

Developing a self-regulated curricula of scaffolded academic and information literacies in a digital learning environment

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The diverse profile of students and large class sizes in Australian universities today raise a challenge for instructors to individually scaffold the development of capabilities such as academic and information literacies, which are required for the successful completion of a study program. This is especially true for programs such as Social Work where students can be profiled as coming from a range of age groups, linguistic and cultural backgrounds as well as life experiences. This paper reports on a project that was undertaken in an Australian University to address such challenges and provide students with authentic experiential learning opportunities. The project also sought to afford students with greater control over the progression of their learning skills development and opportunities for tailoring their studies to suit personal circumstances. The University's digital environment facilitated the creation of iSprings as e-Learning resources that scaffolded the development of academic and information literacies across four courses and two year levels. The evaluation of the efficacy of these resources from student and staff feedback as well as from learning analytics indicated that there was a consistent positive impact on student learning. There was an increase in distinctions and high distinctions and there was a decrease in F1s, especially in the two first year courses. Tutors and course coordinators in all four courses reported a marked improvement in students' writing and research skills.

Key words: academic literacies, information literacies, scaffolding, digital learning environment, self-regulated curricula, e-Learning resources.

1. Introduction

As in many other parts of the world, Australian universities today are made-up of a very diverse student body compared to the past. This is to an extent a result of the Widening Participation (WP) movement that took off in the 1970s (Klinger & Murray, 2012). The WP movement recommended that everyone should benefit from higher education and that institutions ought to be responsible for providing equitable access to every individual who had the potential (Bradley, 2008; *Browne Report*, 2010). The student diversity represented in many universities around the world

as a result of the WP initiative can be observed in the Social Work program in the context of the university where the project discussed in this paper was undertaken. The cohort of students studying Social Work/Human Services can be profiled as falling into a range of age groups, linguistic and cultural backgrounds and life experiences (Goldingay et al., 2012). In addition, some students come from overseas with experiences of life and learning processes that may be different from domestic students. For example, in WELF1014 Human Service Provision, one of the core courses in the Bachelor of Social Work and Social Sciences, it was found that in 2016, out of the 157 students who enrolled in the course, 37 were from Non-English Speaking Background (NESB) and 26 were International students from Nepal, Fiji, Singapore, China, Hong Kong, Vietnam, India and Kenya. The students in the course were between 18 and 54 years of age. Forty-nine out of the 157 students had indicated that they had incomplete secondary education or any prior educational attainment. These students had enrolled in their study program with some other form of qualification. This profile of students is quite representative of students studying in other courses in the Social Work programs. However, increased participation does not necessarily guarantee increased completion rates. Higher attrition and lower performance rates among students who enter university through non-traditional means are common, especially in the first year (Jansen & Meer, 2012; Klinger & Murray, 2012). Many of the students studying in the Social Work programs generally have disparate levels of language abilities, varying academic and information literacies and difficulty locating resources and materials to facilitate their learning.

Despite the diverse student profile in higher education, instructors expect their students to have the competencies to participate and engage in the academic and information literacies of their disciplines to successfully complete their chosen study programs. Nevertheless, for many students who are 'new' to the tertiary setting, the concept of 'academic and information literacies' is often unclear and challenging. These expectations accompanied by other factors such as transitioning to a new learning environment and meeting the heavy demands of their study program can often negatively impact on student experience, learning outcomes and retention. As in other study programs, lecturers in Social Work are often unable to individually tutor this diverse cohort of students due to aspects such as large class sizes, varying levels of their students' skills and abilities, workload constraints as well as not having the expertise themselves to scaffold the development of the required literacies. Therefore, there was a need for a greater digitally-mediated and streamed curriculum that sat parallel to the core curriculum to encourage students to self-regulate their learning.

