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Becoming multiliterate: Digital video news construction within a technology-supported learning environment

Lori Lockyer

University of Wollongong, lori.lockyer@gmail.com

Ian M. Brown

University of Wollongong, ibrown@uow.edu.au

David Blackall

University of Wollongong, dblackal@uow.edu.au

Barry M. Harper

University of Wollongong, bharper@uow.edu.au

Phillip J. McKerrow

University of Wollongong, phillip@uow.edu.au

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Abstract

Twenty-first century literacies imply multiliteracies – going beyond language literacy and numeracy to, among others, information, visual, media and technological literacies. An education that develops capabilities across a range of literacies equips young people with the skills necessary to participate in a complex, globalized workplace and community. A key step toward realizing such national and state education agendas is specific curriculum interventions that are translated to the classroom level. This paper reports on a case study that explored both the process and outcomes of the implementation of an education program which was designed to incorporate multiliteracies.

Keywords

Becoming, multiliterate, Digital, video, news, construction, within, technology, supported, learning, environment

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Becoming multiliterate: Digital video news construction within a technology-supported learning environment

Lori Lockyer
Ian Brown
David Blackall
Barry Harper
Phillip McKerrow

University of Wollongong
Australia

Abstract: Twenty-first century literacies imply multiliteracies – going beyond language literacy and numeracy to, among others, information, visual, media and technological literacies. An education that develops capabilities across a range of literacies equips young people with the skills necessary to participate in a complex, globalized workplace and community. A key step toward realizing such national and state education agendas is specific curriculum interventions that are translated to the classroom level. This paper reports on a case study that explored both the process and outcomes of the implementation of an education program which was designed to incorporate multiliteracies.

Introduction

Having a degree of mastery over a wide range of 21st century literacies may mean the difference between “a fully functioning life and one on the margin” (Gallego & Hollingsworth, 1992 p.206). This concept of 21st century literacies focuses on multiliteracies which goes beyond language literacy and numeracy to include, among others, information, visual, media and technological literacies (Muspratt, Luke, & Freebody, 1997; Reinking, McKenna, Labbo, & Keiffer, 1998; Unsworth, 2001). This article reports on a case study that explored both the process and outcomes of the implementation of an education program which was designed to incorporate multiliteracies.

Background

An education that develops capabilities across a range of literacies equips all young people with the skills necessary to participate in a complex, globalized workplace and community. In Australia, this view is the focus of the Adelaide Declaration on National Goals for Schooling in the Twenty-first Century (Ministerial Council on Education Employment Training and Youth Affairs (MCEETYA), 1999) within which a key goal is improved student learning outcomes and enabling “all young people to engage with an increasingly complex world ... characterised by advances in information and communication technologies, population diversity arising from international mobility and migration, and complex environmental and social challenges” (p.1).

This focus on the complexity of the environment in which young people must participate highlights a need to not just support the development of literacies to a functional or surface level, but rather to strive for a level of deep or critical competency ((Freire & Macedo, 1987). That is, learners need to be able to critically analyse information, logically examine arguments, relate ideas to their own previous knowledge and experiences, develop and use organizing principles to integrate ideas, develop and test possible solutions, and develop conclusions based on evidence (adapted from (Biggs, 1979). Today, interpretation and making meaning relies heavily on multi-modal practice (Cope & Kalantzis, 2000) -- that is making use of a wide range of literacies. Thus, in terms of the expanded view of literacy, critical levels might be evidenced by:

- information literacy - sourcing, analyzing and evaluating information with an awareness of how it is inextricably linked to power and persuasion
- visual literacy - constructing coherent visual texts and critiquing visual texts from positions of aesthetic and meaning
- media literacy - constructing and critiquing media texts with an awareness of how *voice* informs the news-making process
- technology literacy - using technology to create multimedia texts and a critical awareness of how issues such as accessibility and control relate to the wider world.

The context for change

In Australia, state and territory governments are responding to the goals of the Adelaide Declaration and attempting to improve student learning outcomes by reassessing educational policy and proposing new pedagogical frameworks (e.g. Education Queensland; NSW Department of Education and Training). The theoretical underpinnings of such frameworks relate to constructivist approaches to learning which emphasize knowledge as constructed, produced and critiqued rather than transferred. The next step toward realizing these national and state initiatives is specific curriculum interventions or education programs that are translated to the classroom activity level.

