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Shrek Meets Vygotsky: Rethinking Adolescents Multimodal Literacy Practices in Schools

Kathy A. Mills

Not all adolescents today are "digital natives." Greater emphasis should be placed on expert scaffolding of these literacies in school settings in order to extend students' repertoire of skills and genres.

Tim: If we do a movie on school rules, we get it on the school website.

John: No, we should do one about a castle. Oh, how about a princess getting kidnapped by a knight?

Tim: Nah.

John: c'mon!

Tim: Too "girlish."

John: Oh yeah.

Tim: Hey, what about Shrek?

John: Oh yeah, Shrek! Yeah!

Tim: Let's do it!

John: OK. [sings] "Now I'm a believer... Hey, hey, hey!"

These boys were creating a script for a digitally edited movie intended for a family audience. They had no prior experience in digital moviemaking, but could readily make connection between the popular and multimodal text in their experiences, such as movie and website, and this media-based task.

Multimodality is now central to the literacy practices of youth and adults in the globalized communications environment (e.g. Cope & Kalantzis, 2000). Teachers are being urged to include new literacies using digital media to make connection between the learning spaces of home and school.

Multimodality refers to the combination of two or more modes in representation-linguistic (written words), visual, audio, gestural, and spatial (New London Group, 1996). An example of multimodal literacy practice is youth participation in online social networking. When adolescents design t heir Facebook profile, they include written information, share photographs and videos, send instant messages, post micro-blogs on their "wall", and design birthday cards for their friends.

The meanings of words are integrated with words, sound, and spatial arrangement as an electronic, multimedia text.

Recent studies have provided examples of the use of popular multimodal literacies of adolescents in varied social contexts. These include Japanese-style comics or manga – Japanese for “amusing drawings” (Schwartz & Rubinstein-Avila, 2006) digital movie composing (Brass, 2008; Ranker, 2008), graffiti (Vasudevan, 2006), online fan fiction (Black, 2005), cell phone advertising (Ajayi, 2009), illustrated stories (DeBruin-Parecki & Klein, 2003), and rap lyrics (McGinnis, 2007). Literacy educators now think in terms of the multiple platforms for communication in culturally diverse social contexts (New London Group, 1996).

Technologies for communication in the world outside of schools have ended an era dominated by the pen and paper. This is an age of multimedia authoring where competency with written words is still vital, but is no longer all that is needed to participate meaningfully in the many spheres of life. Adolescents need facility with an array of multimodal and digital literacies for different social purposes: critical inquiry, creativity, and communication.

Although the emphasis on the novel literacy practices of youth in everyday settings is important, there are several key assumptions about adolescent literacies of the 21st century that require examination.

- Not all adolescents today are “digital natives”.
- Adolescents’ engagement in multimodal textural practices is not only about fitting English to the interest of youth. Textural practices that give recognition in the world outside of schools can be created and stimulated.
- Although current research focuses on the multimodal practices of youth in their recreational spaces, this needs to be balanced with scaffolded multimodal practice in school settings.

These arguments form a series of important caveats that have been underemphasized in current research about the new multimodal and digital practices of adolescents and adults. My aim is to provocatively deconstruct some of the clichés and discourses surrounding the research about multimodal practices of youth using current research. Classroom examples and strategies for teaching multimodal literacies are provided as pedagogical starting points.

Whose Multimodal Literacies Count?

Labels such as “digital immigrants” and “digital narratives” increasingly oversimplify and exaggerate generational and socioeconomic differences, and perpetuate the assumption that all youth have innate digital skills (Prensky, 2001).

For example, in the United States, recent findings of The National Center for Education Statistics reported that more children and adolescents use computers and the Internet at school (81%) than at home (65%). This large-scale population research found that Internet use was higher among Caucasians than among African Americans, Hispanics, Asians, and Native Americans (DeBell & Chapman, 2003). Similarly, the Digital Youth Project in the U.S. observed that family interactions around digital camera use, video production, and digital editing were commonly observed among the middle class participants (Mizuko et al., 2008).