To address the challenge of providing students with authentic experiential learning opportunities, greater control over the progression of their learning skills development and prospects of tailoring their studies to suit personal circumstances, a team of academics from the Bachelors of Social Work and Social Sciences, the Language and Literacy Coordinator and an Academic Librarian aligned to the Division of Education, Arts and Social Sciences (EASS) met to discuss possible solutions to support, develop and scaffold learning for students enrolled in the two programs. Traditionally academic and information literacies development in the programs had occurred in a face-to-face and ad-hoc basis and was anecdotally found to be beneficial. In 2016, it was decided that in order to implement best practice in regards to embedding and scaffolding in an environment of high student numbers and timetabling constraints, a different method needed to be devised. Hence, it was agreed that with the collaboration between the Language and Literacy Coordinator who was from the Teaching Innovation Unit, the Library and academic staff, a teaching team would be established across four courses that were thematically linked. All members of the teaching team would be part of the course design team and a curriculum package comprising academic and information literacies would be developed. This package would sequentially introduce and develop academic writing and research skills. The curriculum package would encompass thematic, clustered and sequential development of academic and information literacies through an integrated series of iSprings undertaken over two years. These iSprings would be

embedded in course Learning Management System (LMS) sites called the Learnonline. The curriculum package would augment learning by reinforcing the skills students acquire in class. There would be a tight synergy between the classroom and the outside world. The iSprings for scholarly writing and researching would be integrated or embedded into the core curriculum rather than presented as 'add on' or extracurricular. Students can self-regulate their learning and opt not to complete sections of the curriculum package if they had already mastered or acquired the literacies in their previous study context. This paper discusses the implementation of the curriculum package and the evaluation of its efficacy.

2. First year student experience with academic literacies

A student's success throughout their study is often determined by their initial experience (Hurtado et al., 2007; Jansen & Bruinsma, 2005). Students' inability to engage and participate in the academic literacies of their discipline often impacts on their decision to withdraw from study. Academic literacies refer to "forms of oral and written communication-genres, registers, graphics, linguistic structures; interactional patterns that are privileged, expected, cultivated, conventionalised, or ritualised" (Duff, 2010, p. 175). Inability to demonstrate academic writing skills to meet their instructors' expectations was often cited as one of the challenges commencing students faced in higher education which also impacted on their overall workload (Goldfinch & Hughes, 2007; Lau, 2003). Recognising that students commence in their study programs with different levels of preparedness, many universities are increasingly allocating support resources for the development of academic and professional literacies for all students. Traditionally, this comprises language and learning support delivered by learning advisers in study skills units centrally located within a university. This form of skills development is often found to be ineffective as students who learn generic skills are not always able to integrate them to their disciplinary discourses. Disciplinary academic literacies are a set of practices employed by a community of practitioners that is often governed by the historical, social and cultural contexts of a discipline (Carter, 2007; Elton, 2010). The language and discourses of a discipline is unique to the members of that particular community of practice (Bharuthram & McKenna, 2006; Lassetter, Luthy, Sutherland & Callister, 2005). It is therefore important for these literacies to be taught in relation to disciplinary discourses and they are best learnt when embedded in programs and courses (Nesi, 2012; Lillis & Scott, 2007; Wingate, 2012).

3. Information literacy

Queensland University of Technology's Information Literacy Framework defines Information Literacy as "an understanding and set of abilities enabling individuals to recognise when information is needed and have the capacity to locate, evaluate and use effectively the needed information" (as cited in The Australian and New Zealand Information Literacy Framework, 2004, p. 3). Information literacy is an important capability that an individual should possess today because there is a proliferation of information and access platforms that are increasingly more diverse. There is a necessity nowadays, more than in the past, for individuals to make choices about the authenticity, validity and reliability of information (The Australian and New Zealand Information Literacy Framework, 2004, p. 3). The existence of information in multiple forms and modes require that people evaluate, understand and use information in an ethical and legal manner (The Australian and New Zealand Information Literacy Framework, 2004, p. 3).

It is emphasised that information literacy is a prerequisite for "participative citizenship, social inclusion, the creation of new knowledge, personal, vocational, corporate and organisational empowerment and learning for life" (The Australian and New Zealand Information Literacy Framework, 2004, p. 3). Hence, as with academic literacy, information literacy too should be scaffolded and developed in students' study programs.

