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## **Rethinking the Literacy Capabilities of Pre-Service Primary Teachers in Testing Times**

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*Abstract: This paper demonstrates how teacher accreditation requirements can be responsibly aligned with a scholarly impetus to incorporate digital literacies to prepare pre-service teachers to meet changing educational needs and practices. The assessment initiatives introduced in the newly constructed four year undergraduate Bachelor of Education program at one Australian university are described and analysed in light of the debates surrounding pre-service primary teachers' literacy capabilities. The findings and subsequent discussion have implications for all literacy teacher educators concerned about the impact of standardised assessment practices on the professional future of teachers.*

### **Introduction**

As a group of committed literacy teacher educators from five universities across three Australian states, the authors bring professional critique to the problematic issue of what counts in current and possible future measures of pre-service teachers' literacy capacity. In times when normalising models of literacy assessment ignore innovative developments in technologies, we provide an example of what is happening at the 'chalk-face' of literacy teacher education. This paper describes a study that demonstrates how responsible alignment of teacher accreditation requirements with a scholarly impetus to incorporate digital literacies to prepare pre-service teachers will help address changing educational needs and practices (AITSL 2012; Gillen & Barton 2010; Hattie 2003; Johnson, Smith, Willis, Levine & Haywood 2011; Klein 2006; Masny & Cole 2012; OECD 2011).

### **Pre-Service Teachers' Literacy Capabilities: Discourses of Deficit and Blame**

Much of the literature investigating pre-service primary teachers' literacy capabilities employs a discourse of deficit, which places emphasis on their supposed inadequacies rather than their strengths (Fielding-Barnsley 2010; Fielding-Barnsley & Purdie 2005). As Stephenson (2009) reminds us, unfounded concepts or 'memes' do not have to be based on any empirical validity to become commonplace and unquestioned (see, for example, Hattie 2003; Snyder 2008). "Successful memes tend to be those that grab attention, trigger an

emotional response, help in the creation of new memes, fit in with existing memes and memplexes, and those that provide an explanation of observations and experiences” (Stephenson 2009, p. 38). The portrayal of the beginning teacher or pre-service teacher who is lacking in literacy competencies is an illustration of such a meme created when public opinion communicated in the popular press is layered with findings from research based on narrow conceptions of literacy. For example, claims about pre-service teachers’ deficiencies are regularly made in newspapers with headlines such as *Can't write can't spell...* (The Age, 26 February 2007), *Better By Degrees - Teacher entry scores targeted in bid to lift classroom standards*, (The Courier-Mail, 16 October 2010), or *Teachers have a lot to learn* (The Australian, 4 March 2013). Recommendations from national reports or government inquiries promote the need for beginning teachers to “possess high levels of personal language and literacy competence, and the ability to communicate effectively with a range of audiences” (Queensland Board of Teacher Registration (QBTR) 2001, p. 48). These reports and others like them seem to support the premise that pre-service teachers’ literacy capabilities are deficient. For example, the 2009 report that reviewed the status of teaching in Queensland claimed that:

In the course of this review, concerns were raised about the adequacy of some primary teachers’ levels of content knowledge. For example, reference was made to the limited writing skills of some teachers. These concerns echo concerns raised with the National Inquiry into the Teaching of Literacy about the literacy skills of pre-service teachers. The Inquiry noted ‘some scepticism among practising teachers about the personal literacy standards of new graduates’ (Masters 2009, p. 62).

Masters implies that the review’s findings are supported by the National Inquiry that was conducted in 2005 and resulted in the *Teaching Reading* (Department of Education, Science and Training (DEST) 2005) report suggesting little has changed over this time. In this report, the data quoted as evidence are provided through a description of “issues raised” in focus group discussions by participants.

The literacy competency of student teachers was raised as an issue in all focus group discussions. Participants reported that many pre-service teachers lacked the literacy skills required to be effective teachers of reading. These pre-service teachers needed help to develop their foundational literacy skills. They also needed explicit teaching about meta-linguistic concepts, for example, phonemic awareness, phonics, and the alphabetic principle. Although the literacy competence of student teachers is assessed in some way in most courses, and in some cases pre-service teachers who do not have particular assessed levels are required to undertake specific course work to redress this deficiency, the practice was not universal (DEST 2005, p. 50).

