From Print to Critical Multimedia Literacy: One Teacher's Foray Into New Literacies Practices

The literacy landscape of today demands that teachers understand what language is and that they develop with their students the metalanguage to negotiate multimodal texts.

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Within the field of literacy research, there is an increasing recognition that the advent of information and communication technology (ICT) necessitates a broader conception of literacy. A new definition of literacy is required to encompass not just the traditional literacy, such as the ability to read and write, but also multiple literacies related to multimedia technology. Citing Leu, Kinzer, Coiro, and Cammack (2004), the new literacies for the 21st century can be succinctly defined as follows:

> The new literacies of the Internet and other ICTs include the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives. These new literacies allow us to use the Internet and other ICTs to identify important questions, locate information, critically evaluate the usefulness of that information, synthesize information to answer those questions, and then communicate the answers to others. (p. 1572)

Research in new literacies—such as that funded by MacArthur Foundation in the United States, Futurelab in the United Kingdom, and many international research centers—is keeping researchers and practitioners abreast of new understandings of literacies and how they take shape in different contexts. However, not all of the research findings have been translated from prototype studies into everyday classroom practices (Bloome, 2008; Cope & Kalantzis, 2000; Hull & Schultz, 2001; Kim, 2003; Leander & Lewis, 2008; Street, 2003, 2008). Research in teacher education on new literacies is also burgeoning with work by Doering, Beach, and O'Brien (2007) and Miller (2007, 2008) in the United States, Matthewman, Blight, and Davies (2004) in the United Kingdom, and Cope and Kalantzis (2000), A. Luke (2002), and C. Luke (2000) in Australia.

These pioneering efforts, however, have resulted in a mixed and more complex picture. On the one hand, teachers are reported to embrace new literacies enthusiastically (Miller, 2007, 2008). On the other hand, teachers are

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reported to work in complex and constrained policy environments (Kim, 2003; Luke, 2002; Street, 2008) such as the requirements of national assessments.

Teachers and students are often reported to be unfamiliar with the metalanguage that some of the proponents of new literacies have put forward, and they lack the resources and support necessary for incorporating new literacies into the classrooms (Luke, 2002; Matthewman et al., 2004). Similarly, in a large-scale observational study of classroom practices in the subject English in 50 schools in Singapore, Sam, Abd Rahim, Teng, Guo, and Luke (2007) and Luke, Freebody, Lau, and Gopinathan (2005) found that teacher knowledge of new literacies was limited and that very limited use of new literacies was evident in the lessons observed. All this would suggest that new literacies may not simply spontaneously thrive in today's classrooms. More inquiry is needed to understand the challenges and complexities faced by teachers as they attempt to forge ahead into new literacies practices in their classrooms.

The study reported in this article was driven by the need to address such gaps between theory and practice in literacy research. Specifically, we wanted to find ways of infusing new literacies practices into Singapore English classrooms where a premium was placed on high-stakes national assessment that valued and measured the conventional print literacy.

Anchoring our work in the New London Group's (1996, 2000) pedagogy of multiliteracies, this article describes how we as university researchers worked collaboratively with a Singapore high school to operationalize the seminal work of the New London Group. We describe the measures taken to transform classroom practices with respect to the literacy model, the role of the teacher and students, the literacy activities and classroom talk in two English classes of 14-year-old Singaporean students. We present examples of the critical moments whereby shifts in classroom practices were observed and the tension of forging new literacies practices in Singapore.

The Context and Participants

For one and a half years, we worked collaboratively with a Singapore high school to expand the school's notion of literacy by including multimodal semiotic resources necessary for reading and designing print and nonprint texts. We began our exploratory research project with the aim of applying the New London Group's (1996, 2000) pedagogy of multiliteracies in two Year Two (14-year-olds) English language classrooms, in collaboration with a teacher by the name of Alicia (a pseudonym).

When the project started, the school was given the flexibility by the Singapore government to design its own English curriculum rather than abiding by the standard national English syllabus. This was an initiative offered only to a small number of top-ranking schools in Singapore. All of the students involved in the project were Chinese, and they were recognized for their high academic achievement. Specifically for this school, the students were also known to be competent in both the English and Chinese languages as their academic subjects. We at first expected these students to be very vocal in class. However, we observed that the students were not very responsive, in terms of speaking up in class to voice their own opinions.