4. Employing the digital environment for learning development

One of the better ways to promote positive learning outcomes is to embed academic literacies in the curriculum (Bright & von Randow, 2004; Ransom, 2009). However, the diverse student profile in higher education makes it impossible for instructors to individually scaffold the development of academic and information literacies within the curriculum due to aspects such as disparate levels of language abilities and varying academic as well as information literacies. Learning that is facilitated via a digital learning environment can address many of the issues raised in the earlier sections of this paper. First year students require sufficient opportunities to “practice, reinforce and transfer the skills” (Gunn et al., 2011, p. 2). Furthermore, the profile of students in higher education has revolutionised the manner in which learning and teaching unfolds in higher education. Students today extensively use technology to obtain information, work while studying, and require the flexibility to access knowledge from anywhere and at any time. Gunn et al. (2011, p. 4) argue that learning resources for a digital environment can be,

customised and incorporated into the curriculum for specific assignments in different subject areas; align[ed] with terms of the University’s Academic Plan and Graduate Profile statements; ... flexible, portable and user-focussed; ... [and] to motivate and engage students from a range of educational backgrounds and age groups.

The scaffolding of academic and information literacies development in a digital environment can unfold in a non-threatening manner. Resources that sit on a course website can be accessed by students for any amount of time thus making them relevant to genre-based discourses. Moreover, academic and information literacies can be scaffolded with as many models and examples as is seen necessary to make discipline specific genre-based practices clear to students. There are no limits to the number of resources that can sit on a digital platform. These resources can be regularly adapted to meet the demands of assessment tasks and can be designed in collaboration with the course instructors to make them more relevant to the content (Nallaya & Kehrwald, 2013). Resources for an online environment can also be customised to address local learning and teaching needs, be disseminated to a greater audience, accessed from any location and as required. Students who suffer from low self-confidence and self-esteem can access these resources in a stress-free environment and use them as they see fit. Students who speak English as an Additional Language (EAL) and are challenged by their language proficiency will not be constrained by time to understand the content and react quickly as is often the requirement in face-to-face classroom interactions (Nallaya & Kehrwald, 2013).

4.1. University of South Australia’s Digital Learning Framework

In 2015, the Digital Learning Strategy 2015-2020 was implemented in the university referenced in this paper. The purpose of this strategy was to embrace a whole of university approach towards (University of South Australia, 2015):

1. delivering an engaging curriculum to support students to be productive individuals in a digital age;
2. expanding its flexible learning arrangements;
3. developing its academics to be leaders in the digital learning experience; and
4. inspiring the entire university community through lifelong learning.

It was also the university’s aim to become internationally recognised as a leader for using innovative digital technologies to ensure a high-quality student learning experience by 2020. There were other key drivers which contributed towards this strategy. It was recognised that students today had access to more information than in the past. Students are also increasingly mobile and globally connected. These students require flexibility to balance work, study and family commitments. Both the industry and the community require digital leaders with transferable skills and

knowledge, creativity, developed networks and the ability to engage locally and globally (University of South Australia, 2015).

The project reported in this paper was hence conceived because of the following factors:

1. the diverse student profile in the Social Work programs;
5. the revolutionary ways students today learn and access information as well as knowledge;
6. the need to align learning and teaching activities with the university's Digital Learning Strategy; and
7. to address the transformation of the Social Work program into a blended learning model.

More specifically, the project was conceptualised with special relevance to two strategic priorities in the university's Digital Learning Framework, specifically Strategic Priorities 1 "Delivering an engaging and digitally enriched curriculum" and 3 "Expanding our flexible learning arrangements" (University of South Australia, 2015, p. 5).

