

# A Learning Design to Support Multi-Literacy Development in K-12 Contexts

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**Abstract:** The importance of the educational system in providing opportunities for students to develop multiple skill sets has become topic for global debate. It is argued that educational interventions focused on multi-literacy development should involve rich pedagogy and integrate existing and emerging technologies. This paper puts forward a learning design to support multi-literacy development and reports on a project-in-progress that contextualises the learning design and investigates its efficacy through implementation.

## Introduction

The importance of the educational system in providing opportunities for students to develop multiple skill sets has become topic for global debate and a paramount focus of Australian educational policy and curriculum development (Ministerial Council on Education Employment Training and Youth Affairs (MCEETYA), 1999). Such skills include cognitive (critical thinking, problem-solving), process (information identification, brain-storming), life-long learning and workplace (teamwork, communication through presentations and speeches, and technology-based skills) competencies. That is, educators are required to equip students with skills and competencies for the changing nature of cognitive processing (Brown & Bamford, 2002). Thus, educational policy suggests supporting the multi-literate learner through curriculum interventions that involve integration of multiple literacies (Muspratt, Luke, & Freebody, 1997; Reinking, McKenna, Labbo, & Keiffer, 1998; Unsworth, 2001). Specifically, multi-literacy comprises:

- **Critical literacy**– the ability to analyse and question textual, visual and oral information.
- **Information literacy**– the ability to recognised the need for information and then identify, locate, evaluate and use information effectively.
- **Language literacy**– the ability to understand and use language in verbal and written modes (i.e., reading, writing, listening and speaking).
- **Media literacy**– the understanding of the techniques and impact of mass media.
- **Numeracy** – the ability to understand, interpret and use mathematics.
- **Technology literacy** – the ability use appropriate technology tools to communicate, solve problems, and access, manage, integrate, evaluate, and create information.
- **Visual literacy**– the ability to understand, interpret, create and use images.

This issue exists within a context where literacy and learning are being redefined in schools by digital communication and multimedia technologies. As such, students must develop this multiple skill set which supports their participation in both a school and society embedded with technology tools (Brown, In Press). New research is required to examine the ways students interact with new technologies and the impact on the cognitive, social and emotional development of the students. Research focused on technology-supported learning environments calls for more innovative, high-quality learning experiences (Harper, O'Donoghue, Oliver, & Lockyer, 2001) and criticizes recent and current learning designs which do not engage students affectively; do not include appropriate assessment and/or provide exciting relevant cross-curricular activities; and are not rigorously evaluated (Mason, 2001). Thus, educational interventions, which involve rich pedagogy and integrate existing and emerging technologies, must be devised and tested. This paper puts forward a learning design to support multi-literacy development and reports on a project-in-progress that contextualizes this learning design and investigates its efficacy through implementation in a classroom setting.

## A Learning Design to Support Multi-Literacy Development

The current debate concerning learning objects (Boyle, 2003; Hodgins, 2002) and generic learning designs (Harper, Oliver, & Agostinho, 2001; R. Oliver, 1999; Oliver, Harper, Hedberg, Wills, & Agostinho, 2002) challenges educators and researchers to consider issues of reusability and context. In terms of multi-literacy, addressing this debate requires the development of a learning design that can be adapted to different learners and different learning environments. It is proposed that a learning design composed of analysis, construction and deconstruction activities can cater for development of multi-literacies (see Figure 1).

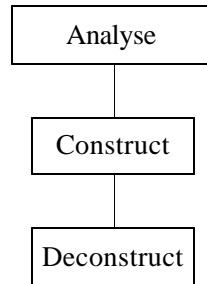


Figure 1: The *Analyse, Construct, Deconstruct* learning design to support multi-literacy development.

The process of analysis allows learners to be presented with and explore issues from a critical perspective. Construction activities provide learners with the opportunity to experience the issues they have explored. 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). The process of deconstruction challenges learners to critique the process and product of their construction activities and this, in turn, informs the next project (process).

