Starting the conversation: Student transition from secondary to academic literacy

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Abstract

This article reports on the first phase of an investigation into the effective transitioning of secondary students to tertiary education through a focus on academic literacy. Action research was used to develop collaborative partnerships between teachers and researchers, and between students and peer mentors. We found that the interpretation of the National Certificate of Educational Achievement's (NCEA) design features and its implementation in teachers' practice may be inhibiting students' academic literacy development. In addition, it emerged that teachers in each sector held erroneous assumptions about the other sector's pedagogic practices. We attempt to reconceptualise NCEA as the flexible model its design implied as a framework within which to incorporate academic literacy development, drawing on the ANCIL model, to support students in transition to university.

Introduction

In late 2013, Catherine Woulfe reported in the *New Zealand Listener* on a hitherto secret document that analysed a large number of New Zealand tertiary institutions' concerns about the low levels of study skills and knowledge of students with National Certificate of Educational Achievement (NCEA) qualifications in science, mathematics, and engineering who were entering university study. A few years earlier, in a series of reports to the Ministry of Education, Professor Luanna Meyer et al. (2006, 2009) questioned the potential of the NCEA qualification to develop the perseverance, study skills, and knowledge to equip students for tertiary study. These are relatively recent examples of several periodic expressions of concern about the capacity of New Zealand secondary qualifications, and secondary schooling more generally, to equip students with the skills and dispositions to make not only the transition to tertiary study but also to vocational study or to the general workforce. Such

concerns are not new. Indeed, they have emerged in various forms in the 1870s and 1930s (Openshaw, Lee, & Lee, 1993), and have intensified since the 1980s as education policy and our schooling system have been explicitly, if not exclusively, tethered to economic progress and globalisation (Codd, Gordon, & Harker, 1990; Peters & Marshall, 2004). In the mid-1990s, university academics, business interests, and national media vigorously questioned how a failing secondary school system (in their view) could generate the human capital necessary to undertake further advanced education and to contribute to national economic regeneration in a highly competitive globalising world (Openshaw & Walshaw, 2010; Smith, 2000).

It is within this context of cyclic national introspection, where NCEA is but the current iteration of a long series of reforms of national secondary qualifications and credentials, that we successfully applied for and won a Teaching and Learning Research Initiative (TLRI) grant. The research explored in detail what students bring from the NCEA experience to support their academic achievement in their first year of study at Massey University. We focused on the extent to which students' secondary education was equipping them with the advanced academic literacy skills (Shanahan & Shanahan, 2008) required for a successful transition to disciplinary studies at tertiary levels.

Academic literacy is a central tenet of our research. This model of literacy, which moves beyond simple "writing skills" or "study skills", emerged out of research into writing in higher education in the United Kingdom (Lea and Street, 1998, 2006). It incorporates multiple aspects of literacy: disciplinary enculturation, writing process (including information literacy and research skills), writing and learning as social practice within a disciplinary context, and the relationship between writing, identity, and power (Lillis, 2006). It includes the knowledge, understanding, and application of scholarly strategies and processes which enable effective learning and critical thinking, as well as clear expression of meaning. A key idea within academic literacy is that entering a new cultural context necessarily involves a new phase of literacy development—and hence Year 13 students, moving into a new educational and cultural context, are required to engage not just with new writing strategies and genres, but

Emerson, Kilpin, and Feekery

also with new learning strategies and "ways of being" (Ivanic, 1997). The questions that arise, therefore, include whether schools (through NCEA) can, and should, prepare students for the academic literacy requirements of a tertiary context.

Specifically, we researched two key elements in our first year, 2013:

- the relationship between NCEA and the development of independent academic literacy skills students needed to smoothly transition to university
- the perceptions, beliefs and actions of first-year tertiary educators in relation to the skills and dispositions of their new students.

And our research project has three practical objectives:

- to research and develop a revised approach to the embedding of academic literacy skills in the senior high school curriculum and first year of tertiary study
- to create a model to nurture a collaborative partnership between secondary and tertiary teachers to improve teachers' understandings of academic literacy (and, within that context, information skills) transitions
- to produce resources that offer strategic support for academic literacy instruction for teachers of senior high school and undergraduate university courses.

In this article, we report on the work and findings of the TLRI project in 2013. We explain how we have used an action research model to recruit participants and to gather and analyse data to track the efficacy of our work. We then explore the significant findings—negative and positive—emerging from our research, with particular reference to the influence of NCEA on academic literacy development, the lack of connection between secondary and tertiary educators, and the use of an information literacy curriculum that has the potential to connect with NCEA subject achievement standards and *The New Zealand Curriculum (NZC)* (Ministry of Education, 2007).