4.2. The iSpring as a learning and teaching resource in a digital environment

The iSpring is a suite of software which enables educators to develop e-Learning content from PowerPoint presentations. It can also be used to create video lectures, podcasts and assessments on any desktop, laptop or mobile platform (iSpring User Information, 2017). The capacity of the iSpring software which converts PowerPoint presentations into a single .SWF file with all external multimedia resources embedded within, made it extremely easy to share the presentations on the Learnonline website, send via email or burn on a CD. The PowerPoint presentations that were published in iSpring maintained their visual parameters, animation effects, slide transitions, audio narrations, video and Flash objects after conversion (iSpring User Information, 2017). Literacies development using the iSpring motivated and inspired students to learn as the presentations were incorporated with many visuals and graphics thus making them engaging. Each of the learning point was aligned with examples and models so that students could see the concepts in context.

The iSprings were no longer than five minutes in length thus providing students with the opportunity to return to the presentations as often as they required. Using the iSpring to design learning resources resulted in easy distribution and access. Students were able to view the presentations from any technology, platform or browser (iSpring User Information, 2017). The presentations were embedded in course sites, accessed by students and viewed quickly as playback commenced as soon as the first slide was loaded. Another advantage of using the iSpring is that the authors did not need web authoring skills as the content was based on PowerPoint slides. The iSprings not only enabled students to select sections that they wanted to watch and listen, they were also able to read the script for each of the slides from the notes tab. This allowed students to further extend their understanding of the content that was being communicated. The script in the notes tab was also useful for EAL students or those who had a hearing impairment. The popularity of the presentations can be ascertained from the frequency of access data in Table 1. Figure 1 illustrates the different capabilities of the iSpring. A published iSpring presentation is graphically presented in Figure 2.

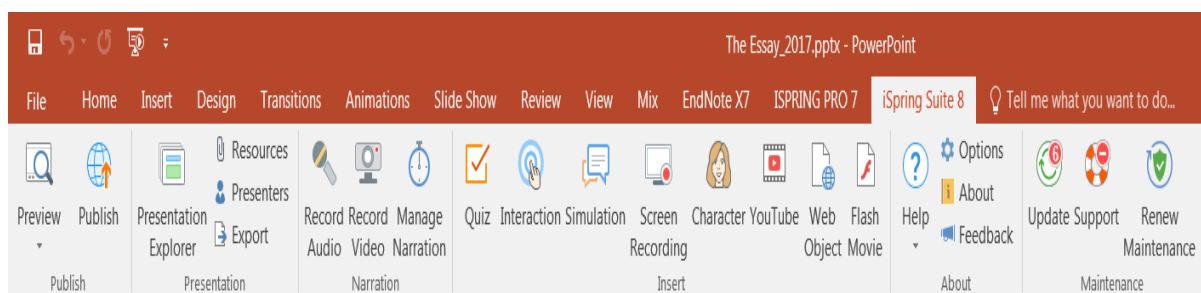


Figure 1. The iSpring.



Figure 2. A published iSpring e-learning resource.

5. Scaffolding the development of academic and information literacies in a digital environment

Although there is much literature that suggests that effective acquisition of academic literacies occurs when the scaffolding and development unfolds over a course of a study program and is embedded in the content of courses (Lea & Street, 1998; Wingate, 2012), this is often not practised in actual learning and teaching contexts. If the scaffolding and development of academic and information literacies happens at all, it is undertaken individually in different courses resulting in some literacies being extensively developed while others are ignored. Students are also not able to see the links and progression of these literacies as they are not sequentially or systematically developed in their study program. The initiative reported in this paper is therefore unique compared to other ad-hoc and once off provision of learning support in that it was holistic in nature. The initiative was holistic in that all the academic and information literacies that were required for successful engagement in the ‘policy’ stream of the Social Work and Human Services Program were systematically mapped, scaffolded and developed over two year levels.