Unevenly distributed multimodal literacy practices are highlighted in other parts of the world. For example, the UK Children Go Online (UKCGO) project is an ongoing, large-scale population study investigation of 9- to 19-year-olds' use of the Internet (Livingston & Bober, 2005).

An important finding was that the majority of the participants had poor Internet navigation skills, rarely questioned the authenticity or authority of websites, and were not critical or discerning digital media users. The students lacked key skills in evaluating online content: 38% of pupils aged 9-19 claimed to trust the information on the Internet, and only 33% of the daily and weekly users had been taught how to judge the reliability of online information. Furthermore, the young research participants used the Internet to communicate mostly with peers, but did not participate in civic, global, or political activities online. Very few participants had engaged in website design, because most lacked the requisite technical skills and knowledge.

These findings are supported by two case studies of the information-seeking behaviours of students in educational contexts across varied levels of schooling. The studies showed that students frequently found the quantity of information on the Internet overwhelming and required specified instructional intervention to develop effective information skills (Branch, 2003).

Socioeconomic differences in adolescent literacy practices are widening and have been underemphasized in adolescent literacy research. For example, in my research with students ages 11-12, I conducted interviews with four culturally diverse students who attended a suburban Australian school in a low-socioeconomic area. The interviews were part of a larger pilot and ethnographic study across several schools and classrooms investigating students' access to multimodal and digital literacy practices in a multicultural school context. Ted (all names are pseudonyms to protect the identity of the research participants) was Indigenous Australian, Meliame was Tongan, Daria was Sudanese, and Jared was Anglo-Australian. None of these students had Internet access at home, and only one student – Jared – had access to a computer. Jared reported that he did better things with the computer at school "because there's more things to do here and I don't have Internet [at home]."

The UKCGO study (Livingston & Bober, 2005) showed that while 88% of middle class youth have accessed the Internet at home, only 61% of working class youth have home Internet access. What is most interesting is that middle class teenagers—those with home access and those who have spent more years online—tend to use the Internet more often, spend more time online per day, and consequently, have greater online skills than other social groups. Daily and weekly users have parents who also use the Internet more often and are more expert. There is also a new divide between the quality of Internet uses of youth. For middle class youth, the Internet is an increasingly rich, diverse, engaging, and stimulating resource. For others, it remains a communication resource of little significance, used for a narrow range of purposes (Livingston & Bober, 2005).

In the effort to bridge the novel and multimodal literacies of youth in classrooms, teachers need to know what multimodal literacies count, and for whom, in the recreational spaces of the students in their classrooms.

Clearly, not all youth today are "digital natives" to the same extent, because there are differences in the nature of multimodal and digital practices across social groups. This means that teachers have a vital role to play in guiding youth participation in new practices for social, recreational, and civic engagement.

Fitting Multimodal Literacies to Youth or Youth to Multimodal Literacies?

Research about adolescent engagement in multimodal textual practices often emphasizes the need to fit English to the multimodal interests of youth. There has been some discussion of the tension between the popular adolescent literacies that are situated in the experiences of learners, and the official or sanctioned literacies that are part of the long history of schooling, and which are the

focus of widespread standardized testing (Vasudevan, 2006). We need to consider the relationship between the literacies taught at school and the literacies practiced in other contexts. How much, for example, should social, workplace, and recreational literacies influence the curriculum?

Determining exactly how much emphasis should be given to addressing the multimodal literacies of youth is something that deserves consideration. The current drive toward including the literacies of youth is reminiscent of Dewey (1929), who emphasized learners' readiness to learn and the need to take into account the knowledge, competencies, and interests of the learner as the launching point of instruction. This view becomes problematic if all of education is situated in youths' out-of-school literacy experiences. Applied to adolescent literacy learning, and taken to its extreme, it can be used as justification for not teaching practices of formal or recognized literacies that render status in institutions and civic spaces, simply because they are located beyond students' realm of experience.

