [Teacher guides students to analyse critically and functionally the claymation movie <i>Chicken Run</i> .]	Visual/Audio/ Gestural/Spatial	1 hr
Storyboard [Discuss plan for movie plot, scenes, characters. Allocate roles. Record ideas using picture frames and labels. List materials required. Movie title.]	Linguistic/ Audio/Visual	2¼ hrs per group
Set Design [Plan & create 3D dioramas with backdrop, stage, and props using real objects and mixed media.]	Visual, Spatial	4 hrs
Character Design [Create 3D characters by sculpting plasticine on wooden figures or by using mixed media.]	Visual, Spatial, Gestural	2 hrs

Claymation Moviemaking	Design	Time
Rehearsing [Rehearse movements, photo schedule and set up filming area, match set proportions to camera angles.]	Gestural, Spatial, Visual	1½ hrs
Filming [Take 60–200 digital photos of the set/s using a tripod while moving the characters and objects gradually. Control lighting, change expressions and gestures of characters. Close ups and long shots.]	Visual, Spatial, Digital, Gestural	2–4 hrs
Sound [Rehearse script, select music files, record sound digitally using computer and microphone.]	Linguistic/ Audio/ Digital	2 hrs
Digital Editing [Special effects, subtitles, title pages, movie credits, backgrounds, combine images and sound]	Digital/Spatial Visual Linguistic	½ hr per
Presenting movies		3 hrs

Figure 1: Schedule of lessons

Findings from Lesson Observations

Several substantial findings concerned the teacher's enactment of 'transmission pedagogy' and its relationship to the learners' designs. Teacher-centred transmission differs from the New London Group's description of overt instruction because it merely refers to expert to novice transmission of content. On the other hand, overt instruction provides explicit information at times when it can most usefully guide or scaffold the learners' practice (New London Group, 2000). The negative consequences of the timing of direct transmission most affected students who were not of the dominant, Anglo-Australian, middle-class culture. For example, the teacher provided one lesson employing transmission pedagogy to prepare students for collaboratively producing a claymation storyboard.

Video Transcript 2, Journal notes

In the first lesson, the teacher spent one hour with each ability group showing examples of students' claymation movies using a data projector. She also outlined the steps involved in claymation movie-making through a Big Book. The teacher explained to the researcher that the first lesson with the low English-ability students relied on direct teaching because she had insufficient time to guide these low-ability students to discover the answers. Normally, she would be more interactive with the students, and 'draw the information from them.'

Constrained by the school timetable, the teacher relied on transmissive pedagogy for the low-ability learners with its one-way, expert-to-novice dispensing of knowledge. While some direct instruction has an important place in the multiliteracies pedagogy, it should be used at times when it can usefully guide students' practice. In contrast, when the teacher taught this lesson to the average-ability group, she used an interactive pedagogy in which the students dialogued with the teacher. Both groups were then required to collaboratively produce a claymation storyboard, supported by a worksheet of blank picture frames, and no additional guidance from the teacher. The separation of instruction from practice caused limitations, demonstrated by a group composed of a Thai female, an Anglo-Australian female, and two Anglo-Australian males. In this transcript, the students are reading the worksheet with the headings: 'Title', 'Characters,' 'Photographer,' and 'Scene', and have been asked to design a storyboard.

Transcript 8, Section 3

- 1 David: Who wants...?
- 2 Sean: What, what?
- 3 David: Who wants to be the 'photo'...'grapher'? [mispronounced]
- 4 Rhonda: What's the 'photo'...'grapher'? [mispronounced]
- 5 Sean: Let Robyn be one.
- 6 Rhonda: I don't want to be – pick Paweni.
- 7 Paweni: No, no!
- 8 Rhonda: Ok, I will...I will be the photographer.
- 9 David: What characters?
- 10 Sean: I'll be, um...
- 11 -----
- 12 David: Who's the character? Who's the character?
- 13 Rhonda: Um?
- 14 Sean: What's the characters?
- 15 Rhonda: Characters, like um, like...I don't know!
- 16 David: Everybody – you need everybody to be the character!
- 17 Rhonda: Can you just wait! I've gotta get my, like...
- 18 David: Um, I don't know - everybody. You need everybody to be a character.
- 19 Rhonda: With the like, characters, you need like, the name, and then...
- 20 David: No, what are we doing first? What are we doing?
- 21 Sean: Yeah, what are we doing first?

The students were required to engage in designing, but were initially unable to produce the storyboard in the absence of instruction during this designing. The learners were not familiar with the written form of the metalanguage for storyboard design, like the terms 'photographer' and 'characters'. By the end of this interaction, the students were still unsure of a suitable starting place for meaning-making. The teacher had introduced a new metalanguage for clay animation movie designing in the form of teacher-centred transmission, but learners were required to transfer this metalanguage to their designing independently of the teacher. This group of mixed gender and ethnicity required a higher level of scaffolding, or guided collaboration with expert peers or the teacher, to conceptualise the metalanguage used in the storyboard planning outline. The necessary direct instruction was not given during the time when it could most profitably direct and systematise practice: during storyboard design. Consequently, learners spent more time than necessary to produce their storyboard.