In 2016, four courses in the Social Work and Human Services program (two each in first year and second year of the ‘Policy’ stream) were identified for the systematic development of academic and information literacies. A mapping process was undertaken in WELF1014 Human Service Provision, POLI1008 Governance and Citizenship in Australia, POLI1012 Australian Social Policy and POLI2027 Policy Practice to identify all the learning outcomes and required literacies. The major assessments in these courses were essay writing. Hence, as WELF1014 was a core course in the Bachelors of Social Work and Social Sciences, it was important that students acquired particular skills such as writing an essay plan, reading and note-taking, using academic language for writing and writing an essay. In 2016, a total of five iSpring presentations on these topics were developed in collaboration with the Course Coordinator (CC) of WELF1014 Human Service Provision. The scaffolding of literacies in these presentations was carried out based on the input provided by the CC from their experience of teaching and assessing the course in previous years. They identified the literacies students needed in order to complete the assessment tasks and to write in their discipline. Similarly, a series of iSpring presentations were also designed by the Academic Librarian on searching and locating quality sources for writing (using the library catalogue, choosing where to search & the search process). As WELF1014 is the first course that would have a diverse cohort of student enrolment, it was important to provide support for the

development and scaffolding of the core literacies associated with essay writing which was also a common genre that is assessed in many courses and programs in Social Work.

The essay genre would allow the development of a range of literacies including critical reading, evaluating sources for reliability and credibility, synthesising information, selecting appropriate information to build an argument and writing critically. When students progressed to the second course which was POLI1008 Governance and Citizenship, they were asked to do an audit of the skills they had acquired in the previous study period by looking at the assessment task and the feedback they had obtained for their final essay. Tutors in WELF1014 gave detailed feedback about students' strengths and weaknesses and this provided valuable input for further skills development. Students were provided feedback on skills that they needed to focus on and further develop. As the major assessment for POLI1008 was also essay writing, another series of four iSpring presentations were developed. The iSprings developed for this course focused on slightly higher level thinking skills of the topics highlighted in WELF1014. Literacies such as note-taking, writing an essay plan, using evidence to structure a logical, coherent and cohesive argument as well as revising the essay, proofreading and editing were emphasised. Additional iSprings supporting students to further develop information literacies such as employing more advanced search techniques and database searching were also created and embedded in the course site.

When students enrolled in POLI1012 Australian Social Policy, the Level 2 course, they were once again asked to audit the skills they had mastered and those that they needed to acquire, from the feedback they had obtained for their essay assessment in POLI1008. Two more iSprings on critical thinking were developed for POLI1012. Another two iSprings on using policy frameworks to analyse, synthesise and evaluate policies were developed for POLI2027 Policy Practice. Both of these courses were second level courses and students enrolled in them in Semester 1 and 2 of their second year of study. For POLI2027, an iSpring presentation was developed by the Academic Librarian on using more sophisticated search strategies and techniques to access policy documents and websites. All of these iSprings were less than five minutes in length in most instances and employed a lot of visuals and disciplinary examples as well as models to demonstrate the intended learning point. These iSprings were embedded in course Learnonline websites and were used by instructors of the courses as teaching resources.

Where it was possible to associate continuous assessments with the modules, these were designed and marked to inform instructional improvement. Tutors incorporated the video content when providing explanation about assessment tasks. This structured approach ensured that the scaffolding and development of skills were done sequentially (from lower to higher order skills).

It was anticipated that with this approach, students would have mastered the required literacies to undertake their first professional placement. Table 1 presents the range of topics that were developed and the number of times the iSprings were accessed by students in 2016 and 2017. The data presented in Table 1 shows that the iSprings had been accessed at least once or twice by students in the four courses. Some topics were more popular than others. Those that were linked to continuous assessments such as the reading and note-taking, the essay plan and critical thinking iSprings had been accessed more frequently compared to those that did not. The analysis of access data also identified that the location of the iSpring on the course site significantly contributed to how often the students accessed the iSprings or how much value they placed on them. This was observed in 2016 from the three information literacies iSprings that were embedded under the study support tab in WELF1014. From the data presented in Table 1, it can be observed that not many students accessed and used these particular resources. When these iSprings were moved in 2017 to the Week 3 tab in the course site, there were more hits compared to the previous year. The number of times students were accessing these resources indicated that students were returning to these resources as and when they needed them. It was possible that the length of the presentations, which in most instances was less than five minutes, made it possible for students to watch them more frequently compared to a lengthy resource such as lecture recordings.