Methodology

Implicit in the research plan was a requirement to establish connections between schools and the university that went beyond the conventional and routine information and induction days, or course planning and guidance encounters. An action research approach seemed appropriate because it emphasises participant collaboration and reflexive critique of participant views, and practice, and is flexible enough to include various narratives and critiques and conduct research in situ; that is, in Year 13 classrooms and university teaching sites (Cohen, Mannion, and Morrison, 2007).

Data collection

We used a range of data collection methods appropriate to action research methodology (McNiff & Whitehead, 2011) to gain a range of perspectives and reflections on the research process. Data were collected drawing on Mill's (2007) taxonomy of action research qualitative data collecting techniques, including "experiencing" (participant observation and meeting notes) and "enquiring" (questions asked in interviews). Data were collected systematically, and analysed and reflected on throughout the entire project. By the end of 2013, the first year of our two-year project, we had collected data from secondary school teachers and Year 13 students, using scheduled recorded meetings, professional development workshops, and mid- and end-of year interviews, and we had also collected data from tertiary teachers through a series of meetings between them and the secondary literacy leaders.

Data were disaggregated by full cohort and individual schools, and were then manually coded and analysed using themes emerging from specific enquiry streams and teachers' and students' self-reflection. The data were used for two purposes: the action focus, to inform shifts in teacher practice; and the research focus, to develop a deeper sense of shifts in attitude and knowledge. Triangulation was used to test the findings for consistency across data, including researcher, teacher, and student reflections to provide our conclusions with validity (McNiff & Whitehead, 2011; Mills, 2007).

Participants

Beginning in 2013, we located our investigation in the lower North Island, which is Massey University's natural enrolment area. We made connections with five lower decile secondary schools whose rolls had relatively higher numbers of Māori and Pasifika students, were a mix of school types and urban and rural locations, and had low levels of transition to tertiary study. Earlier in the 2000s, the schools had participated in adolescent literacy professional development through the Secondary Literacy Project (2006-2011). This work had nurtured crosscurricular literacy leaders in each school, and made the teachers aware of the pivotal role of advanced disciplinary literacy instruction in improving student progress and achievement. However, whereas this earlier professional development had focused on lower achieving Year 9-11 students, our project focussed on Year 13 teachers and their students who aspired to university study. We were able to capitalise on an existing network of people and schools with whom we could work collaboratively in an area of shared interest. We were able to recruit seven literacy leaders who engaged continuously in the TLRI project; other interested teachers participated at various points (e.g., Massey University academic literacy induction days).

We also sought to engage lecturers and tutors of first-year tertiary students to ascertain their perspectives on the quality and robustness of their students' academic literacy skills within their disciplinary courses. We focused our investigation on the text-rich faculties of humanities and social sciences, sciences, and business, all of which have large numbers of first-year enrolments.

Research findings

Our dialogue with secondary and tertiary teachers brought to light a number of issues, both negative and positive, that help shape the transition experience of Year 13 students to university study. We deal with the negative issues first, and then balance these with just as many positive elements to indicate that, given a change in perspective on the capacities of NCEA, there are grounds for optimism and progress.

Perceived constraints and limitations

A number of factors, not least school competitiveness and league tables, and particular structural design features of NCEA, are claimed by teacher participants in this study to have led to prioritising product over process during teaching and learning. This took the form of students work amassing the required achievement standard credits, and teachers' work being directed, whether they like or not, towards supporting "credit harvesting" (teacher interviews, 2013). This prioritisation gives precedence to the summative assessment of student work more than to the process of teaching and learning. As a consequence, our secondary teacher participants commented in various discussions that the development of advanced academic literacy skills, taught as an intrinsic part of the disciplinary learning process, was subservient to the pressure teachers feel to pass high numbers of students.¹

Another related issue identified by teacher participants was the conditions set out in the revised pathways. To meet government policy targets of 85 percent attainment of NCEA (Level 2) per year, students can now qualify for NCEA (Level 2) through the conventional subject-based pathway and the recently introduced Vocational Pathways Profile and Award. In both cases students require University Entrance (UE) literacy (10 credits from a range of identified conventional achievement standards or Recommended Vocational Pathway Assessment Standards).