This point is highlighted in my interview with Meliame, the multilingual student mentioned earlier who was clearly not a "digital native." Meliame was a Tongan student who had immigrated to Australia a year before I met her. Her parents had returned to Tonga for business, while she remained in Australia with her brother, under the care of her aunt and uncle. Meliame completed her written homework each afternoon and then read novels. Meliame also wrote for a range of purposes about once a week in her own time. Television viewing was only permissible when her work was done. Her aunt and uncle didn't own a computer. The integration of new multimodal and digital literacies in the classroom created discontinuity with her existing print-based literacy practices, rather than the reverse.

Researcher: Do you like designing things which have words, pictures, movement, or sound at school? Like, for example, you designed Claymation films at school, and they were really good. Do you enjoy doing that sort of thing at school?

Meliame: Yes.

Researcher: Why do you like it?

Meliame: Because it's new for me.

Meliame's response is somewhat surprising. The multimodal practices of the classroom achieved the goal of engaging Meliame – not because of the continuity with her lifeworld and existing interests, but because they were unfamiliar and new. Bruner (1969) once argued candidly, "It is sentimentalism to assume that the teaching of life can be fitted always to...interests just as it is empty formalism...to parrot the formulas of adult society. Interests can be created and stimulated" (pp. 116-118).

Vygotsky (1978) argued that adults should not deny students abstract learning experiences on the basis of their supposed level of development but rather take learners to the upper limits of their potentiality within the "zone of proximal development" (p. 87). Vygotsky convincingly argued that adults should bridge the distance between learners' current levels of understanding and levels that can be achieved through collaboration with experts and powerful artifacts. This principle resolves the tension between the multimodal and popular literacy practices of youths and school-sanctioned literacies. Teachers of English need not sacrifice the mature literacy practices of adults to the informal literacies of youth. Conversely, they need not sacrifice the literacies of youth to the formal literacies of adulthood.

A helpful example is an ethnographic study by Dyson (2003), who observed how African American students drew upon popular culture in school English. The children did not approach the

official literacy activities in their classroom as unrelated to their own life and textual experiences, but used familiar media – influential practices to take intellectual action in the official school world. The study illuminated how learners build from the social and textual resources of their life experiences.

I have observed this principle in my research, witnessing examples of how learners build from their previous textual experiences outside of school. For example, Ted was a 12-year-old indigenous Australian student. He was collaboratively designing a movie set with his peers that aimed to communicate an educational message to students in the lower grades. Ted glanced at Julie as they filmed their movie, as he asked, "Have you seen [the film trilogy] Lord of the Rings?" Overhearing from the other side of the classroom, the teacher said, "Ted, that's got nothing to do with this!" While Ted's comment was interpreted in this case as "off task" behaviour, it demonstrates that Ted was making links between a popular text of his recreational space, and the multimodal practice of digital movie-making in the official context of the classroom (Mills, 2007).

Another example highlights the way in which students make "intertextual connections" – the cross-referencing of textual meanings-between their world and the classroom (New London Group, 1996, p. 82). Tim and John (Anglo-Australian boys from low socioeconomic backgrounds) brainstormed ideas for a movie storyboard. The teacher had previously shown the boys some good examples of movies produced by other students.

- Author: OK. So what is the title...going to be?
- Tim: Shrek
- John: Yeah-like on www.shrek.com...
- Tim: But we'll make it different...
- Author: And what are the main events in the plot?
- Tim: When Shrek rescues the princess... He can slide down a pole to escape from the castle.
- John: And he gets his swamp back... The character will be Donkey, Shrek, the Princess, and the dragon.

In this official classroom space, the popular movie-Shrek-became a source for creative learning providing a textual model to lead the students toward success as movie designers. The boys planned to use the existing movie characters and themes as an outline, while modifying the plot for their purposes. Hybridization-the mixing of different discursive practices in a text-was evident in the boys' multi modal designing (Fairclough, 2000, p. 175).