Table 1. The frequency of iSpring access in 2016 and 2017.

Courses	e-Learning iSprings	2016 (hits)	2017 (Hits)
WELF1014 (Sem 1)	Interpreting the task	459 by 201 users	346 by 188 users
	Reading for the essay	317 by 176 users	158 by 124 users
	Academic language for assessment	584 by 238 users	125 by 98 users
	Essay plan and annotated bibliography	970 by 261 users	523 by 235 users
	Writing the essay	366 by 177 users	229 by 142 users
	Using the library	22 by 18 users	119 by 51 users
	Choosing where to search	16 by 15 users	63 by 51 users
	The search process	15 by 13 users	63 by 51 users
POLI1008 (Sem 2)	Interpreting the task	311 by 139 users	
	Reading and note-taking	522 by 233 users	
	Essay plan, essay structure and critical thinking	624 by 181 users	
	Revising the essay, proofreading and editing	145 by 74 users	
	Search process	187 by 104 users	
	Choosing where to search	187 by 105 users	
POLI1012 (Sem 2)	Quick tips for the super searcher	145 by 81 users	
	Searching the database	95 by 63 users	
POLI1012 (Sem 2)	Critical thinking 1	706 by 189 users	420 by 162 users
	Critical thinking 2	657 by 177 users	435 by 158 users
POLI2027 (Sem 2)	Bacchi's WPR approach	250 by 86 users	
	Bacchi's WPR approach explained	133 by 55 users	

6. Innovative approach to teaching that motivate, influence and inspire students to learn in a digital environment

The approach identified in this paper was innovative in that the University's digital environment was used to motivate, influence and inspire students to learn. The members of the project collaborated as one cohesive teaching team that worked across four courses in the 'Policy' stream of the SW program to sequentially and systematically develop students' academic and information literacies using iSprings. Literacies development occurred within the curriculum. All students irrespective of age, linguistic and cultural backgrounds as well as life experiences were given the same opportunities to acquire the literacies required for the successful completion of their assessment tasks and prepare for their first placement. There were no prior assumptions from CCs that their students have the associated literacies to engage in their study program. Students were able to watch the presentations at their own pace and there was no pressure to complete the viewing at a given time in most instances except where continuous assessments were attached. Students could choose to watch the presentations as many or few times as they required.

The project was also innovative in that the collaboration and mapping of the literacies as well as systematic scaffolding identified in this paper, does not traditionally occur in programs or courses.

When the scaffolding does unfold in the curriculum, it occurs in silo in different courses thus resulting in CCs not being aware of the literacies that have been developed previously or those that need further development. Consequently, there are instances where students are referred to learning advisers in their third year because they are unable to demonstrate scholarly writing or research skills that are required for successful engagement in their study program. The project was also unique in that consistent message about the literacies was being sent to all students enrolled in the four courses irrespective of the tutorial group they were enrolled in. In other words, no matter which tutor instructed the students, the message about the literacies, assessment tasks and requirements was the same. Previously, students in these courses complained that tutors were communicating different requirements to the various tutorial groups, particularly in courses where there were large cohorts of students. The iSprings also addressed the challenge of instructors not having the expertise themselves to scaffold the development of academic and information literacies in their individual courses. Instructors now had a suite of customised teaching resources that they could use for instructional purposes. The processes identified in this paper illustrate how the digital learning environment and strategy, collaboration between experts as well as systematic scaffolding resulted in the development of particular literacies required for successful engagement in a study program.

7. The efficacy and evaluation of scaffolding the development of academic and information literacies in a digital environment

The collaboration between staff from different units guaranteed that students benefited from the expertise of different people in the university and that the resources were tailored for the diverse cohort of students enrolled in the different courses. The discussion that occurred between the teaching team and the support provision team ensured that the resources were developed to address student challenges as the input for what needed to improve came from the instructors. The way the resources were designed also allowed students to see the connections and links between different courses and their assessment tasks as well as how these progressed from simple to more difficult as they enrolled in higher level courses. Literacies development in a structured and sequential manner also allowed students to master basic skills before they acquired those that were of a higher level.