Teachers in our TLRI project argued that demands to meet these achievement thresholds placed pressure on teachers to award UE literacy, and NCEA (Level 2) standards more generally, to students whom they feel may not be suited to advanced Level 3 or university tertiary study. Further, they were concerned that some students were potentially sent a false message about their aptitude for academic study at NCEA Level 3 and university. They observed that students now felt entitled to undertake Year 13 programmes whereas in the past they may not have enrolled for academic study at this level nor considered pursuing a university education thereafter (teacher interviews 2013). The problem, in their view, was compounded by the competitive, marketised environment mentioned earlier. Schools that ostensibly meet the achievement thresholds for UE literacy and university entrance use the results to send signals about their

effectiveness, because the results are made public through annual league tables and are used in publicity by schools competing for enrolments. One unintended outcome of the NCEA realignment revisions, driven by school marketing, seems to be that students are entering Level 3 and university who, their teachers concede, may not be ready for independent academic study, notwithstanding what their NCEA achievement suggests.²

The provision of NCEA achievement standard resources on TKI and NZOA websites also emerged as problematic. For as much as they signal ways about the reliable assessment of subject content work, they also appear to limit wider learning opportunities. The intensive scaffolding provided by readily available internal and external assessment exemplars, off-the-shelf student tasks, strategies for teaching content material, and the extensive assessment information has, we suggest, unintentionally limited teachers' professional horizons. Teachers and their students feel compelled to comply with assessment-oriented resources, which has led to spoon feeding practices in the drive for high numbers of achieving students; as one teacher put it:

We do tend to mother them a little bit and give them as much support as we can, and I do wonder whether we do start systematically pulling it away a bit more. (Teacher interview, 2013)

The irony here is two-fold. First, highly structured scaffolding is largely removed upon entry to university study, where self-reliance, perseverance, and independence are highly valued dispositions. And second, learning and practising academic literacy and information skills are not explicit requirements of achievement standards. So while students may have passed Level 3 science and mathematics achievement standards, for example, many tertiary educators we spoke to felt that achievement standards were not developing the personal dispositions, skills, and strategies that students need to independently and critically research, process, write, and present content information in university first-year courses.

Resisting reading and writing

Teacher interviews suggest that reading and, more particularly, writing are not, it seemed, highly valued as tools with which to develop students'

critical thinking skills, nor to build connected and complex disciplinary knowledge. Writing to learn beyond the prescribed requirements of the assessment task, especially to process complex information from teachers or literature using extended prose writing, is not a significant feature of student work in their senior high school years (Shanahan, 2004). Our research supports this contention, and suggests strongly that, at best, writing is seen as a utilitarian means to communicate the specific requirements of the assessment task

Teachers reported that their students were reluctant to read widely to build knowledge or enhance their thinking by writing-to-learn through extended prose (Shanahan, 2004), beyond the immediate demands of the achievement standard assessment task. Students will deliberately avoid work that involves extended writing—500 to 700 words is more than long enough. They may request digital copies of the teachers' notes on the school drive, snap a cell phone picture of the whiteboard jottings, or listen for the instruction to "copy this down!" Teachers report that a number of their colleagues and students resent writing, or express a lack of confidence in their own writing (teacher interviews, 2013). The reluctance or inability to express deeper disciplinary understandings in writing may also be related to the ease of "cutting and pasting" which has increasingly led to problems with plagiarism, where students, unwittingly or otherwise, compromise themselves by finding, copying, and pasting someone else's ideas.

Yet university study, from the first year onwards, relies on advanced, extended prose-writing skills, shaped by disciplinary discourse conventions, for learning and assessment. It seems that there is a significant disconnection between each sector's views about the role of writing in learning and student achievement, effective pedagogic approaches, and the skills students are expected to have mastered.

Academic literacy and information skills

Our research also suggests that critically informed use of information for academic study is not well understood by senior secondary students. In most disciplines, neither Year 13 teachers nor their students appear to receive accurate and up-to-date instruction about how to handle

information from a variety of sources in ways that are academically ethical and discursively appropriate. This means that students are not exposed, in many subjects, to a variety of challenging disciplinary texts, are unable to critically evaluate information in terms of authoritativeness, and may be unable to identify the purpose, audience, and task-relevance of a text. Google or Wikipedia are often the only portals for identifying information. Of real concern was the revelation that secondary students and teachers infrequently use school library resources or a librarian's expertise and access to information databases, in part due to limited resourcing of school libraries:

I don't think we are that well equipped at all ... we've been very weak in the library area and I don't just mean that in terms of books. I just mean in terms of staffing it. We are reliant on volunteers. There's a great deal of potential there to actually have someone who knows what they are doing and can direct students to good sites and help them actually do that research because oftentimes teachers may not have the information, skills or the time to help students. (Teacher interview, 2013)

Instead, teachers use their own subject knowledge, prepared notes, or a narrow range of texts for students to learn from. Yet once at university, the library, its disciplinary databases, and all the information stored therein, lie at the centre of students' daily learning. Our research raises a question, then, about the extent to which Year 13, Level 3 study is equipping students with the literacy information skills to manage successfully the information landscape they are immediately immersed in upon entry to university study.