Similarly, Ella, who is Anglo-Australian, and Olivia, who is Maori, drew upon their previous multimodal textual encounters as they shared their initial ideas for a digital movie:

- Ella: After the party with the junk food, we are going to take Ava, the pimple person, shopping to get, like...
- Olivia: [interrupts] We are the Fabulous Five!
- Ella: Cosmetics skin care stuff, and healthy food for Ava. We're like, the Fab Five from Queer Eye.

The Fab Five is an intertextual reference to the five characters in the reality television show Queer Eye for the Straight Guy. In the TV series, five homosexual males give extreme makeovers and grooming tips to positively transform the image of heterosexual males.

The girls' movie, *The Case of the Disappearing Pimples*, innovated on the theme of "image" and "makeover" with different characters and an original plot. Within the genre of a reality television makeover show, the movie would demonstrate how an adolescent overcame her skin problems and poor self-image with the support of her peers. The message of their movie would be "Don't eat too much junk food." In a similar way to television advertising, the students' dialogue was saturated with cross-references to characters, events, quotes, and lyrics from popular movies, television, and songs.

These examples underscore the fluid way in which youth draw from their informal experiences with multimodal texts to connect with mature literacy practices in school settings, making permeable boundaries between home and school (Dyson, 2003). Such examples serve as a reminder that teachers need not "sacrifice the adult" to youth nor sacrifice youth to the adult (Bruner, 1969, pp. 117-118). Recognition of informal adolescence literacies needs to be tempered with knowledge of the multimodal textual encounters that youth still need to traverse. It should not be assumed that the conventional literacies taught in schools are alien to students or have little relevance to their lives (Bulfin & North, 2007). Textual practices of value in the global social context can be created and stimulated. Teachers can incorporate students' predilections while extending the range of multimodal literacy practices that are already familiar to youth (Hull & Schultz, 2001).

The Role of Schools and Multimodal Literacy Practices

Current research about the multimodal practices of adolescent literacies emphasized the way in which youth intuitively grasp or acquire new literacies in their recreational spaces. In particular, the new literacy studies (NLS) have specifically drawn attention to the situated ways in which language and communicative practices are shared by groups of people who sustain and modify them (Barton, 1994; Gee, 1996; Street, 2003). Research in this tradition has investigated the innovative and productive potentials of informal literacies in electronic environments that students use outside of schools (Lankshear & Knobel, 2003; Sefton-Green, 2006; Street, 2003).

For example, a white paper (Mizuko et al., 2008) has recently summarized the findings of a three-year, large-scale ethnographic investigation of youth media practices funded by the MacArthur Foundation as part of a broader initiative on digital media and learning. The Digital Youth Project focuses on the friendship and interest-driven practices of adolescents in the United States across 23 case studies. The studies describe rich learning outside of school, primarily in settings of peer-based interaction (Mizuko et al., 2008).

Hull and Schultz (2001) have argued, "Perhaps, more than any other theoretical tradition, the NLS has embraced out-of-school contexts almost to the exclusion of looking at schools... and... valued out-of-school literacy practices as distinct from those associated with schools" (p. 589). Discussing the more recent trends of the NLS, Street (2003) agreed that the next stage of work is to apply the principles learned in local communities to mainstream educational contexts.

Although an emphasis on out-of-school literacies counterbalanced earlier research that separated literacy learning from the lived experiences of students in their communities, there is now a need for research that emphasizes scaffolding the multimodal practice of youth by experts in school settings. Schooling came into existence to expose youth to knowledge beyond their realm of lived experience. Adolescents today can discover creative and useful multimodal literacy practices, yet there are limits to what they can achieve by themselves. Damon (1990) contended, "Just as we should not lose sight of the remarkable adaptability of some unschooled abilities, we must also guard against expecting more from them than they can deliver" (p. 38).