Such interventions must realize the context where literacy and learning are being redefined in schools by digital communication and multimedia technologies. Where ICT use has been pedagogically applied, research demonstrates learning process and outcome benefits associated with development of critical thinking skills in problem-solving activities; ability to communicate visually and process data quickly; capacity to work effectively in a team; effective communication through presentations and speeches; and increased self-confidence and motivation to learn (Bamford, Brown, & Flood, 2002; Chessler, Rockman, & Walker, 1998; Software & Information Industry Association, 1999; Williams, 1999). Collaborative multimedia project-based activities have been found to cater for different learner types and levels and support the development of time management, project management, teamwork and information literacy skills (Bergen, 2001). Further, collaborative learning activities supported by computer-mediated communications or resources which provide access to mentors or experts contribute to students' ability to apply knowledge in solving problems (Williams, 1999) as well as provide the mentor/expert opportunity to reflect on their professional practices and perspectives (Lockyer, Patterson, Rowland, & Hearne, 2002). Thus, potential educational interventions which involve rich pedagogy and integrate existing and emerging technologies must be devised and tested.

This paper focuses on a research project that aims to develop and test an educational intervention which involves high quality pedagogical strategies through student collaboration of digital media and embeds the use of technology tools and expert advice. The envisioned strategy involves student teams creating digital video news items about their school community. The research team's initial concept of the project was reported at eLearn 2003 (Lockyer, Brown, & Blackall, 2003) and has subsequently been implemented through eight in-depth case studies. This paper reports preliminary results of the first of those cases.

Digital video news – becoming multiliterate through multiliteracies pedagogy

Engagement in the 'television' news development process, that is the identification of a 'news-worthy' story; the need to research the topic and issues related to the story; interviewing talent, filming and camera work, script writing, applying ethical principals and video editing, may have the potential to facilitate student development of multiliteracies. This form of situated learning, is embedded in a social constructivist paradigm. Students are required to engage in multimodal learning experiences where scaffolds have been embedded in the learning process. A type of anchored instruction, students are confronted with realistic situations, facing similar dilemmas as real world journalists. Scaffolds, such as factually authentic live footage, are presented as part of the learning design. Situated cognition allows for complex tasks to discover procedures, working in teams and supported by experts. (Bredo, 1994, Brown, J.S. Collins, A. & Duguid, 1989).

The research team's initial ideas of realizing a television news development process within an education program translated to students working with digital video within a series tasks, that is *analysis-construction-deconstruction*.

First, students would be presented with raw footage, source documents, reporter’s notes and the final broadcast story from an actual event. Students would use these resources to *analyze* the news event, understand how the story was constructed, and derive meanings from the final story.

Then, though a collaborative *construction* task student teams would create their own digital video news items about their school community by engaging in the video news process. Students would have access to a variety of supports and resources including shared network workspaces, digital video editing tools, and on-line communication tools to access the expertise of news industry professionals, supports for the news construction process and learning reflection spaces.

As a *deconstruction* task, students would reflect, with other teams, the process by which they developed their news items and critique their final product to identify the meanings people might make of their story. The proposed tasks were associated with development of multi-modal skills – of particular interest to this study – information, media, technology and visual literacy as identified in Table 1.

	Analyze	Construct					Deconstruct
Literacies	Review/Discuss	Research	Interview	Write	Film	Edit	Critique/Discuss
Information		✓	✓	✓			✓
Media	✓	✓	✓	✓	✓	✓	✓
Technology		✓			✓	✓	✓
Visual	✓				✓	✓	✓

Table1: Literacies developed within each task of the contextualized learning design (Lockyer, Brown, & Blackall, 2003)

Research approach

In order to gauge the practicality of the researchers’ hypothesized education program, a *development research* approach (Reeves, 2000) (also known in educational literature as design-based research (Brown, 1992; Collins, 1992; Hoadley, 202; The Design-based Research Collective, 2003) was undertaken . Such an approach involves practitioners (i.e., classroom teachers) in defining the education problem or challenge (in this case providing opportunities for student multi-literacy), identifying possible solutions to address the challenge, testing those solutions and developing design principles that will help others address the challenge in their own contexts (see Figure 1 for an illustration of this approach).

Development Research

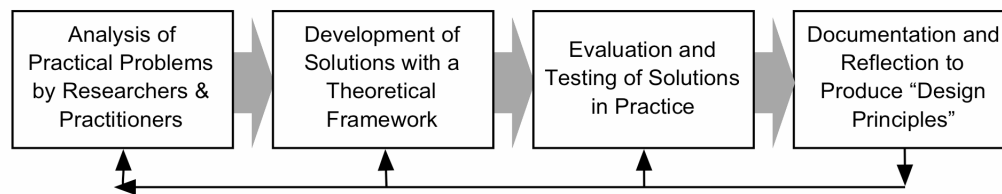


Figure 1: Model of a development research approach (From Reeves, 2000).