No-one is talking

Finally, and perhaps most importantly, in the course of our research it became clear that educators in both sectors held a number of erroneous assumptions, beliefs, and opinions about what secondary school study and university study were like—or not. These were based on vicarious experiences, often through those of their own children or sentimental memories of their own experiences, and there was an obvious lack of knowledge about the extensive changes both sectors have undergone in the last 10 to 20 years. The secondary school teachers in this study had

little understanding of the extent of the digital nature of students' study, changes in assessment expectations, and how university libraries now work in the information age:

We've had several staff doing study at Massey so I was actively supporting them with their writing, proofreading and offering suggestions with improvement. With my daughter also being at university, I had a really clear idea of what the expectations were and I think I had a good grip of what was needed. Referencing is one of the things colleagues returning to study after several years away had to come to grips with. Things have altered quite significantly since they were at university. (Teacher interview, 2013).

Conversely, during a round table discussion in March 2013 and at seven seminar presentations at regional tertiary institutions in 2014, a significant majority of tertiary educators in each presentation revealed they knew very little about NCEA and its assessment structures, requirements, and demands, and in particular the changes the standards realignment process (2009–2012) has made to NCEA Level 3 achievement standards. However, many comments echoed the rhetoric of public critics that NCEA was a flawed system and was to blame for the apparent decline in academic standards. It was both striking and troubling that there seemed to be such a wide chasm and deep disconnection in knowledge and understanding between educators in both sectors about the learning experiences students were leaving behind and those they were moving to in the following year(s). We found ourselves asking, did tertiary and secondary teachers ever have a conversation in the same room?

Opportunities and potential

One important objective of the project is to develop a relational framework within which a collaborative conversation and approach can develop, and it is to these efforts and their effects that we now turn. In 2013, our efforts concentrated on building relationships with our five participating secondary schools. These efforts have led to a number of positive developments and changes in awareness and understanding of academic literacy in the secondary-tertiary transition.

Getting teachers talking

Our first priority was to start the conversation between teachers in the two sectors. We invited the schools' literacy leaders and management representatives to seminar and workshop meetings to meet with university science, social science and humanities, and business faculty members, learn more about what and how courses were delivered, visit Massey's Turitea Library, and co-ordinate a series of school visits. Our conversations were deeply enriching—at times, revelatory—for all concerned. The teachers were also given an extensive introduction to Massey's library services, which included a tutorial on Internet and database research strategies. This highlighted the restricted access schools have to academic databases, and the need to teach students how to competently and critically research online.

Our intent was to connect the experiences, knowledge, and resources of people and institutions in both sectors in as many ways as possible. We coordinated a series of discipline/subject day visits to Massey's Turitea campus that focused on how academic literacy skills were pivotal to any disciplinary study. On separate days, students and teachers who were broadly oriented towards the sciences and the social sciences and humanities were lectured on unfamiliar topics, attended tutorial sessions, toured the library and were introduced to Internet and database research approaches. Our central message was communicating and demonstrating the key factors that made for an academically successful first-year university experience. Teachers indicated it was useful to have these messages coming from someone other than them:

Most kids don't believe you, "You're a teacher. You're not the real world. I can do what I like. I'll sort it". They don't actually believe that you might know what you are talking about then you say they have to do a lot of reading and stuff at uni. I think the fact that they were exposed to that—they went to the science day and they saw what a lecture was like, they saw was research was like, they saw the sort of stuff they have to do and that brought it home. (Teacher interview, 2013)

Nurturing independent learners

One of the key issues that emerged in this study was the radical difference in teacher guidance of students' reading and writing between the secondary and tertiary sectors. At tertiary level, teacher expectations are that students will read and write in a way that is largely independent: while tertiary teachers may provide some readings, they provide little guidance on that reading, conduct no checking of comprehension outside of assessment, and expect students to find and read sources independently. In secondary schools, by contrast, reading and writing are extensively scaffolded and supported by the teacher (for reasons discussed above). Part of the academic literacy skills expectations of transitioning students, therefore, is that they make this adjustment to independent reading, writing, and learning. How to enable this transition became an important aspect of our research.