Tracing the provenance of The National Inquiry (DEST 2005) it appears that this report drew on a variety of sources designed to support the position that pre-service teachers’ literacy competencies are unsatisfactory. For example, the work of Fielding-Barnsley and colleagues is used to argue that pre-service teachers have a “positive attitude to but poor knowledge of metalinguistics in the process of learning to read” (Fielding-Barnsley & Purdie 2005, p. 65). However, Fielding-Barnsley’s (2010) contributions are based on administration of questionnaires to pre-service teachers at only one university in Queensland, Australia. Working from a perspective that values the explicit teaching of phonemic awareness and phonics as an essential and predominant component of reading instruction, Fielding-Barnsley’s studies portrays pre-service teachers as incompetent and ignorant. For example, in her latest study she reports that:

These results indicated that, even though pre-service teachers felt that phonics is important in teaching reading and were confident in knowing the definition of phonics, they were less confident in defining a phoneme and very weak at being able to count individual phonemes in words (2010, p. 106).

Three issues need to be raised about this comment. First, the claim that pre-service teachers are “very weak” in their ability to count phonemes is based on one question in a six question ‘study questionnaire’. The question, “How many phonemes are there in each of the following words: chop..., box..., this...?” is followed by the question, “How prepared do you feel to teach beginning readers?” with a 6 point scale from “not well prepared” to “well prepared”. It could be argued that asking respondents to rate their ability to teach reading directly after asking them to demonstrate knowledge could impact on the reliability of the responses. Second, it is important to note that other components of broader conceptions of literacy are excluded from this appraisal of the pre-service teachers’ capabilities. Third, the 12 items about “attitudes towards early reading and writing” and 10 items about “knowledge of the structure of the English language at both word and sound levels” (Fielding-Barnsley & Purdie 2005, p. 69) are offered as a proxy for making claims about pre-service teachers’ metalinguistic knowledge, a concept identified by Fielding-Barnsley and Purdie (2005, p. 65) as “an acquired awareness of language structure and function that allows one to reflect on and consciously manipulate the language” (p. 65). However, as Kress (2010), Walsh (2006) and others have warned, educators in today’s world need to shift from a purely linguistic appreciation of literacy to a semiotic view that attends to multiple modes of communication in texts.

The *Teaching Reading* report also relies on the Australian Government Report, *Prepared to Teach* (Louden et al. 2005), to make claims about beginning teachers’ lack of confidence in “teaching specific aspects of literacy such as viewing, spelling, grammar and phonics” (DEST 2005, p. 51). Yet, as Louden has argued elsewhere (2008), despite over 100 reviews into Teacher Education in Australia over the last 40 years, there has been little empirical data collected that disaggregates factors that can influence the effectiveness of teacher education programs in relation to literacy development. In most of the reports reviewed for this paper, there is an inextricable link set up between the quality of the education provided during course work and practicum, and the quality of the pre-service teachers undertaking these courses. Commentary on the capabilities of pre-service teachers is often limited to a discussion of university entry requirements, a discussion that is based on the tenuous and often disputed connection between the tertiary entrance ranking and pre-service teachers’ academic abilities (Levy & Murray 2005). Moreover, discussions of this ilk fail to appreciate the significantly reduced numbers of pre-service teachers entering teacher education directly from secondary school. As a case in point, at one large Queensland university, 38% of the first year pre-service teachers enrolled at the city-based campus were immediate school leavers, with school leavers comprising 34% of the first year pre-service teachers enrolled at the satellite campus of the same university (Exley, Walker & Brownlee 2008). This highlights one of the more common threads in deficit discourses apparent where other teachers, other systems and other people, are blamed for the pre-service teachers’ lack of skills or knowledge. Here, for example, is part of the findings of a study where the authors attempted to explicitly teach pre-service teachers elements of grammar:

Pre-service teachers need to come to college with a solid foundation in English grammar so that faculty in teacher education programs can build on it rather than have to teach the fundamental structures and knowledge about grammar before any kind of instruction can take place about applying this knowledge in a classroom setting (Hadjoannou & Hutchinson 2010, p. 103)

Here, the ‘blame’ is attributed to the education pre-service teachers receive before they attend university.

Another aspect of the debate is that much of the research focuses on pre-service teachers’ and graduate teachers’ own *perceptions* of their literacy competencies, or their *confidence* in their own competencies. Illustrating the dangerous assumptions made in such investigations is this comment by members of the team who prepared the significant Australian Government

Report, *Prepared to Teach*, (Louden et al. 2005). In writing about the findings of this report, Rohl and Greaves argue that:

Compounding this lack of preparedness to teach literacy to these pre-service teachers is the beginning teachers' apparent lack of knowledge about particular aspects of literacy, particularly spelling and phonics, identified by themselves and by senior school staff (Rohl & Greaves 2005, p. 7).