The effect of separating overt instruction from situated practice was also demonstrated by three Anglo-Australian boys of low socio-economic backgrounds who were unable to create a storyboard.

Transcript 8, Section 2

- 1 Simon: What we should do, what we should do is just write the script first and then go back and draw all the pictures, and...
- 2 Jared: Yeah, that's a good idea but, how we gonna...but what happens if the person is too big for the new script, and we don't know how to draw it?
- 3 Warren: Well, maybe we could draw it little.
- 4 Teacher: Come on boys - why has someone not got a pencil, and why are you not actually writing your script! Don't waste any more time! You already wasted one day when I wasn't here.
- 5 Jared: We should um [pause] we should um, ah your turn, Simon.
- 6 Simon: We should start writing the script.
- 7 Jared: Ok.
- 8 Simon: I'm gonna write first [softly] I'm gonna write first? [loudly]

- 9 Warren: Are you?
- 10 Jared: What? Ah hmmm. Anyone got a ruler? I need a ruler.
- 11 Simon: I'll get a ruler.
- 12 Warren: So what are we gonna do first? [No answer from Jared. Long silence as they wait for Simon to return]
- 13 Simon: Ok. I got the ruler.
- 14 Warren: What are we gonna do first?
- 15 Simon: Write the script.

The boys were unable to understand the requirements of script design by the end of this interaction. The use of transmission followed by time for collaborative designing was not sufficient for these boys to begin work performed with available designs in the semiotic process. These difficulties were compounded by the lack of 'expert novices' to guide peers during collaborative designing, because the low-ability learners had been streamed into one class.

During the three-dimensional backdrop designing for movie-making, some learners experienced difficulty understanding some of the potentials and limitations of this new media. This was because situated practice using the viewfinder of the camera to understand angles and perspective was not provided to enable learners to design their movie sets. For example, Darles, a Sudanese refugee, began to draw the second backdrop as a distance scene of a park. She intended this to be photographed behind a life-size sandwich on a tablecloth. She was unable to understand that the distant objects in the background would not match the spatial proportions of the large sandwich in the foreground when viewed through the lens of a camera.

Transcript 9

- 523 Teacher Aid: For scene number two, if you've got the focus on the sandwich, all you're going to see behind it is green grass. It will be really easy to do.
- 526 Darles: That's just gonna be grass? [Darles had proposed that the park would still be visible in the background of a close-up, aerial perspective shot of a sandwich]
- 527 Teacher Aid: Yes, but to make it more interesting, you're going to put bugs and things in it, crawling around.
- 528 Jessica: That will still look a bit boring, but.
- 529 Darles: Yeah, but that's weird because... [long pause]
- 530 Teacher Aid: Look – like that [holds object in front of backdrop]. Whereas if you have a scene that's too far away, you'll have this giant sandwich next to these little details of the park!
- 531 Darles: Yeah, but then that's gonna be funny, because grass up there? [Points to the backdrop scene.] Isn't there supposed to be grass underneath the mat?
- 532 Teacher Aid: Yes. But when you look at something close-up, the only scene behind it will be green grass because your camera is not getting up that high.
- 533 Darles: It will be up like that? The camera ... will take the photo up like that? [At a 45o angle to the scene]
- 534 Teacher Aid: That's right. So you don't even need to draw a backdrop because that's all you can see [in the viewfinder].
- 535 Darles: So um, I don't get it. I get this one – I really do get this one [The first scene at the beginning of the movie, a long shot of the park].

The principles required here to understand concepts of visual perspective and its relation to set design were too complex to be fully and usefully described or explicated. Backdrop designing required prerequisite knowledge of spatial design, such as perspective, that was primarily situated and heavily contextualised in specific knowledge domains and practices, best acquired through experiences.

In the absence of situated practice, Darles was unable to understand, even when it was explained to her, the concept of close-up angles and its implications for the spatial and visual design of the set. Learning could not occur because the landscape of movie-making was unthinkable and unachievable. Darles required the situated, concrete experience of viewing a three-dimensional movie set through the lens of a digital camera to make sense of the unknown.

The direct instruction that had been provided in the whole class setting had required learners to view completed versions of claymation movies to understand the movie-making process. Without situated practice, the distance between the lifeworlds of students like Darles, and the new spatial elements of designing, was too great. In contrast, the students who were of middle-class, Anglo-Australian backgrounds, were able to independently recognise the design possibilities of set design in relation to camera angles. They could explain this clearly to others without situated practice. The use of transmissive pedagogy was sufficient to transport these students into a world that was already familiar, and not too perplexing.