Such an approach has been employed in an attempt to address criticisms of “the sharp divide between educational research and scholarship and the practice of education in schools and other settings” (Shavelson & Towne, 2002, p14).

Analysis and solutions – building on theory with practice

In order to place the proposed education program within the appropriate context, an analysis was undertaken of upper primary and lower secondary school curriculum documents in each Australian state and territory. It was identified that the involvement of student in the video news development process related closely to the outcomes of a range of lower secondary English, Media Studies and Technology syllabi. To explicate this relationship and more fully develop the intervention design, classroom teachers from schools, located in New South Wales, who represent these subject areas were invited to participate in focus group sessions. Members of the research team facilitated the focus group sessions. Participants were provided with an outline of the educational program and asked to consider issues of suitability to meet syllabi objectives; practicalities of implementing in a classroom situation; and, suggestions for improvement of the program. Focus group sessions were audio taped and the recordings were then transcribed and analyzed by the research team.

The results of the focus group discussion provided the research team with a direction forward. The proposed program was seen, by participants, to be explicitly related to objectives of middle high school NSW English syllabus (Board of Studies New South Wales, 2001). In fact, teachers agreed the program would have the ability to cater to so many of the syllabus outcomes that they proposed they could devote anywhere from three-quarters to a full school term to the program and interrelated learning activities.

Teachers considered that the links to other syllabi areas might facilitate cross-faculty teaching and an opportunity to integrate curriculum areas. The teachers also identified that the proposed tasks could actually represent multiple cycles of an *analysis-construction-deconstruction* process particularly if students had the opportunity to put together more than one news story. Thus, the initial proposed task was adapted to allow students to use the raw footage from an authentic story to create their own version then comparing their own, their classmates, and the professional version.

Teachers also recognized the variability in their own skill in using technology, facilitating the use of technology by their students, and issues of accessibility to school computing resources (particularly for such subjects as English). As such, any supporting resources must cater for this diverse range of skill, experience and accessibility.

Testing solutions – pilot case study

Building on the input of the focus group participants, the education program was documented in the form of a nine-week *unit of work* that outlined week-by-week teaching and learning activities and supporting equipment and resources, assessment tasks and the unit's relationship to the syllabi. Resources were developed and packaged including:

A website providing access to:

- General guides and manuals videography, script writing and digital video editing
- Resources related to each specific task such as the raw footage and press releases.
- Facility to upload and share final stories
- Space to record learning reflections
- Communication tools to request advice from experts (professional journalists)

An outline of the technology requirements:

- Computers with Internet access
- Digital video cameras, tapes and microphones
- Video editing (iMovie) and word processing software

The research team then worked with a volunteer teacher to implement the program in their classroom as a pilot case study. The particular setting of implementation involved one grade ten class (n=28 students) in a metropolitan secondary school.

A number of learning activities for the unit of work were devised to introduce students to the topic. Such activities involved students comparing news across medium (e.g., newspaper, radio, television and Internet) and across types of television news broadcasts (e.g., local, national, international and current affair formats).

For the first major task (TASK 1) of the unit students chose partners to develop their version of a one-minute, twenty second news story when provided with raw footage and source documents (i.e., press release and e-mail from news director assigning the story to the reporter). Upon completion of their story, students could compare with the original story that went to air and that of their other classmates. To link the first and second task, students had the opportunity to visit and tour a local television newsroom to see the process in action.

For the second major task (TASK 2) the participating teacher allocated students to groups of four. Attention was paid to evenly distribute students across the groups in terms of ability as identified through previous academic performance and skill development. Each student team was asked to identify a 'news worthy' story that existed in their school or school community. They 'pitched' their story to the teacher and could access advice from the news director of the local television station, which they had just visited. While students teams worked together to develop their story, the teacher applied an individual assessment involving each team member to submit a script for their story. Students worked with their own footage and their combined scripts to edit a final story.

To conclude the unit, student teams presented their final story to their classmates describing why they chose to construct the story and the process in which they engaged. Students individually submitted a self-assessment of their team's final story, their own contribution to the construction process and the contribution of their team members. Students were also asked to submit a learning reflection. These self-assessments and the teacher's own observations of the process and analysis of the final product contributed to individualized grades (the researchers did not have a role in student assessment).