What is not clear here, but is abundantly clear in the methodology described in the paper quoted above and in the report, is that these claims are based on surveys of *perceptions* of abilities. There are many methodological and epistemological issues with relying on self-reporting of confidence. For example, while the report *Prepared to Teach* (Louden et al. 2005) used such questionnaires, Loudon himself points out some of the problems when, “rather than ascribe their difficulties in the first year of teaching to the complexity of the role, new graduates conclude that they have received poor or impractical preparation” (2008, p. 358).

In contrast to the portrayal of pre-service teachers as deficient in their literacy abilities, the study reported on in this paper sets out to examine the literacy capabilities and expertise of the pre-service teachers enrolled in one particular program as they engaged with ‘new’ digital and more ‘traditional’ literacies.

### **New Literacies, New Capabilities**

When making claims about pre-service teachers’ competencies, most of the reports and studies reviewed in the previous section focus on traditional views of literacy. There is an emphasis on phonemic awareness (Fielding Barnsley 2010), grammar (Hadjioannou & Hutchinson 2010), and/or spelling (Penn-Edwards 2010). Yet in a review of teacher education, the QBTR (2001) commented on the tensions between these traditional views and the demands of ‘new’ literacies, including those pedagogical approaches informed by multiliteracies (Cope & Kalantzis 2009) and the need to incorporate digital texts into classrooms (Honan 2009, 2010a; Simpson & Walsh 2013). This tension is often expressed as a choice between focusing on the technical skills associated with traditional literacy education, and the need to develop pre-service teachers’ awareness of the wider view of literacies as social practices including multiple literacies and multimodal literacies (Bishop 2009; Cervetti, Damico & Pearson 2006). As Klein argues:

prospective teachers’ knowledge work should be nuanced by an appreciation of text production and interpretation as meaning-making practices, as social and moral action (2006, p. 195).

International studies also decry the lack of integration of new technologies into teacher education. The Centre for Educational Research and Innovation (hereafter CERI 2009) reports that:

In most OECD countries teacher training institutions are not doing well at providing student teachers, not only with the vision, but, what is even more important, the required hands-on experience of learning with technology (CERI 2009, p. 1).

Likewise, the influential *Horizon Project*, which each year identifies emerging technologies likely to have an impact on education internationally, also notes the slow progress of teacher preparation programs to design coursework that develops digital literacies (Johnson, et al. 2011).

It seems that contemporary literacy teacher education is situated within a range of complex and contradictory discourses about the kinds of literacies with which pre-service teachers should be prepared to engage in their classrooms. For example, institutional and societal discourses demand that teachers teach the ‘basic skills’ of reading and writing, while at the same time expect that they will engage with the ‘new’ literacies associated with digital

technologies (Rowan & Honan 2005). In many industrialised nations, competing versions of 'what counts' as literacy have been taken up in various policy documents, and it is taken for granted that teachers will be able to make daily pedagogical decisions based on these policies (Honan 2010b). As awareness of the complexity of literacy grows, so too does the responsibility for teachers to become familiar with new approaches to communication and interaction which build on knowledge about writing and reading to emphasise design (Kress 2010) with vision for possible classroom applications.

The authors of this paper all believe that explicit teaching about various forms of literacies (new and traditional) is vital in teacher education and that pre-service teacher education should reflect the complexity of literacy in contemporary contexts. The study reported in this paper showcases how pre-service teachers from one university are learning to navigate their own pathways through the literacy demands of their personal lives, their academic study and their professional futures. It provides an analysis of the literacy practices pre-service teachers demonstrate and are challenged to learn during their degree programs.

## Research Context and Methods

The study reported on in this paper was a pilot study used to investigate whether the methods we had devised could be used to analyse the literacy demands of some of the courses offered to pre-service teachers across Australia. We selected the literacy education courses within a four-year undergraduate Bachelor of Education degree in Primary Education at one Australian university. The university is a member of the 'Group of Eight' (Go8): "a coalition of leading Australian universities, intensive in research and comprehensive in general and professional education" (<http://www.go8.edu.au/>). The focus on teaching in the primary school years is a relatively recent introduction to the programs offered at this university and aims to equip pre-service teachers with the skills, knowledge, growth, and dispositions necessary to become leaders in the education field in the 21st Century.