It should not be assumed that the informal literacies of youth are always rich, dynamic, and relevant enough to gain recognition in many social spaces of participation. As Hull (2003) cautioned, "We need to celebrate youth culture clear-eyed, without romanticising it" (p. 233). Providing expert

guidance by teachers, books, or technologies is one of the key responsibilities of schooling, and it is unreasonable to expect students to reinvent pivotal literacy practices of adults in social, recreational, and civic engagement by themselves. Immensely generative multimodal practices among youth are often limited by uneven access to technologies, critical literacies, and specialist knowledge of media and technology. The goal of literacy education is to point youth in the right direction so that they can extend their current practices to a wider range of productive purposes.

The following anecdote shows how scaffolded multimodal practice can occur in the classroom with youth. Pawini, age 12, had limited verbal English skills because she had lived in Australia for less than one year and spoke Thai at home. David and Samuel, age 11, were Anglo-Australian. All students attended a school in a low socioeconomic suburb. In the following interaction, the teacher showed the students how to digitally record sections of a script using an attached computer microphone and Sound Recorder software. The teacher had helped the students to modify the script to match the duration of the moving images. Their movie aimed to create road safety awareness among young children.

- Pawini: "Look out for car!"
- Teacher: I know English is your second language, so this is hard for you: "Look out for cars." Maybe you need to say: "Look out for cars, son." Try it again.
- Pawini: "Look out for cars, son!"
- David: "OK, Mum"
- [later in the recording session]
- Sean: "Oh-no. I hit a child! I shouldn't have been talking on my phone" (cell phone).
- Pawini: [very dramatic] "Oh-my son!"
- Teacher: very good, Pawini!

The teacher scaffolded the students' dramatic speech before and after each short audio recording in a timely manner. This process continued for 50 minutes, alternating between instruction and practice. Sometimes the teacher asked the students to analyze the digital recording: "Do you think the audience will understand that?" She asked them to evaluate the effectiveness of the audio text, drawing their attention to diction, volume, flow, pacing, and voice expression, and the mechanical aspects of microphone use (e.g., appropriate distance). The teacher worked with the students to record the script segments multiple times until they had produced a high quality audio recording that communicated their message effectively. The enactment of scaffolded multimodal practice occurred in the zone of proximal development for these students of the "Millennia Generation" – today's adolescents – through explicit scaffolding provided by an expert (Considine, Horton, & Moorman, 2009)

Teachers have a key responsibility to scaffold multimodal literacies and model new technical proficiencies. They can lead students to engage in sophisticated, mature forms of communication that are unattainable for many students without intervention and expert guidance. In discussions about the multimodal literacy practices of youth, what is being missed is that many adolescents, particularly those who are not of the dominant, middle class culture, are still novices.

For example, in my research with students engaged in digital video production using still images, a common difficulty was anticipating how the accumulation of still photos results in specific variables of movement on the screen, such as direction, speed, and fluidity. The boys in the following example are 1- to 12-year-old Anglo-Australians who were making plans for their educational movie to promote sun safety to a younger audience.

- Nick: The sunscreen bottle guy's got this flame-thrower thing that...
- Mark: A flame-throwing thing?
- Jack: Yeah, the sunscreen bottle-he's got this little tube thing, and he just shoots. And he sprays out sunscreen onto the man!
- Teacher: How are you going to film that idea?
- Nick and Mark: Don't know.
- Matthew: We could have a little hose cut out of him, and a piece of string...
- Teacher: Mmm, that's going to be hard.

Here, the boys negotiate how the hero of their movie, an animated sunscreen bottle, will shoot sunscreen to protect the main character from the sun's harmful ultraviolet rays. The teacher prompted them to anticipate filming techniques that would be required to realize their story on the screen. With no prior engagement in stop-motion techniques, the boys did not understand the technical constraints involved in making a clay figure appear to shoot sunscreen. Consider the substantial and ongoing scaffolding provided by the teacher in the following example, as the participants engaged in the scaffolding of stop-motion filming techniques.