Given the pilot nature of this stage of the overall research study, the research team was interested in the process by which the education program was carried out, the role of the teacher in facilitating the program, the learning process engaged in by the students and the learning outcomes for students. As such, a highly qualitative data collection procedure was undertaken including:

1. Administering a survey prior to the program that gauged students' awareness and engagement with different types of media.
2. Observing and recording field notes during all classroom activities related to the program.
3. Collecting student work samples (e.g. final news stories for each task, individual scripts written for the second task, learning reflections and self-assessments).
4. Teacher assessments of student work.
5. Post-program group interviews with each student team covering their perspective on their learning and the strengths and weakness of the program.
6. Interview with the teacher to discuss the process of implementing the program, their perspectives on student learning process and outcomes, their own professional development and suggestions for improving the program.

Preliminary findings

The complexity of the data set requires detailed analysis and consideration of both theoretical and practical implications. However, much can be gleaned from analysis of the final story developed by the student teams in task two and the group interviews to guide a way forward for the research and other interventions focused on multi-literacy development.

Telling stories using digital images

The final student stories were analyzed in terms of the literacies of interest to the study (media, information, visual, technology):

Literacy	Indicators from student team products
Media	All stories reflected a relationship to student issues or topics identified in their school or local community. All stories attempted to provide multiple perspectives.
Information	Multiple perspectives were illustrated via interviews with at least two primary sources in each story.
Visual	In some stories, students referred to statistical data – the source of which was not clear. Story visuals tended to be of poor quality in terms of lighting (e.g., too bright or too dark). Some teams augmented visuals with text (to identify the interviewer/interviewee). Some stories included variety of camera angles to provide persuasion or impact
Technology	Six of the seven teams completed a digital video news story. One team had chosen to use analog videotape to record raw footage and encountered technical problems converting to digital format for editing and thus were unable to complete a final product. However, in the final team sharing session the group did tell their story by using the raw footage. Some teams used effects features of the video editing tool (e.g., fade). Some stories had poor sound quality (either due to not using a microphone or choosing an inappropriate/noisy filming location).

Student team perspectives

Analysis of interviews conducted with each student team at the conclusion of the program can also be categorized in terms of the literacies of focus.

Literacy	Issues raised during team interviews
Media	Students reported that the program had raised their interest in the news. Students reported that the program raised their awareness of the news process and the effort that is required in developing video (or television) news stories. Students use of media-related language (such as ‘talent’ and ‘wild vision’) during the course of the interviews indicated a level of media literacy comprehension.
Information	Students reported that they tended not to research the topic of their story beyond primary sources (i.e., their interviewees).
Visual	Any data or statistics used in their story tended to be supplied by the primary sources. Students identified the limitations of the visuals in their stories (e.g., poor lighting, focus on talent) and expressed a wish to have another chance to get it ‘right.’
Technology	Students reported that this program was one of the few experiences they had with a ‘hands-on’ computer-based activity in their class. For many students, this was true across curriculum areas and not just in English. Students reported a range of previous experience in using computers. No students had previously used digital video editing software. Some students had previously used (analog or digital) video cameras. Students reported that they did not refer to the printed technical guides (videography, editing, etc.) but learnt how to use the camera and digital video editing software by trial and error and/or asking for help from other students. Students felt learning the editing process was easy.

Discussion and conclusion

Initial indicators suggest an educational program that engages students in digital video news production may cater for the development of multi-literacy skills. Preliminary analysis suggests some principles for a refined program:

- The ease by which students learned the digital video editing software suggests a possibility of decreasing the emphasis on editing skill development through the two tasks.
- The limitations of the visuals of the final story in suggests increasing the emphasis on skill development and practice with camera work/videography through the two tasks.
- The students' reliance on primary sources suggests a need to more closely support the research process within the construction of the news story.

To further refine the intervention, the research team has engaged in a further cycle of the development research approach. The revised 'solution', that is the education program was further defined by the data relate to this case, further theorizing and another series of focus group discussions with practicing classroom teachers. The program the revised program has been (or is currently being) implemented through multiple case studies in English classroom in schools located in New South Wales, Australia.

While it is clear that the data can be analyzed in terms of specific literacies, a deeper level of analysis is required if the research is to explore levels of critical multiliteracy, including gauging the level of integration of the literacies. In this respect, some further work on identifying how media, visual, information and technology literacy standards might be incorporated to form both a data analysis framework and a practical assessment guide.

This further research will help to produce guidelines for the development of educational programs focused on developing multiliteracy skills in a range of classroom settings.