The content of the literacy education courses within this pre-service teacher program was designed in light of the goals expressed by the QBTR (2001):

...the goals of literacy education must focus not only on the mastery of certain knowledge and skills but, in addition, the use of these skills in various social contexts. Furthermore literacy education will need to foster the attitudes and abilities needed to continue to master and use the evolving languages and technologies of the future. Literacy education must also focus on critical engagement and understanding of text and its inherent ideologies, in all its forms, as well as competency in creating such texts (p. 13).

During the program design phase it was assumed that future teachers would need to handle the literacy demands of *both* print and digital materials and be confident and competent in delivering high quality intellectually demanding literacy education. In light of the deficit discourses circulating about graduating teachers' literacy abilities (discussed above), a study was devised and undertaken to investigate the literacy capabilities demonstrated by pre-service teachers as they undertook the assessment associated with English Curriculum and Literacy Education studies in the new degree.

Data were collected from a cohort of pre-service teachers undertaking the first of three compulsory Literacy and English Curriculum courses within the Bachelor of Primary Education program. In 2010 and 2011, the three assessment tasks for the first year course included:

1. a digital, multimedia representation of pre-service teachers' own literacy identities;
2. a written profile and reflection of a primary school student's engagement with literacies at home and in school; and
3. three pieces of writing that were designed to assess the pre-service teachers' abilities to write explanations, discussions and descriptions.

For the purpose of the study, the first and third tasks were selected to provide a suitable contrast between the construction of a digital text (assessment task 1), which requires the use of ‘new literacies’, and the preparation of a print text requiring the use of more traditional academic writing styles and genres (assessment task 3).

In brief, in assessment task 1 (hereinafter the ‘digital task’), pre-service teachers were asked to develop a multimedia personal literacy profile using a mixture of photos, text, images, music and video presented in any kind of digital format (for example, PowerPoint presentation, or any other kind of presentation software (such as Prezi); a blog; a webpage; or a video). They were provided with illustrations of the formats through modelling in lectures and tutorials, technical assistance, provision of links to websites and examples of texts that make use of the multimodality afforded within these formats. The criteria against which these digital tasks were assessed were designed to gauge the pre-service teachers’ ability to: communicate meaning through a multimedia presentation; demonstrate understanding of the nature of literacy as it is explained in the course content and readings; and construct a multimedia presentation that captures the depth and breadth of literacy practices used in a variety of social contexts.

In assessment task 3 (hereinafter the ‘academic task’), pre-service teachers were required to prepare three written responses of approximately 700 words each to demonstrate understanding of the content and readings for the course. They were asked to:

- **Explain** their understanding of the Four Resources Framework;
- **Discuss** the reasons for tapping into and building upon children’s existing funds of knowledge and virtual school bags that they bring into literacy classrooms; and,
- **Describe** the changing nature of texts, and the changing ways that literate people interact with texts.

The criteria against which these academic tasks were assessed were designed to gauge the pre-service teachers’ ability to: demonstrate the overall understanding of the key concepts using a wide range of readings and core content; use of appropriate academic styles and conventions including mastery of the macro and micro features of each of the three genres of explanation, discussion and description (Derewianka 1990) or innovations on text types (Martin 2009).

Once all the assessment tasks were returned to the pre-service teachers, copies were collected from those pre-service teachers who had consented to be part of the study and organised into two data sets: ‘digital tasks’ (n=32) and ‘academic tasks’ (n= 27<sup>1</sup>).

## Analysis

Given that the pre-service primary teacher course were designed with the QBTR goals in mind, it was decided to use this framework to guide the analyses of the two data sets. We wanted to examine the evidence that pre-service teachers had “mastery of certain knowledge and skills” and could use these skills in “various social contexts”, that they could demonstrate “mastery and use of the evolving languages and technologies of the future” and “critically engage and understand text and its inherent ideologies” (QBTR 2001, p. 13). We found that the Four Resources Model could be used as an analytical framework. The Four Resources Model (Freebody & Luke 2003) constructs literacy practices as social practices that require the use of ‘resources’ to engage with or construct a text:

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<sup>1</sup> Technical difficulties with collecting the print versions of the academic tasks resulted in the different number of tasks collected for each set.