Direct instruction was similarly used to explain to students what would happen if the height and length of the movie backdrop did not match the proportions of the camera lens. However, the instructions were provided after the students had already designed their movie sets with the incorrect length to height ratio. A group of culturally diverse learners were unable to apply this instruction, resulting in significant frustration for the teacher when filming began.

Video Transcript 14

- 637 [The teacher is still adjusting the camera and tripod to fit the set perfectly in the viewfinder. Sighs loudly.]
- 638 Teacher: This whole thing is crazy! Ok. I can't fit your park in [groan]. What's going to happen is: We're going to have a tiny little bit of green. You can see a little tiny bit of table on the sides.
- 642 Teacher: So if we put this here... [Teacher puts a piece of lime green cardboard at the sides of the set to cover the gaps visible through the camera lens.]
- 643 Ted: Does it ... ? See there? [looking through lens]
- 644 Julie: Now you can see that! [The green coloured cardboard that the teacher has used to fix the problem is not a perfect match with the shade of green on the backdrop.]
- 645 Ted: [Ted adjusts the zoom on the camera which the teacher has just set up in an attempt to fix the problem]. Mrs. Taylor, you can see that – there and there [Points to visible sides of set].
- 646 Teacher: What are you doing? [as if frustrated] ... You don't want the whole set. It's not all going to fit in. That's it – You're not going to fit this part in. You never were!

Even when the camera focus was zoomed in and out, important details of the backdrop were outside the viewfinder while gaps were visible at the sides of the sets. The teacher needed to provide situated practice for students to view their sets through the lens of the digital camera during construction, or alternatively, provide students with the correct sized cardboard before beginning. These constraints were similarly confronted by other groups, who were also unable to match the proportions of their set design to the camera angle capabilities.

Video Transcript 15

- 169 Teacher: I tell you what, I'm not impressed! [Looks through viewfinder with David nearby] We can't see the birds? We can't see the road. You need the road in it. I thought we actually had this right before [viewfinder of camera aligned with sides of set]. Did we move this?

In these examples, the use of teacher-centred transmission, after requiring students to design their sets, could not enable all learners to transform meaning-making resources to create the visual and spatial designs. Those who experienced the greatest difficulty accessing the new designs of meaning were those from low socio-economic backgrounds and students who were not of Anglo-Australian ethnicity, while those from the dominant, middle-class, Anglo-Australian culture were more successful in collaborative designing. Overt instruction was required to focus the learners and provide explicit information at times when it could most usefully organise and guide situated practice (Cope & Kalantzis, 2000b). Overt instruction refers to all the collaborative efforts and active interventions on the part of the teacher and other experts that extend and utilise what the learner already knows and has attained to some level of proficiency (Kalantzis & Cope, 2000).

To conclude, a counter example demonstrates how learning occurred when the components of the multiliteracies pedagogy were very successfully combined during the design of audio elements. The teacher worked with each group in the computer laboratory to record the music and speech for their claymation movies. In this example, the group of girls rehearsed and recorded their script multiple times until transformed practice was reached for each segment of the script. The students had already rehearsed for an hour in a previous lesson with the specialist support of the drama teacher, focusing on the expressive reading of the script without having to simultaneously attend to correct microphone use.

Video Transcript 18

[The teacher and four girls are seated at a computer with a microphone and script.]

- 1 Teacher: Ok, so when you're talking, you have to make sure that you're really close to this. So I'll hop out the way. You need to be right up. The closer you are to it, the less background noise we're going to pick up, because your voice will be stronger. Ok. All right. So, you're going to have... 'Let's party and dance!' [Teacher demonstrates first line of script with enthusiasm.] And one person – who was it? Malee says, 'Yes, you'd never guess' Right, you need to get closer in. One, two... [Counting on fingers]
- 2 All: Let's party and dance!
- 3 Malee: Yes – you'd never guess!
- 4 Teacher: [Replays] So you took ... You didn't say that all together. See how you're supposed to say that all together? All right? So when I press play, I'll go... [gestures by counting on hand] and that means to start talking. Let's try it again. You need to get closer to the microphone. You're not loud enough.
- 5 Tenneile: So we're doing that? [Points to section of script]
- 6 Teacher: Yes, we're doing it again. You need to get closer – Tenneile. [Teacher counts girls in using her fingers and presses record]. Ready.
- 7 Girls: Let's party and dance! [Said in unison]
- 8 Malee: Yes, you'd never guess!
- 9 Teacher: [Replays] It's not going to work, is it?

[After another practice]

- 14 Teacher: [Replays] Ok [nods] That's good! [Saves as Sound bite one]. This is our sound ... one. Save. Now, 'sound two', remember, is the music. Sound three is Rhonda. So everyone move back so Rhonda can get closer.