As we gathered teacher and student reflections, it quickly became apparent that this inclusive collaborative approach was generating a number of positive shifts. Earlier adolescent literacy professional development had focused on underachieving students in Years 9–11 (Kilpin, 2013) rather than on advanced academic literacy skills for Year 12 and 13 students. Our participating teachers felt refreshed by an academic literacy focus on their able seniors who were likely to go onto tertiary study. A highlight for many was the visit to the library where they were tutored on Internet search strategies, and exposed to the multitude of academic databases, most of which they did not know existed, some of which they did not know they had access to. This affirmed for them the need to reduce their own, and their students', dependence on a narrow range of mostly Ministry of Education and NZQA resources and a set of school texts, to use their school library's resources and connections, and to push students towards greater levels of independence as academically literate thinkers:

I think [the Massey visits] helped to make us all more aware that they're not going to necessarily have the intense amount of help and assistance that they get with us, that they are going to have to be more independent about it, and the fact that they going to actually have to do the readings. They can't just go "oh yeah, I'll do it later" and leave it to the very end. (Teacher interview, 2013)

I was like this is only one day and we've already got about 4–5 pages in my folder and I've got this resource to read. I don't think what we're doing now is quite up to the standard they're doing there, with only a year between. It would be quite hard to fill that gap. (Student interview, 2013)

Similar changes occurred in terms of students' perspectives. Unexpectedly, "reading and writing" acquired a legitimacy beyond a communicative tool for assessment. Students reported that the lectures and library visits had impressed upon them the importance of robust academic reading and writing skills, and the need to practise these in their Year 13 programmes. Students began asking for more subject reading and writing, which suggests that the visits not only confirmed for them the centrality of these skills to academic achievement, but that they already had skills which they felt their subject teachers should regularly refine and reinforce. The library sessions on these days had a visible effect as students became aware of and then applied information search strategies to unfamiliar academic databases. The students' visits to the university, and their induction into tertiary learning during these visits, made reading and writing purposeful, made information research more focused and purposeful, and gave them a stronger sense of self-efficacy:

I thought it was going to be all these brainy people talking about this stuff I didn't understand, but it wasn't as highly out there that I thought it was going to be ... It was just a big eye-opener that I can do this. (Student interview, 2013)

Equally, the visits signalled to teachers that intensifying rather than reducing disciplinary academic literacy practice would generate positive consequences for students' academic futures.

NCEA through a different lens

Initial conversations within the project centred on the pressures and limitations NCEA imposed upon teacher practice. In some respects, it seemed that NCEA was a barrier rather than an enabler of academic literacy. However, further research through 2013 has given us a more refined perspective. Our research has reiterated for secondary teachers that the Ministry of Education's realignment process (2010–2013) has given the qualification more flexibility and depth of challenge, and strategically pushed it away from credit harvesting (teacher interview, 2013). Equally, the vision (p. 8), principles (p. 9), competencies (pp. 12–13) and learning area sections (pp. 16–33) and the seven learning areas of NZC (Ministry of Education, 2007) (especially Levels 5–8 of which the NCEA draws its structure, standards and intent) cumulatively charge senior secondary teachers to develop their students' academic and information literacy skills in preparation for a life-time's learning. Thus, reorienting teachers' perspectives about NCEA and *NZC* through an academic and information literacy lens has permitted for many a reprioritisation of advanced literacy learning in their senior academic NCEA classes. One senior history teacher and literacy leader described this learning as "food for the soul".

For our tertiary colleagues, a number of factors have challenged their assumptions and beliefs:

- NCEA is not the Year 13 curriculum. Rather it is an assessment system of learning areas in the 2007 curriculum and their associated subjects.
- NCEA is a national credential that must serve a number of other socioeconomic functions for Year 12 and 13 school leavers, the majority of whom do not aspire to a university education. It is not for the exclusive use of universities and other advanced tertiary training organisations to use as a drafting tool in the way University Entrance and Bursary did in the past.
- The NCEA and NZC (and its learning areas) are not dedicated academic and information literacy curricula.
- Conversely, both structures easily support and indeed encourage, an academic and information literacy pedagogic approach because they are implicitly threaded through *NZC*'s various sections and learning area strands, outcomes and indicators.
- Tertiary educators need to reach beyond their siloed environments into senior secondary schooling to familiarise themselves with NCEA requirements, structures and practices, and with the way teachers' practice is accordingly shaped and directed in disciplinary settings.
- Advanced literacy learning in the secondary-tertiary transition is one
 point on a continuum that carries into university study and has no
 terminal end stage. It is not done and finished at the end of secondary
 school.