- **Code breaking resources** are necessary in order to crack the codes and symbols of particular semiotic systems used in texts: linguistic, auditory, visual, gestural, spatial or an amalgam.
- **Text participant resources** are those required to make meaning of any text. One draws on prior experiences and knowledge about the content and type of text in order to make meaning of it.
- **Text using resources** require an understanding of the social purpose of texts as well as the context in which the texts occur.
- **Text analyst resources** are required to enable a critical view of texts, which emphasises that all texts are social and cultural constructs produced by specific authors at specific points of time and therefore represent particular ideologies and world views.

To use the Four Resources Model as an analytic tool to interrogate the construction of texts required the application of a set of analytic questions. In this case, one set of questions were adapted from Honan's (2012) list of questions for reading digital tasks, and another set of questions were adapted from the work of Harris, McKenzie, Fitzsimmons and Turbill (2003) around reading print based texts. The differences in the two sets of questions took account of the new kinds of modes and codes available in digital spaces. For example, one of the code breaking questions asked of the digital tasks was "What typographical conventions and/or communicative modes (audio, visual, textual, systems-based, spatial, layout) are used?" (Honan 2012, p. 64). One of the code breaking questions asked of the academic task was "What text patterns and conventions are used?" (Harris et al 2003, p. 71). The latter question helped identify the use of in-text references that conformed to APA requirements, while the former question helped identify the structure of a slide in a PowerPoint presentation (horizontal segmentation using photos and words divided into halves or thirds). Each set of texts was examined and a set of descriptive points about each set was developed. These points were then collated and compared to produce a set of statements about each kind of text.

## Findings

We report here on the 32 'digital tasks', presented in a variety of formats, submitted for assessment task 1 and the 27 'academic tasks' submitted for assessment task 3. Most digital tasks were PowerPoint presentations (14); followed by blogs (9) either using a blogging tool or a website created but used as a blog forum. Seven pre-service teachers created videos including one that was the visual accompaniment to a song, which was the focus text, and two pre-service teachers created Prezis. The findings of the analyses are grouped below using the headings from the Four Resources Model (Freebody & Luke 2003). We point out again that these tasks are being analysed to demonstrate the pre-service teachers' literacy capabilities to provide a broader and more comprehensive understanding than can be demonstrated in a stand-alone test as is currently being proposed by the Queensland College of Teachers (Australian Council of Education Deans 2012; Queensland College of Teachers 2012). However, we also are cognisant that these results are not generalizable across cohorts, but they do point to the complexity of the literacy demands required, complexities that are discussed further below.

## Code Breaking Resources



In this context, mastery of knowledge and skills about how to create a text was the focus. In particular we examined the texts to find evidence of the pre-service teachers' knowledge of the semiotic codes used and their skills in application of those codes.

In relation to the digital task, the flexibility in the choice of format provided space for the pre-service teachers to demonstrate existing capabilities without having to learn a new piece of software or text creation tool if they chose a digital platform they already knew. The use of PowerPoint varied significantly, so in some cases the presentation used the bare minimum capabilities of the software, with a default theme, bullet points listing for listing phrases, sentences and sometimes paragraphs, while other presentations included embedded video, voice recordings, clipart, downloaded and student created images, and screen shots. Hardly any spelling, grammar and punctuation errors were noted, despite university teaching staff paying attention to this aspect of the presentations. The use of references and referencing was noted as lacking in the digital tasks; few pre-service teachers provided details about the source of images, music or video clips downloaded and many pre-service teachers who elected to use PowerPoint presentations seemed not to have the requisite knowledge about copyright.

In contrast to the variety of types of texts submitted for the digital task, the academic task required the submission of a linear piece of text, divided into three sections that used three different genres or text types. Whilst genres and text types are defined by their social and cultural purposes and contexts of production, we use 'genres' to refer to texts with typical staging features (Derewianka 1990) and 'text types' to refer to texts that innovate on the typical staging features of genres (Martin 2009). Despite this scope to be innovative and creative in a response, many pre-service teachers did not experiment. There was a narrow and formulaic interpretation of the requirements thus making it easier to pinpoint the inaccuracies or inconsistencies of the 'academic codes', for example the use of APA referencing styles, use of passive voice, paraphrasing and use of referenced quotations from academic sources. Spelling, punctuation and grammatical errors were identified often in the academic task.

### **Text Participant Resources**

When examining this aspect of the pre-service teachers' work, we considered the evidence of understanding of the nature of the text being created as well as demonstration of knowledge of the topic.