The teacher was able to record over the audio text multiple times until the girls had attained a collaborative level of competence. Situated practice and overt instruction were enacted concurrently to enable students to engage in transformed practice. The teacher provided timely scaffolding of the girls' audio and linguistic text before and after each short rehearsal. This process continued for almost an hour with the pedagogy alternating between instruction and

practice. Sometimes the teacher applied critical framing by asking the students to analyse their text functionally when she replayed the recordings. She asked, 'Do you think the audience will understand that?' She asked them to evaluate the effectiveness of their text and make critical evaluations about whether competence had been reached or whether more practice was required. When the digital sound bites were joined together, the quality of the audio design elements of the claymation movies was very high across all groups. Therefore, when situated practice became linked to overt instruction, there was scaffolding rather than transmission, leading to transformed practice. Through this collaboration that occurred between teacher, expert novices, and novices, learners were able to accomplish tasks more complex than they could on their own.

Conclusion and Recommendations

Before designing, the teacher had reflected, 'The interesting thing about these kids is they have no background in this, so they've just got no idea.' During film-making, students were part of the shift from a culture of predominantly linguistic designing in school to the culture of image making, gestural and audio designing, characteristic of contemporary popular culture. Students engaged in a new form of subjectivity, a new way of being and becoming in a multimedia world (Green, 1993; Green & Bigum, 1993; Green, Fitzclarence, & Bigum, 1994). The redesigned, multimodal texts produced by the students were evidence of the ways in which the active intervention in the world, that is, designing, had transformed the designers who had become movie producers (Kalantzis & Cope, 2000). This was the greatest strength of the teacher's enactment of the multiliteracies pedagogy in this research.

However, while there was evidence that transformed practice occurred among the learners across some modes of designing, the enactment of the multiliteracies pedagogy as a linear hierarchy or as distinct stages caused some difficulties for students' learning, in particular for those who were not of the dominant, Anglo-Australian, middle-class culture.

Collaboration in practice was required as a foundation for learning the new specialist and hybrid forms of semiosis required to digitally film the claymation movies. Certain forms of immersion in digital filming were needed alongside instruction to enable the acquisition of new visual, spatial, and digital skills. Gee's definition of 'acquisition' is used here to refer to: '... a process of acquiring something subconsciously by exposure to models, a process of trial and error, and practice within social groups, which happens naturally and functionally'. In contrast, he defined *learning* as '... a conscious process gained through teaching and in more formal contexts, requiring reflection and analysis' (Gee, 2000, p. 113–114). The significant finding in this study was that when acquisition and learning were separated, some learners experienced difficulty accessing new, multimodal, and digitally mediated designs of meaning. Students who were not of Anglo-Australian, middle-class culture were least served by the separation of overt instruction and situated practice.

Access to designs of meaning across multiple modes required the amalgamation of acquisition and learning, of situated practice and overt instruction, rather than teacher-centred transmission or situated practice in their isolated forms. This is supported by multiliteracies theorists who emphasise that situated practice and overt instruction can be 'related in complex ways', though at times, 'one or the other will predominate' (New London Group, 2000, pp. 32–35). Vygotsky's (1962; 1978) notion of scaffolding, upon which the multiliteracies pedagogy draws, is a useful description of successful pedagogy. His research indicated that the most effective learning occurs when practice and instruction occur concurrently, with a gradual removal of scaffolding until learning is demonstrated.

The New London Group acknowledges that the multiliteracies pedagogy combines the strengths of past approaches to literacy practice (New London Group, 2000). These include Dewey's Progressivism (linked to whole language and process writing), transmission or direct instruction, critical literacy, and approaches that emphasise 'strategies for the transfer of learning from one

context to another' (Kalantzis & Cope, 2000, p. 239; Lave & Wenger, 1991; New London Group, 2000, p. 31). However, in this study, the step-by-step enactment of these pedagogies did not provide all learners with access to powerful designs of meaning that are required for purposeful participation in society. There was a need for pedagogy that combined doing and analysis: immersion in experience with an explicit metalanguage (Luke & Freebody, 1997). Alternating between these practices in one learning episode, with expert guidance, resolves the historical tension between theories of implicit language 'acquisition' and explicit language 'learning'. In the lessons observed, transformed practice occurred for all students when the teacher employed an exemplary, seamless pedagogy that simultaneously integrated both situated practice and overt instruction. It was then that these learners, like the characters in *Chicken Run*, discovered design possibilities.

All names in this paper are pseudonyms to maintain privacy, confidentiality and anonymity. The research from which this paper was drawn received ethical clearance from the Queensland University of Technology University Human Research Ethics Committee (Queensland University of Technology, 1999).

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