During the project, Alicia was one of the key curriculum designers in the collaborating school. She was intended to be the catalyst to infuse new literacies, specifically critical multimedia literacy, by co-designing lessons with us. Through her lessons, she would share with her colleagues how she went about implementing critical multimedia literacy in her English lessons. These lessons would be included in the school's revised curriculum and would be extended to all other classes.

When Alicia started the project with us, she had taught for seven years in the school. She majored in English Language and Literature for her first degree. She admitted that she did not know much about visual or multimedia literacies. She was familiar with and trained in teaching text types that focused on print-based texts, and she was not sure how different her teaching should be when multimodal texts were used for her lessons. In her interviews with Lynde (first author), the key researcher, she shared that she had not been taught how to teach with any multimodal texts that paid attention to other modes of meaning making beyond language.

## Supporting the Change in Classroom Practices

In the initial phase, the project focused on developing an understanding of Alicia's practices and on documenting what she understood about meaning making and literacies. This took about 10 weeks, and we called this phase the Descriptive Phase of our project. Following the Descriptive Phase were iterative interventions and implementations of lessons codesigned by Lynde and Alicia, which we called the Intervention Phase. Lynde then observed how Alicia carried out the discussed teaching ideas during the Observation Phase. The Intervention and Observation phases took about a year. Figure 1 shows the different phases of the collaborative project.

For each intervention, Lynde shared her field notes with Alicia, first to ensure that what she observed and interpreted were representative in her classrooms and second to anchor teaching points for (re)designing subsequent lessons. Other than an overseas trip to Armidale, New South Wales, Australia, to observe how some schools implemented the pedagogy of multiliteracies (New London Group, 1996, 2000), interventions typically occurred in the form of just-in-time professional development to include (a) explaining existing theoretical frameworks related to critical multimedia literacy (Freebody & Luke, 1990; Kress & Van Leeuwen, 2006; Luke & Freebody, 1999; O'Toole, 1994; New London Group, 1996, 2000; Unsworth, 2001), (b) scaffolding Alicia's use of a discourse analytic approach to read multimodal texts based on the theoretical frameworks introduced, and (c) designing lessons to incorporate strategies that engage students in multimodal reading and designing. The following sections discuss the intervention measures we took to design for these changes in the classroom pedagogical practices.

Designing the Literacy Model in English Language Curriculum

We argue that as digital natives (Prensky, 2001), our Singapore students' interactions with texts have expanded and their text experience has encompassed multiple modes of representation for meaning making and communication, afforded by ICT. Language is commonly viewed as a strategic, meaning-making

Figure 1   Phases of the Project

Descriptive phase
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Intervention phase
↓
Observation phase
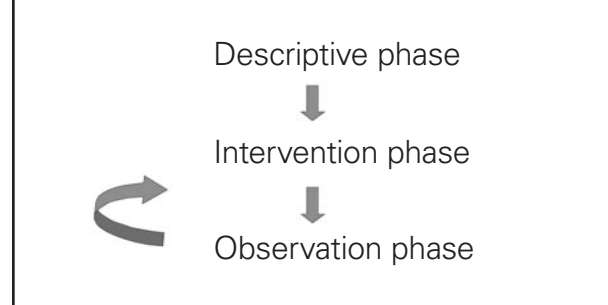
resource among many other modes of meaning in any culture where the meanings are influenced by the social and cultural context in which they are exchanged (Eggins, 1994; Halliday & Hasan, 1985).

The constructed nature of texts implies that they are not ideologically free. Hence, for this research, we focused on modes of meaning making and critical multimedia literacy to emphasize the knowledge of the different roles and practices of the reader to critique the power relations inherent in the production and interpretation of texts, both print and multimodal (Graddol, 1994). We followed Lemke's (2006) definition that critical multimedia literacy includes

> techniques of analysis that can both show how images and texts have been selectively designed to reinforce one another and show their residual potential for undermining each other. This is a key part of the job of critical multimedia analysis. (p. 8)

The New London Group's (2000) pedagogy of multiliteracies was a suitable literacy pedagogy, as it afforded Alicia and her students the opportunity to discuss the various modes of meaning making in the multimodal texts that the students encountered in their everyday lives. It could be seen as an approach to bridge the school discourse and out-of-school discourse when the multimodal texts were situated in the students' everyday lives (situated practice).