For the digital task, the knowledge that was required to be demonstrated was about the concepts of 'new' literacies (Lankshear & Knobel 2003), including the uses of new technologies, literacies as social practices, and production (Bruns 2008) processes when engaging with digital texts. It is interesting to note that the use of illustrations and examples to support demonstration of knowledge was strong in the digital tasks. Given that the digital task focus was on their 'personal' literacy practices, the use of first person and examples drawn from their own daily lives were common.

For the academic task, pre-service teachers were required to demonstrate knowledge about the Four Resources Model (Freebody & Luke 2003), 'funds of knowledge' (Moll, Amanti & González 1992), and 'virtual school bags' (Thomson 2002). The term 'funds of knowledge' refers to the kinds of information and individual gains from life experience and cultural heritage, which will be specific to each person (Moll et al 1992). The term 'virtual schoolbag' is a metaphor for the personal history and skills that a child will have developed from home and community contexts before they start school (Thomson 2002).

As expected of an academic task, many pre-service teachers demonstrated their knowledge of these topics via the work of theorists and scholars to develop their arguments. Inclusion of personal opinion or personal perspectives on the issues discussed in the

academic task was far less common. While this does ascribe to the conventions of 'distance' created in academic tasks, it also meant that in some cases the pre-service teachers did not demonstrate a full understanding of key concepts.

### **Text Using Resources**

When making use of text-using resources to construct both digital and print texts, writers display, for example, their knowledge of the 'genre' (Derewianka 1990) or 'text type' (Martin 2009). Understanding the relationship between the way a genre or text type is constructed and its social and cultural purposes and contexts is essential. In many ways, this point can be used to argue against the use of particular kinds of 'everyday' genres in classrooms (primary, secondary and university classes), especially when digital texts are used for artificially constructed, 'educational' or education-based purposes (Lankshear et al. 2000). In the case of the texts constructed by pre-service teachers for an assignment that was to be assessed, there were two areas of knowledge that they needed to display: first, that both digital and academic tasks were being created for the purpose of assessment, and secondly; demonstrating an understanding of the textual qualities of the genre or text type being applied.

For the digital tasks, the pre-service teachers needed to demonstrate they understood how to use a genre or text type in the cultural context of a university-based assignment, rather than how to use the genre or text type in the social contexts in which they more usually occur. This could explain why so many pre-service teachers opted to construct a PowerPoint presentation (14 of 32 collected tasks). If this type of digital text is the one most commonly used in educational settings (Craig & Amerinc 2006), and the pre-service teachers had grasped the concept of authentic use of texts in appropriate social contexts, then this demonstrated real mastery of text using resources. Selwyn and Facer (2007, p. 13) believe the term 'affordances' can describe the combination of 'technological possibilities, user capabilities and understandings, and the wider social context' that can be engaged with when constructing digital texts. Most of the examples of PowerPoint use took advantage of the affordances available within this particular type of text. However, those who attempted to use blogs tended to create linear, non-interactive texts with very few hyperlinks or other connections between words, image, or sound, failing to take account of the affordances offered for making meaning in these multimodal texts. The course content in relation to the digital task only related to the topics, although a variety of digital texts were used in delivering this content. It was felt that providing a model or scaffold for the digital task might restrict pre-service teachers and lead them to duplicate or replicate the university staff's knowledge of these texts, rather than providing the pre-service teachers with the freedom to demonstrate their text user knowledge for digital task.

In the academic tasks the pre-service teachers needed to display understanding of the textual structures of explanation, discussions and descriptions and the ways these genres are used in academic writing.

The mastery of the types of texts being created could also have been affected by the scaffolding and support provided for the academic task production. In the weeks leading up to the submission of the academic task, the course content was related to the teaching of writing in the primary and middle years of schooling, including the history of the genre approach and the models and scaffolds provided in curriculum resources. The course content was directly related to both the topics of the academic task and the writing of particular genres and text types.

### **Text Analyst Resources**

Using text analyst resources as a producer of a text requires a certain level of reflexivity, that is, a self-awareness of one's position in relation to the knowledge being represented in the text. In accordance with the Four Resources Model, text analyst resources should be used at the same time as the other resources, and that we should therefore be able to find evidence of this reflexivity in texts created by literate people, just as we find evidence of their code breaking abilities. In this case, the course content included the readings based on the 'funds of knowledge' (Comber & Kamler 2004) and 'virtual school bags' (Thomson 2002) concepts to support pre-service teachers to examine their own relatively privileged insider status with regards to literacy learning.