- Jack: Or he's just standing there, and he shoots [gunshot sound], and then you just see it.
- Mark: You just see a little bit of sunscreen coming out
- Teacher: How are you going to make the sunscreen stay still through?
- Mark: With a piece of string. Like, just hold it up.
- Jack: Yeah, you could just, like, tie it there...
- Teacher: You'll probably need fishing wire then, so that people can't see it.
- Jack: You just... film it like that [rifle motion], and then you see where the white thing is.
- Teacher: Exactly. Do they actually have to see the bottle spraying? Maybe you could have a close up of your character getting sprayed. You don't have to take all long shots.

The teacher anticipated the complexity of representing the movement of squirting liquid through stop-motion animation techniques, which is unlike capturing action with a video camera. Rather than immediately supplying the solution she guided them to consider the design constraints and possibilities for representing movement through still images. Key questions prompted them to anticipate unforeseen complexities.

Jack's suggestion-"You just...film it like that, and then you see where the white thing is"-shows his gradual awareness of "before" and "after" shots. The teacher elaborated Jack's idea by introducing the filming technique of switching between different characters in an interaction. This would allow the viewers to infer that the sunscreen had been sprayed.

The teacher also explained the use of close-up shots. Without scaffolding, novice filmmakers tend to think exclusively of "long shots," representing whole figures against backgrounds (Burn & Parker, 2003). The students needed to be taught how to use close-up shots to focus the viewers on important details.

Students need to be inducted into certain specialist technical proficiencies for multimodal and digital literacy practices. For example, in a study of 12- to 13-year-olds who were taught to design web pages, Eagleton (2002) found that students knew less about multimodal literacy practices than is often assumed. A student admitted that before the project, "I didn't know much. I didn't even know how to get on the Internet." Creating hyperlinks on their e-zine pages was a new skill for these learners. Similarly, Courtland and Paddington (2008) showed how students with minimal prior

engagement in website design needed greater understanding of digital conventions to translate meanings across sign systems, including digital file management, html encoding, and expertise with Dreamweaver software.

These examples support the argument that youth need to be explicitly taught many new specialist technical conventions of the screen. The complexity of new technologies for multimedia production requires that teachers spend additional instructional time in ducting students to new ways of communicating multimodally. Without scaffolding of multimodal practice in formal learning contexts such as schools, students will not be taken to the outer limits of their potential in multimodal design with new technologies.

Teachers of English need to do more than incorporate the out-of-school literacy practices, interests, and predilections of youth. They must also extend the range of multimodal practices with which students are conversant. Teachers can extend the multimodal literacies that are valued in youth networks to give students recognition in the global communications environment.

Recommendations for Classroom Practice

English teachers approach multimodal designing with significant background knowledge of the linguistic mode (written words), such as the genre or text structure, how information is presented in clauses and sentences, vocabulary choice and positioning, and so forth. These linguistic design elements have differing degrees of stability or change in new multimodal texts. For example, in claymation moviemaking, there are similarities between the text structure of written and visual narratives. Movies and written stories both include the development of a setting, characters, and plot, which includes a series of complications, climax, resolution, and coda. Teachers can model and collaboratively construct movie scripts and written narratives that attend to the textual codes and conventions of this genre.

However, when designing multimodal texts, teachers also need to focus the students' attention on the visual, spatial, gestural, or audio modes embedded in a text. In movie production, students can be shown how to begin with storyboard and script writing in pre-production, to creating animations (gestures and movements) of characters during production. Students then choose or create complementary music, sound effects, dialogue or narration. Finally, they combine multiple modes during digital editing (see Table 1 for the stages of movie production).