The value of these iSprings or e-Learning resources can be ascertained from student feedback which was accessed from the Course Experience Instrument (CEI) that students complete at the end of each semester. Table 2 lists student comments that were obtained from 2016 and 2017 for WELF1014 and POLI1012 which are Semester 1 courses. As POLI1008 and POLI2027 are Semester 2 courses, data was only available for 2016.

Tutors and course coordinators in all four courses reported a marked improvement in students' writing and research skills. In some instances, moderators were asked to look at the graded essays as more students were obtaining HDs compared to the past. Tutors also suggested that they were finding it easier to scaffold the development of academic and information literacies with the existence of the iSprings which they used as learning and teaching resources. To be objective about the efficacy of the iSprings as e-Learning resources, a tutor who was not a member of the project team was asked to evaluate the usefulness of the iSprings. This tutor has been an instructor in all of the four courses over the two years. The other tutors for the four courses comprised three of the project team members. The tutor's response was,

My sense is the iSprings have been particularly useful for students coming to university study for the first time or after a long break. Overall they provide clarity and direction regarding the specific assessment requirements of the topics, which can often seem quite daunting to students when they first look at these. The iSprings complement material presented in the lectures and discussed in the tutorials which students are able to go back to. Particularly useful

iSprings were those that outlined Library search techniques as many students found using the Library quite challenging at times. The iSprings addressing essay plans and essays were useful in helping students break down components of an essay although this did not always translate into practice. The strength here is that students have a resource they can go back to and reflect on specific areas where they can improve. iSprings were useful in assisting students across a range of categories in improving their study skills although I think probably were more pertinent to those who were struggling (Tutor, 2016-2017).

Table 2. Student comments about the iSprings obtained from the CEI.

Course and Year	Student Comment
WELF1014: 2016	<i>The content, lectures, and tutorials all complimented each other and made the assessments easy to understand and follow. The mini clips with instructions for assessments provided in week four were especially helpful</i>
WELF1014: 2017	<i>The amount of support given especially in writing an essay. They clearly understood that it was the first time for many students writing university grade assignments. Very good support in writing a university level essay, many helpful slides and PowerPoints to access.</i>
POLI1008: 2016	<i>The huge amount of information available regarding essay writing skills and information on the course via links and short you tube information</i>
POLI1012: 2016	<i>This course is challenging yet very interesting, well-structured and assignments help with learning the course content, the use of continuous assessments and isprings to develop research and writing skills were a great help and assisted my learning greatly.</i>
POLI1012: 2017	<i>This course has been enjoyable and a great follow on from the first year course Governance and Citizenship. In my opinion these two courses have been the best by far in the way that the course is structured, taught, and how expectations are clear.</i>
POLI2027: 2016	<i>Very well set out in regards to breaking a policy apart; lots of online assistance links for assignments.</i>

Feedback from all instructors teaching the four courses had identified that there has been a marked improvement in 1st year students' academic and research writing skills and the quality of research and analysis in the 2nd year had also improved. This can also be identified from the grade distribution in the four courses. Figure 3 shows the distribution of student grades before (2014-2015) and after (2016-2017) scaffolded support. It can be observed that, especially in WELF1014 and POLI1008, the two first year courses, there was a significant increase in the number of Ds and HDs. Although there were still students who were obtaining F1 grades, data from the learning management system indicated that these students had not submitted any assignments for assessment or engaged in the course. Grades for 2017 could only be obtained for the Semester 1 courses (WELF1014 & POLI1012).