### Background to the Project

The 'Schools News Project' is a research study comprising staff from the Faculties of Education, Informatics and Creative Arts at the University of Wollongong, Australia. The aim of the project is to develop learning activities and resources that facilitate high school students' creation of digital video news. The hypothesis for the study is that student involvement in such learning activities will support their development of multi-literacies. Students selected from the mid years (ages 13-15), are being targeted for the study.

### Contextualising the Learning Design within a Technology-Supported Environment

The development of multiple literacies will enable students to develop the skills required to communicate, understand, translate and critically examine a complex world. Immersed in an environment where students need to think critically about visual data and develop the ability to understand layers of meaning (Kress and Van Leeuwen 1996), students require learning environments which provide for deeper levels of meaning. It is envisaged that exposing students to the proposed learning design, appropriately supported in technology rich environment, will allow the essential learning to occur.

Within the Australian K-12 context and the research investigation currently in progress, this learning design can be defined through student exploration of journalism issues and process, collaboration on digital news stories, and critique of their own experience and outcomes.

#### *Analysis*

Within the analysis phase, students are presented with the raw video footage, source documents, reporter's notes and the final broadcast news story from an actual event (in addition to the final products of the same events from a range

of media outlets). Students use these resources to analyze the news event, understand how the story was constructed, and derive meanings from the final story. They are encouraged to consider simple legal and ethical implications for themselves (as journalists) and the subjects in the story.

### *Construction*

The construction phase comprises a number of tasks - identification of a ‘news-worthy’ story; the research process, interviewing skills, news story writing, filming and camera work, and video editing - as student teams create digital video news items about their school community. The feedback from the community will inform the student teams of the quality of the product, its story telling qualities and its social responsibility in terms of ethical treatment of those whose stories have been included in the news items. The community will be encouraged to provide feedback on the stories during production and after broadcast. For young people to go through the process repeatedly, of producing news in the same process as the ‘professionals’ brings about realizations about the “constructedness” of those mass news media products. Students will have access to a variety of technology tools including shared network workspaces and digital video editing tools. Students also have access to on-line communication tools to draw upon the expertise of news industry professionals to develop their understanding of the broadcast news process, including the legal and ethical responsibilities.

### *Deconstruction*

Within the deconstruction phase students discuss the process in which they engaged to develop their news items. Students also critique the final product to identify the meanings people might take away from the story. Table 1 provides an overview of the literacies expected to be developed through the tasks associated with the contextualized learning design.

	Analyse	Construct					Deconstruct
	Review/Discuss	Research	Interview	Write	Film	Edit	Critique/Discuss
Critical literacy	✓	✓	✓	✓			✓
Information literacy		✓	✓	✓			✓
Language literacy	✓	✓	✓	✓			✓
Media literacy	✓	✓	✓	✓	✓	✓	✓
Numeracy					✓	✓	
Technology literacy		✓			✓	✓	✓
Visual literacy	✓				✓	✓	✓

Table 1: Literacies developed within each task of the contextualized learning design.

## **Project Activities and Next Steps**

The initial stage of the research project is focused on teachers’ perceptions of the plausibility of the generic learning design to support multi-literacy development. Importantly, the expertise of classroom teachers will also be drawn upon to detail the learning activities, identify the required resources and the specifications for tools that will support the learning process. Involvement of teachers in contextualizing the learning design is critical for identification of limitations and opportunities of implementing the design in a classroom setting. Data collection instruments to measure processes and outcomes associated with multi-literacy skills will be developed concurrently to the specification of the learning activities. Subsequently, the project will involve the production of defined learning resources and tools.

The emphasis of the research study will be the implementation of the contextualized learning design through a staged intervention approach. High quality student outcomes are the result of learning designs which capture both deep knowledge and deep understanding. Today, it is important for teachers to provide for their students rich experiences which allow for critical analysis and critical thought, while developing a range of literacies. In this

project, through the use of technology, students make informed decisions and demonstrate meaningful understandings with the support of a community of interest. This study contextualizes an exploratory learning design while exploiting the use of e-learning principles which supports this innovative type of learning.

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