Students could develop a shared language to interpret the possible meaning of multimodal texts from the social and cultural contexts with which they could identify themselves (overt instruction and critical framing). When students understood how meaning

making was realized in multimodal texts, they could apply the same critical multimedia literacy in the texts that they encountered to learning other disciplinary subjects beyond the subject English (transformed practice). This literacy model worked well with the collaborating school as it augmented their text-type syllabus that focused on print literacy, with specific attention drawn to critical literacy.

Designing Literacy Activities

Lessons were codesigned with Alicia to weave critical multimedia literacy into her two Year Two classes. In our intervention work to transform classroom pedagogy, we made a conscious effort to foster literacy transformations (Bruce, 1998, as cited in Lankshear, Synder, & Green, 2000) by relating literacy with technology, shifting classroom practices from print literacy to video literacy and other multimedia literacy. Rather than engaging Alicia and her students in learning and using "old skills" with new technology, we were mindful to start with a pedagogy that examined the modes of representation for meaning making and communication (Cope & Kalantzis, 2000). Table 1 summarizes the sequence of lessons designed to shift Alicia and her students to infuse critical multimedia literacy lessons into their English lessons.

Table 1   Sequence of Lessons Gearing Toward Critical Multimedia Literacy

	Key focus	Design	Text form
Stage 1 (10 weeks): Making brochures	Shifting from the role of a text coder to a text analyst, using print-based text The teacher and students deconstruct a printed text using the Four Resources Model (Freebody & Luke, 1990).	Linguistic	Printed excerpts from fiction books
	Shifting from the role of a text coder to a text analyst, using printed multimodal text The teacher and students deconstruct brochures to study how the linguistic and visual modes interplay to construct messages.	Linguistic and visual	Printed multimodal texts—Brochures about the places of interest in Singapore
	Shifting from a text consumer to a text producer Students produce a printed brochure to publicize their school as group work using any technology they are comfortable with, such as Microsoft Publisher or Adobe Photoshop.	Linguistic and visual	Printed multimodal texts—Brochures about the school
Stage 2 (10 weeks): 2D multimedia production	Shifting from the role of a text coder to a text analyst, using multimodal and multimedia text The teacher guides the students to analyze critically how the linguistic, visual, and audio modes interplay to construct messages.	Linguistic, visual, and audio	Multimedia text—A video advertising Singapore from the Singapore Tourism Board
	Shifting from the role of a text coder to a text analyst, using multimodal and multimedia text Students then critique how their printed brochures differ from the Web advertisements in terms of the modes of meaning making.	Linguistic, visual, and audio	Multimedia text—Videos/webpages advertising different places of interest in Singapore
	Shifting from a text consumer to a text producer Students use the authoring software, Flash Macromedia, to produce a multimedia presentation on their school's language arts program.	Linguistic, visual, audio, and spatial	Multimedia text—A multimedia presentation to promote the school's language program
Stage 3 (10 weeks): 3D multimedia production	Shifting from a text consumer to a text producer Students create short films using the software MediaStage. They re-represent scenes from *Macbeth* to relate the themes learned from the study to the contemporary lifeworlds	Linguistic, visual, audio, spatial, and gestural	Multimedia text—A multimedia re-representation of *Macbeth*

Shifting Alicia's literacy practices required planned efforts in implementing literacy strategies, according to her readiness. Lynde first started with print literacy by drawing Alicia's attention to the roles of readers when engaging with printed texts such as comprehension passages (Freebody & Luke, 1990; Luke & Freebody, 1999). She then designed literacy activities that focused on reading advertisements in brochures and newspapers with Alicia, followed by designing tasks that allowed Alicia's students to produce brochures to promote school programs and events. These literacy activities engaged Alicia's students in interacting with print-based multimodal texts. The next step was to codesign lessons with Alicia to incorporate reading moving multimodal texts (viewing videos) and finally projects that involved designing multimedia productions using software like Flash Macromedia and MediaStage (a 3D animated learning environment that allows users to create different genres such as short films).