For all educators, this TLRI project has begun to identify gaps in teachers' instructional knowledge about disciplinary academic and information

literacy, and that as a continuum, literacy instruction requires continuous support irrespective of sector location. Finally, and perhaps most importantly, is the recognition that ongoing professional development support in both sectors is vital if learning institutions are to meet the literacy challenges presented by 21st century learning.

A new perspective

One obvious challenge is the extent to which the relatively recent technological revolution has made available vast amounts of information, almost overwhelming in complexity and variety, that were hitherto accessible to a very few. In turn, this has promoted information literacy skills to become a non-negotiable form of academic capital for students who wish to enter tertiary study.

An innovation adopted by this project was the use of the ANCIL framework (Secker & Coonan, 2011) as a tool with which to reinterpret NCEA Level 3 achievement standards. Briefly, the ANCIL framework is made up of 10 strands. It offers the teacher "a series of practical steps through which to scaffold the individual's [information literacy] development" (Secker & Coonan, 2013, p. xxiii). Rather than subjugate existing content learning curricula, ANCIL "advocates a close alignment with not only the intended learning outcomes, but also the assessment mechanisms and learning activities employed to achieve the outcomes" (ibid.). Our research has begun to identify these close points of alignment to NZC and NCEA. In the second year of our study, we trialled resources based on the ANCIL framework (Feekery, Emerson, & Kilpin, 2014) in our participating schools and first-year tertiary classes and investigated their effectiveness in forging important connections between subject curricula, university courses, and the information literacy skills upon which academic success now obviously depends. Our hope is, as Secker and Coonan explain, to research effective practices and resources that help secondary and tertiary teachers to orient their practice towards deeper information literacy perspectives, and introduce independent information sources to extend students beyond provided sources and Google or Wikipedia.

Conclusion

Our TLRI research to date has highlighted a number of issues that have a cumulative effect on students' efficacy and success in making the transition from senior secondary school to university. The research focuses less on student disciplinary content knowledge per se, and more on academic literacy and information skills. However, we acknowledge that the latter are always active within disciplinary contexts and are not treated as isolated noncontextual skills. Secondary school and university teachers have, in line with wider public rhetoric, defaulted to identifying the structural and regulatory conditions of NCEA as key factors that affect and shape the transition to university experience. We argue that rather than being the barrier, NCEA in its realigned form combined with a dedicated academic literacy curriculum such as ANCIL, offers teachers in both sectors insights and possibilities to develop a comprehensively literacy-centred practice. The significant barrier in our view is the absence of professional, curriculum, and pedagogical connections between the tertiary and senior secondary sectors, which has the effect of generating misinformation and sustaining deeply embedded historical discourses. These, in turn, serve to misrepresent the aspirations and potentialities implicit in senior secondary curriculum and qualifications, which tertiary teachers are ideally placed to nurture and advance.

Our research points to four important factors that can nurture intersector communication.

- First, it is vital to develop a relational framework as the common ground where teachers in both sectors can build important professional connections.
- Second, teachers need to reinterpret instructional materials in NCEA and university courses through an information literacy curriculum lens that makes explicit their implicit academic literacy and information skills requirements.
- Third, teachers need support to work with resources that scaffold and support the process of teaching and learning academic literacy and information skills in multidisciplinary contexts.
- Finally, professional development is needed that builds teachers' literacy pedagogic knowledge which can inform and sustain continued

academic and information literacy instruction in the secondary sector and through the years of advanced academic study at tertiary level.

In this, our second year of the research, we aim to further investigate these factors so that, ultimately, students can make the transition to university study, confident that their academic literacy and information skills and knowledge will drive their success in their chosen areas of study.

Notes

- 1 See Woulfe (2014) for a wider discussion on government NCEA achievement targets and the NCEA.
- 2 Specific NCEA (Levels 2 & 3) requirements can be found at: http://www.nzqa.govt.nz/qualifications-standards/qualifications/ ncea/understanding-ncea/how-ncea-works/ncea-levels-andcertificates/

http://www.nzqa.govt.nz/qualifications-standards/awards/university-entrance/

http://www.nzqa.govt.nz/qualifications-standards/awards/vocational-pathways/

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