Multimodal literacy practices frequently require attention to new operational dimensions of digital technologies. For example, claymation moviemaking involves technical skills such as setting up a tripod, matching the aspect ratio of the camera to the dimensions of the movie set, controlling lighting conditions, varying camera angles and zoom, using audio recording software, and operating moviemaking software to capture the frames and digitally edit the movie.

"Distributed expertise" can be used to make multimodal literacy practices collaborative (Brown et al., 1993). For instance, the teacher could apprentice groups of students into a specialist element of claymation movie design, such as storyboards, script writing, set and character design, animation, filming, audio, or editing. The teacher can regroup the students, distributing an expert to each group of moviemakers to mentor their peers in a specialist area. This model of learning enables scaffolding to occur without relying exclusively on teachers. Experts can focus the novices' attention on important task features by referring to instructional aids, such as classroom posters, books, websites, and computer help menus. Through collaboration between experts and novices, students can design multimodal texts

Textual Elements	Examples	Modes
Genre-Specific Conventions		
Audience, purpose	To entertain and educate younger students	

& message		
Script - narrative Text Structure	Setting, characters, plot – orientation, complications, climax, resolution, coda	Linguistic
Screen Elements		
Sets and props	Representing place through backgrounds, foregrounds, 2-D and 3-D forms, colour, texture, material, weight, size, stability, shape, contrast, symmetry/asymmetry	Visual, Spatial
Characters	Representing identity, gender, age and so forth, through skin colour, hair, facial features, physique, costume, accessories	Visual Gestural Spatial
Spatiotemporal Elements		
Animations	Stop motion animation (repositioning objects or characters to create movement while maintaining a static background), gestures, posture, facial expression, lip synchronising, gaze. Background movements to create life and rhythm.	Gestural Visual Spatial
Screen Layout	Positioning of objects on screen (e.g. left, right, top, bottom, foreground, background, centre, margins).	Gestural Visual Spatial
Technical Conventions		
Lighting	Constant/varied, bright/ dull, dark/ light, soft/harsh	Visual, Spatial Digital
Framing	What is included or excluded in each shot.	Visual, Spatial Digital
Camera Angles	Aerial, high, low, or eye-level camera angles. Long, medium, or close-up shots to show social distance between viewer and characters.	Visual, Spatial, Digital
Audio	Music, sound effects, silent, or dialogue (e.g. diction, volume, pitch, pacing, modulation, inflections)	Audio, Linguistic Digital
Transitions	Words on static background, fade, dissolve, wipe	Visual, Spatial, Digital
Screen writing	Title page, credits, and subtitles	Linguistic, Visual Spatial, Digital
Multimodal Compositional Meanings		
Editing	Storing or converting files, deleting, rearranging, combining sound and image	Multimodal Digital

Note: From *Multiliteracies Plus: Extending a Function Approach to Digital Design* by K. A. Mills, 2009.

that are more complex than those that are constructed independently (Mills, 2006).

Vygotsky (1962, 1978) indicated that the most effective learning occurs when practice and instruction take place concurrently, with a reduced level of scaffolding as independent learning is demonstrated. For example, we have seen how situated practice in digital audio recording was required alongside instruction to enable the students to acquire new moviemaking skills. When situated practice is tied to instruction through peer and other experts, there is scaffolding rather than transmission, leading to productive learning (Mills, 2006).

In the process of rethinking the multimodal literacy practices of adolescents, there are several important implications. This article has shown that although many youths are discovering certain multimodal literacy practices through informal networks, they are not all experts of many important multimodal and digital practices (DeBell & Chapman, 2003; Livingston & Bober, 2005; Stevens, 2005).

This means that schools have a greater responsibility to introduce the new literacies than has been recognized. Creating space for students to make connections with popular and multimodal texts in the English classroom is necessary, but not sufficient, to prepare adolescents for social and civic participation. Students need guidance by experts that moves them beyond the known to the new. It is time for Shrek to meet Vygotsky in the multimodal literacy practices of adolescents at school.

Notes

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