In the digital tasks, many of the pre-service teachers presented their own experiences with school and home literacy learning as normative, with little recognition that there may be other ways of learning how to be literate. For example, many of the digital tasks included images of favourite picture books, adults reading to children, and written reflections on developing a 'love' of reading in the early years of school. Occasionally, attention was drawn to the impact of family environment and parental influences on these literacy learning experiences.

In the academic tasks, those responses that most narrowly followed the classical generic structures of explanation, discussion and description seemed to almost 'channel' the lecture content and readings, providing little evidence of personal opinion, critique or reflexive commentary on the topics. There was an occasional innovation from this prescriptive approach, with responses written in a personal voice and a self-awareness applied to the task.

The lack of personal opinion, and compliance with the point of view created in the course content and readings point to some of the contradictions in this kind of assessment. On the one hand, pre-service teachers are encouraged to express their own opinions, while on the other hand we hope they will engage with the views on literacy education offered via the course content. For example, one part of the academic task was a discussion on the value of building home-school connections. The course content on this topic presents pre-service teachers with a non-deficit view of these relationships, where teachers make use of children's 'funds of knowledge' to improve literacy education. However, in the academic task, some of the pre-service teachers ignored the course readings and presented a view of home-school connections where the parents are viewed as needing instructions and guidance on how to 'help' their children.

## Discussion

In this paper we examined one case of one pre-service teacher education program's response to the theoretical and pragmatic challenges of coping with shifting conceptualisations of literacy/ies at a time when some of the rhetoric informing debates about literacy appraises pre-service teachers through a discourse of deficit. We have analysed the literacy capabilities of the pre-service teachers through one digital task and one academic task. The tasks are typical of the pedagogic designs being developed in teacher education programs throughout Australia more generally (see also Dooley, Exley & Comber, 2013), which reflect a deliberate shift from narrow conceptions of literacy towards a broader understanding of literacy capabilities (Lankshear & Knobel 2008).

The discussion of the findings is organised around three key points as follows:

1. Complex literacies;
2. Investment in future literacies; and
3. Visions of future pre-service teacher education.

In discussing these findings we avoid making generalised assumptions about ‘all’ pre-service teachers. The analyses presented in this paper are drawn from data collected from one part of one cohort at one university.

### **Key Point 1: Complex Literacies**

The findings show that these pre-service teachers are capable of demonstrating a broad range of literacies that go beyond narrow skills as the CERI (2009) and Horizon (Johnson et al 2011) reports recommend should be the case in higher education. For example, the QBTR’s (2001) goals for literacy education were represented in the pre-service teachers’ work as they produced texts to meet assessment requirements and made deliberate language choices to appropriately match the social purpose of the text and their audience. As a cohort, the pre-service teachers demonstrated functional, pragmatic and critical awareness of literacy through their mastery of knowledge and skills, application of skills and critical engagement with text through their presentation of appropriate ‘content’ within each task.

As individuals, pre-service teachers demonstrated their knowledge of ‘new’ literacies in the digital task and more traditional literacies in the academic task, as per the task requirements. What was particularly interesting though were the misconceptions about appropriate coding (language use) that appeared to exist for some pre-service teachers across the two modes. For example, referencing sources was clearly evident in the academic task but frequently inaccurate or even omitted in the digital task. However, this result could be an issue of clarity with assignment criteria or a result of the assessment design as much as about student capability. There were few grammatical, spelling and punctuation errors identified in the digital tasks. This could be attributed to the limited use of the linguistic mode, or that previewing the digital task on a screen included using inbuilt grammar and spelling checkers. Another observation about complex literacies was that PowerPoint was heavily used in the digital task in comparison to other platforms. This suggests that the application was not only well known but was also viewed as highly suitable to the university assessment context, showing an awareness of the importance of social context in the construction of texts. There was not much evidence of text analyst resources being used in the digital task either. This finding is not surprising given the climate and focus on code breaking and literacy ‘skills’ in both schools and higher education settings and the lack of emphasis on students demonstrating their critical awareness of the assessment tasks per se.

Although the academic task provided an opportunity for a creative response, most of the pre-service teachers drew upon narrow interpretations of the requirements that matched a particular written genre ‘typical’ of university assessment. There was less ‘experimentation’ with mode and format of delivery in the academic tasks than expected and many pre-service teachers were not explicitly critical in their approach to this task. However, this could reflect student perceptions of the nature of tertiary or university assessments rather than their abilities to provide scholarly reflection on the assessment tasks.