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References

- Bamford, A., Brown, I., & Flood, A. (2002). Reviewing Media and meaning Within Interactive Graphic Technologies. *Proceedings of the International Society of Education Through Art (InSEA) World Congress*.
- Bergen, D. (2001). Differentiating curriculum with technology-enhanced class projects. *Childhood Education*, 78(2), 117-119.
- Biggs, J. (1979). Individual differences in study processes and the quality of learning outcomes. *Higher Education*, 8, 381-394.
- Board of Studies New South Wales. (2001). English Years 7-10 Syllabus. Retrieved 21 October, 2003, from http://www.boardofstudies.nsw.edu.au/writing_briefs/english/english_710_syllabus.pdf
- Brown, A. L. (1992). Design experiments: Theoretical and methodological challenges in creating complex interventions in classroom settings. *Journal of the Learning Sciences*, 2(2), 141-178.
- Chessler, M., Rockman, S., & Walker, L. (1998). *Powerful tools for schooling: second year study of the laptop program*. San Francisco: Rockman ET AL.
- Collins, A. (1992). Toward a design science of education. In E. Scanlon & T. O'Shea (Eds.), *New directions in educational technology*. Berlin: Springer-Verlag.
- Cope, B., & Kalantzis, M. (2000). Designs for social futures. In B. Cope & M. Kalantzis (Eds.), *Multiliteracies: literacy learning and the design of social futures* (pp. 203-234). London: Routledge.
- Freire, P., & Macedo, D. (1987). *Literacy: Reading the Word and the World*. South Hadley, MA: Bergin & Garvey.
- Gallego, M., & Hollingsworth, S. (1992). Research directions: Multiple literacies: Teachers' evolving perceptions. *Language Arts*, 69(3), 206-213.
- Hoadley, C. P. (2002). Creating context: Design-based research in creating and understanding CSCL. In G. Stahl (Ed.), *Computer support for collaborative learning 2002* (pp. 453-462). Mahwah, NJ: Erlbaum.

- Lockyer, L., Brown, I., & Blackall, D. (2003). A learning design to support multi-literacy development in K-12 contexts. In A. Rossett (Ed.), *Proceedings of the World Conference on E-Learning in Corporate, Government, Healthcare and Higher Education* (pp. 1703-1706). Norfolk, VA: Association for the Advancement of Computing in Education.
- Lockyer, L., Patterson, J., Rowland, G., & Hearne, D. (2002). Online mentoring and peer support: Using learning technologies to facilitate entry into a community of practice. *Alt-J*, 10(1), 24-31.
- Ministerial Council on Education Employment Training and Youth Affairs (MCEETYA). (1999). The Adelaide Declaration on National Goals for Schooling in the Twenty-first Century. Retrieved 5 September, 2002, from http://www.dest.gov.au/sectors/school_education/policy_initiatives_reviews/national_goals_for_schooling_in_the_twenty_first_century.htm
- Muspratt, S., Luke, A., & Freebody, P. (1997). *Constructing Critical Literacies*. New Jersey: Hampton Press, Inc.
- Reeves, T. C. (2000). Socially Responsible Educational Technology Research. *Educational Technology*, 40(6), 19-28.
- Reinking, D., McKenna, M. C., Labbo, L. D., & Keiffer, R. D. (1998). *Handbook of Literacy and Technology: Transformation in a Post-typographic World*. Mahwah, N.J.: Erlbaum.
- Shavelson, R. J., & Towne, L. (2002). *Scientific research in education*. Washington, DC: National Academy Press.
- Software & Information Industry Association. (1999). 1999 Research report on the effectiveness of technology in schools: executive summary 6th edition. Retrieved 30 April, 1999, from http://www.spa.org/project/edu_pub/99effreport.htm
- The Design-based Research Collective. (2003). Design-based Research: an Emerging Paradigm for Educational Inquiry. *Educational Researcher*, 32(1), 5-8.
- Unsworth, L. (2001). *Teaching Multiliteracies Across the Curriculum*. Buckingham: Open University Press.
- Williams, D. C. (1999). The effects of expert stories on sixth grade students' achievement and problem solving in hypermedia-supported authentic learning environments (HALE). In B. Collis & R. Oliver (Eds.), *Proceedings of ED-MEDIA/ED-TELECOM 99 World Conference on Educational Multimedia and Hypermedia & World Conference on Educational Telecommunications* (pp. 112-118). Charlottesville, VA: Association for the Advancement of Computing in Education.