Designing Classroom Talk

We ran into one major problem when we were co-designing ways to use the multimodal texts in Alicia's lessons. That is, the metalanguage that described the various design elements was too abstract for a teacher's immediate use for classroom teaching. It could not be used as pedagogical knowledge for Alicia to read and view the multimodal texts with her students. As a result, we developed our framework as a form of shared language to guide her in negotiating meanings in multimodal texts. Our framework integrates the Four Resources Model (Freebody & Luke, 1990; Luke & Freebody, 1999) with recent developments in systemic-functional theorization of multimodality (Kress & Van Leeuwen, 2006; O'Toole, 1994). Table 2 shows the scaffold we developed with Alicia to help her facilitate her classroom interactions. The scaffold thus serves as a metalanguage for Alicia to deconstruct multimodal (and multimedia) texts with her students. It is also an example of how Alicia used a discourse analytic approach to read multimodal texts while avoiding technical grammatical terms used in the identified theoretical frameworks.

Designing the Role of the Teacher and Student

For Alicia, she was learning about the various modes of meaning making while teaching them in her English lessons. She was a colearner with her students as they infused new literacies into their classes. From the classroom observations, we saw Alicia playing the role of a mediator in terms of designing learning opportunities that were relevant for her students and scaffolding her students in becoming more of a text analyst and text producer. The students were positioned to take such roles that proved to work well in helping them understand how the modes of meaning making communicate meanings in multimodal texts.

Methodology

Because the nature of our research work involved design initiatives to mediate Alicia and her students' literacy practices in her classes, we posited our methodology as a case study with interventions (Stake, 1995). The data presented in this article came from coding sheets of what modes of meaning making were discussed in the classroom interactions, field notes of what activities took place in the observed lessons, transcripts from video recordings of 31 hours of classroom observations, 10 sets of the Year 2006 and Year 2007 curricular documents and syllabi, transcripts from 10 hours of in-depth interviews with the teacher, and 12 sets of students' multimodal productions (brochures, multimedia presentations using Flash Macromedia and MediaStage productions).

Coding of the data was done using NVIVO 7, the software for qualitative analysis. The coding was emergent, and the themes identified guided further data collection. These varied sources allowed us to triangulate the themes that emerged, and some of the key findings are presented in the subsequent section of this article. The combination of sources was necessary for the analysis of the interaction of meaning making, official curriculum, and classroom practices.

Critical Moments in the Classrooms

In this article, we present two out of many critical moments in the classrooms. The first took place at

Table 2   Suggested Prompts for Reading/Viewing a Multimodal Text

Message	1. Who are the main characters? What are the things shown? Who/what do they represent? Why did the producer choose them? What role did the producer intend for them to play?
	2. When does a particular character/object appear? Why does the character/object appear at those times?
	3. Can you group some of the images together? Why did the producer choose these images?
	4. What words do you see in the multimodal text? Why did the producer choose these words/ phrases?
Appeal	1. Who does a particular character look at? Does the particular character look directly at you? What does the character's gaze draw your attention to?
	2. When you look at the images, do the things, events, or people keep you at a distance or draw you towards them? How do they accomplish this?
	3. What angle does the camera assume most of the time? When it assumes a different angle, why does it do that?
	4. What are the images that stay in your mind? How did the producer achieve this?
Layout	1. Do the images move from one to another in any particular way/sequence? Why?
	2. How did the producer ensure that you understand the images as a whole and not as individual/ separate images? How are the images connected/linked to each other?
	3. How would you describe the tune/music at the beginning and end of the text?
	4. What are the images in the opening and closing sequences? Why did the producer make these choices?
Being a critical viewer	1. Who is the multimodal text produced for?
	2. Based on the analysis you have done, what do you think is the intended message? How did the producer construct it?
	3. Do you agree with the message that is being conveyed by the multimodal text? Why?
	4. Can you think of any groups of people who will like or object to the messages constructed in the text? Why?
	5. If you could add or remove something from the multimodal text, what would it be? Why?
	6. On the whole, would you consider this an effective multimodal text? Why?

Note. Reprinted from Tan, L., Guo, L., & Chia, A.L. (2009). Teaching English in new times. In P. Teo, T.M. Yin, & C. Ho (Eds.), *Exploring new frontiers: Challenging students in the language and literature classroom* (pp. 15–29). Reprinted with permission from Pearson Education.

the beginning of the sequence of the lessons on critical multimedia literacy (at Stage 2). The second took place at Stage 3 of our intervention work. For the first critical moment, Alicia asked her students to work in groups to compare and contrast the printed brochure and a website about a specific place of interest in Singapore. After the students finished their group discussion, a representative for each group was asked to present the group's critique to the whole class. The following excerpt shows the interaction between a student (S) and Alicia (T).