### **Key Point 2: Investment in Future Literacies**

We believe that pre-service teacher education should involve building attitudes and abilities to deal with the evolving languages and technologies of the future. This view acknowledges that pre-service teachers need to become aware of digital modes of communication as well as print, and that due recognition should be given to the digital knowledge they may bring to the profession. Research into the development of literacy in the digital age is beginning to reveal the ways in which reading print is different to reading digital texts (Walsh 2006; OECD 2011). As Kress states, “digital literacies are in a deep and

profound sense new literacies, not merely the traditional concept of literacy – reading and writing – carried on in new media” (2010, p. 6). This requires teacher educators to inform pre-service teachers about the different affordances of multimodal texts to prepare them for classrooms where digital technologies are expected to be commonplace.

The findings demonstrate that some of the pre-service teachers in this particular cohort have already developed high level literacy capabilities across multiple modes. For example, some made good use of the ‘newer’ conventions around digital texts. This is not to say that all pre-service teachers are fully rounded across all modes as in some cases they appear to have less knowledge about written conventions of digital texts (e.g. referencing of images, music, video clips compared to written APA referencing).

Investigation of the responses offered using one application did reveal differences in the ways the pre-service teachers understood that the affordances of this technology. For example, the 14 PowerPoint presentations varied significantly, demonstrating awareness of basic elements (e.g. default theme, bullet points listing of points, sentences and sometimes paragraphs) to more sophisticated control of its affordances (e.g. embedded video, voice recordings, clipart, downloaded images, and screen shots).

### **Key Point 3: Visions of Future Pre-Service Teacher Education**

The third key point arising from the findings relates to the concern that we operate in a research context of “consistent obsolescence”, that is, our research is necessarily one step behind the latest developments (Masny & Cole 2012, p. 149). Everywhere there are signs that the world and models of learning have moved on (Casey 2013) yet the future of pre-service teacher education may be fettered by backwards looking perceptions of what literacy capabilities pre-service teachers should demonstrate. Reports on pre-service teacher education programs from various countries already identify the lag between pre-service teachers’ out of school practices and higher education integration of digital literacies – even including early adopters who embed innovative practices in university contexts (CERI 2009). In Australia, significant funding has been spent on supporting “digital revolutions” and, as Snyder warned, at the same time sound literacy policy often seems more affected by public opinion instead of researched informed enquiry (2008, p. 6). In addition, it appears that government imperatives may actually be working in conflict with each other. For example, programs such as *Teaching Teachers for the Future* (AITSL 2012) stand in stark contrast to the movement that promotes high-stakes pre-registration tests for pre-service teachers premised on ‘old school’ concepts of literacy capabilities (Australian Council of Deans of Education 2012; Masters 2009; Queensland College of Teachers 2012).

We understand that pre-service teachers’ personal, academic, and professional development takes place in the context of highly politicised views of literacy as well professional requirements. Yet if pre-service teacher education continues to base its practices on “the characteristics of the former semiotic and social world” (Kress 2010, p. 7), then the teaching profession is put at risk from “an increasingly vast gap of practice, understanding and of disposition to knowledge”. (Kress 2010, p. 7). Our brief exploration of contrasting digital and academic assessment tasks has shown that pre-service teacher education can promote the interface between traditional and digital literacies in such a way that connections are made to meet changing educational needs and practices.

### **Conclusion**

In this paper we have challenged the portrayal of the pre-service teacher as one lacking in literacy competencies, and in contradistinction, we look to a broader understanding

of what constitutes literate practices in pre-service teacher education. While focusing on the national context of teacher education in Australia, we have presented data to challenge the view of pre-service teachers as deficient by focusing on an illustrative example from a Queensland university. We have examined how one pre-service teacher education degree has been designed to develop literacy capabilities through both traditional print and innovative digital assessment tasks. The illustrative case provides an opportunity to rethink the reductive framing of literacy capabilities as a set of skills by providing examples of broader literacies that can be demonstrated through disparate forms of assessment.

The implication drawn from our deliberations for teacher educators is that we must design learning experiences that empower pre-service teachers as authors, producers and readers of texts that balance conventional and digital literacies. For this to happen, teacher education must value the new literacies and give it currency by including these skills within assessment practices. To ensure that measures of quality teaching are more than just measures of competency, national accreditation and state policy must take into account ever emerging conceptualisations of literacy capabilities in the assessment of new and emerging graduate teachers.

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