S: For the website, it uses bright colors for the background. It uses white. Then, the photos instead of black, as in the brochure, it uses those colored photos. Maybe you can find the enquiries page but then it's not very obvious. It's not like the brochure which is highlighted as black, which contrasted from pink.

T: Uh, can you tell, can we, can we, OK. I'll ask my questions later. Yea. Go ahead.

S: Uh, I'm now going to talk about the language features of the brochure. For the brochure, it uses a very direct approach. It just goes straight to the point, like for example this, they want to talk about the concert. They just put "Concert Hall" and then they won't like go about the bush.

T: They don't beat about the bush. Yea. OK.

S: Then the title although it's very pale but then it's very big. Like you can see from this, it's very big and it attracts our attention. Then the subtitle for every point is bold and then the elaborations are smaller and it's not bold. Then the language features for the website which uses a more indirect approach. You have to like go to the main page. Go to what they want to you to see or do. Then the title is also very big, attracts attention and it's quite the same as the brochure except for the first point.

T: OK.

S: Then the others are like for this brochure, it has these background pictures and for the website, it has sound.

T: Can we go back to your slides? Er, you've made some very good observations. Can we elaborate a little bit on the observations in term of the purpose that it's trying to achieve on the target audience. For example, let's look at the color usage, uh, for the website. Uh, interesting point you noted that well generally they are similar except that the enquiries page is not very obvious on the website. Would you be able to come up with an explanation for that?

S: Er, for maybe for the brochure, it wants you to know about the place that is not stated in the, in this brochure so they give you the website, they give you the, they give you the hotline all those but for the website, it has like a lot of things so they don't…

T: Good. Or rather, or rather on the website, the assumption is that if you need to find out information, how would you do it? You will explore it on your own, right? Whereas the brochure needs to tell you where can you get further information, alright? So that's one of the ways that the mediums work very differently. Because the website, in a sense, if you are there, the website, if you need this information, you have all the other hyperlinks and other points that you can surf to find them, right?

The student presented the color usage of the website, in contrast to that of the brochure. He compared and contrasted the language features of the brochure and the website. He also mentioned that the brochure had background pictures but the website had sound. It is clear that the student was able to compare and contrast the surface features of the two media (e.g., the color usage and language features). However, he was not able to analyze the social purposes and assumptions of the brochure and the website. That is, the student (and his group) was a good code breaker but a relatively poor code user and analyst (Freebody & Luke, 1990). In addition, the student tended to make sweeping generalizations without sufficient elaboration. For example, he failed to explain clearly what "indirect approach" for the website meant.

Seeing that the student was not demonstrating such competence, Alicia was keen to push the student(s) further by interrogating the social purposes. The student attempted to respond but did so vaguely. Alicia then reformulated, using Mercer's (2001) term, to sharpen the student's emergent ideas.

Rather than believing that there was a neutral correct meaning to a text, independent of the social context, Alicia encouraged the students to identify the link between text and context, meaning and purpose, using the example presented. Finally, rather than acting as if meaning resided in words alone, she directed the student's attention to the extralinguistic mode as well.

The second critical moment was the pinnacle point of the collaborative project. The students were asked to use MediaStage, a 3D animated learning environment, to portray the themes they learnt from the study of Shakespeare's *Macbeth*. We noted that the students might not be articulate in voicing their semiotic choices in classroom interactions. However, their productions might give evidence of the critical multimedia skills they had learned in their language arts classes.

We present an example from one of the MediaStage productions Alicia's students designed to show what the software could do and how the students applied their critical multimedia skills in their production. For this group, the students were re-representing the selected scenes from *Macbeth* as a literary response to the following quotation:

> I have no spur
> To prick the sides of my intent, but only
> Vaulting ambition, which o'er leaps itself
> And falls on the other. (*Macbeth* Act 1, Scene 7, 2003)

The intended intertextual message was designed using several modes of meaning making in MediaStage. The students made use of the existing sets of props and characters in MediaStage to compose a suitable set building for the different scenes and characters they intended to portray. Their choice of props and characters made clear how their selections of semiotic choices like clothes, gestures, and ways of speaking were related to the genre and message they chose. They had to select appropriate acting state, pose, and emotions of the characters to portray suitable characterizations for each scene. This had to be done skillfully as a form of script in MediaStage to synchronize the automated speech, gestures, and the movement of the characters for each scene. Without the skillful design of the interplay of these different modalities, the characterization features and behaviors of the key roles in *Macbeth* could not be inferred.

This group of students started with automated speech available in MediaStage. However, they later moved on to record their own voices for the key characters in *Macbeth*. The transduction from text to speech displayed their use of intonation and pitch to project evil intention, doubt, and other emotive expressions when the characters had dialogues with one another in their MediaStage production.

The students also made use of the camerawork in MediaStage to direct the audience's eyes. Different types of shots were observed to bring attention to various details of the scenes they created. For instance, a long shot was used to direct the audience's attention to the context of the setting in the first scene. The students also made use of lighting to create different moods. For instance, in one scene, the setting was

designed to be dim. The students had in mind an evil atmosphere when James (a name the students gave to the 3D character representing Macbeth) met a woman fortune teller in the particular scene. The dimness of the setting was intended to indicate the beginning of the evil plot James (Macbeth) had in mind.

In summary, positioning the students as text producers using MediaStage not only allowed them to display their creativity in creating metaphors and a deep understanding of the literary work of *Macbeth*, but it also created the opportunity for them to display their knowledge of intertextuality in the particular short film they designed.

This knowledge of intertextuality was demonstrated through their choice of scripting, language, giving voice to their characters, camerawork, lighting, gestural moves, and scene changes. The students' use of the semiotic choices provided evidence of their knowledge of critical multimedia literacy, which was hard to tease out in their spoken response during class interactions.

Language-Dominant National Assessment: An Impeding Factor

Alicia played a key role in designing learning opportunities for her students to be text analysts and text producers. The way she jointly constructed meaning with her students in their interactions about multimodal texts was a resource in equipping the students with critical multimedia literacy. Alicia herself benefited from the shift in their classroom literacy practices. In her words,

> I have benefited professionally from this collaboration in terms of learning about visual literacy…. It has provided me with the language to think about teaching visual literacy and how to better bridge the written mode, as in verbal text and visual text. I think for me as a professional teacher, that's the greatest takeaway. Then I think the other thing is that in a way it has forced me out of my comfort zone to teach beyond what I am comfortable and familiar with, which is the verbal text. (Personal communication, December 10, 2007)

Nonetheless, the high-stakes language-dominant assessment was one impeding factor that discouraged Alicia from giving priorities to critical multimedia literacy. On the one hand, Alicia believed that critical

multimedia literacy was relevant in the 21st century. On the other hand, because the national assessment remained language dominant, Alicia commented in her final interview that critical multimedia literacy was regarded as secondary to conventional literacy. In other words, all interactions with multimodal texts in her school literacy practices were intended to advance conventional literacy skills. Alicia believed that the development of critical multimedia literacy could be conflated with critical literacy skills in print. This became her warrant for implementing critical multimedia literacy in her classroom practices when the assessment mode remained the same.

During the Intervention and Observation Stages, we noted that more time was set aside to prepare Alicia's students for print literacy. Less class time was set aside for the students to work on their multimodal productions. As a result, the students took the initiative to complete their multimodal productions after curriculum time. Alicia's struggle with incorporating critical multimedia literacy skills while preparing her students for a language-dominant national assessment is heard in her final interview:

> But I am, as an educator, I say that it is important for them to acquire these skills and that you know…I mean in their world, we don't just encounter the printed words. Very much of my emphasis in curriculum is still very much guided by the final assessment that they are going to take. And so when it comes to the crux, I would still choose focusing teaching or building or constructing their knowledge of the printed words. (Personal communication, December 10, 2007)

New Literacies in the Old Institute of Learning

Our study can be said to add another tale to the many that point to the complex picture of infusing new literacies in the institution of old learning (O'Brien & Bauer, 2005). The Singapore assessment remains language dominant when there is more than one semiotic resource for making meaning in today's communication landscape. Even if the school is agreeable to pedagogical reform that allows critical multimedia literacy to be incorporated into classroom practices, there is constant juggling of two systems—new pedagogical approach but the same mode of assessment. Although

it has been argued that to secure social futures in an increasingly globalized world, new literacies (in this case, we focus on critical multimedia literacy) should be developed in the learners, this may not be effectively practiced in classrooms when the alignment between curriculum and assessment remains weak.

Notes

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