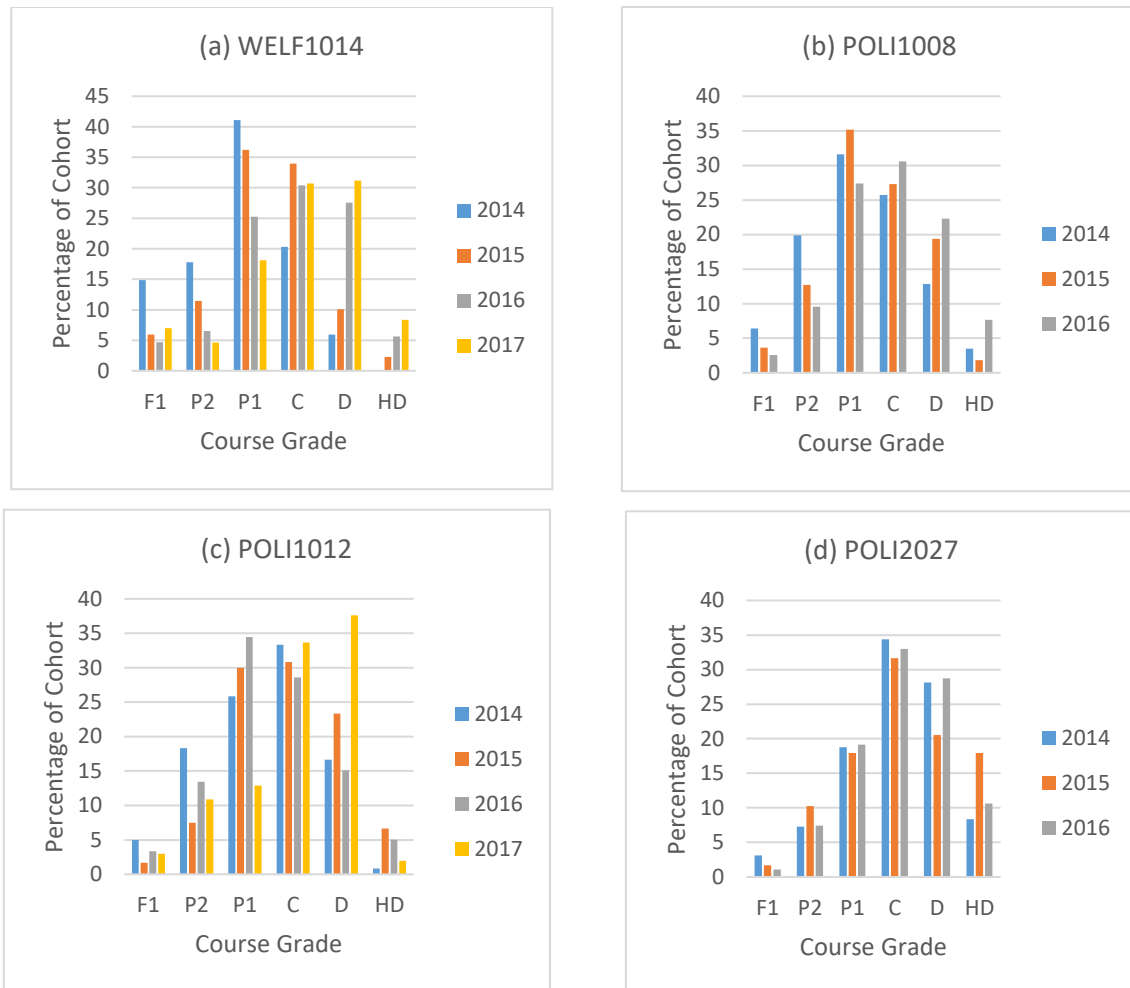


Figure 3. Final course grade distributions in (a) WELF1014 ($N = 202, 218, 214, 215$ respectively), (b) POLI1008 ($N = 171, 165, 157$ respectively), (c) POLI1012 ($N = 120, 120, 119, 101$ respectively), and (d) POLI2027 ($N = 96, 117, 94$ respectively).

Many studies have found that first year students are challenged by their discipline's academic literacies and discourses (Chanock, 2000; Devereux & Wilson, 2008). These challenges are increasingly becoming more significant for both instructors and students with more non-traditional students enrolling in study programs like Social Work. It is possible that some of these students may not be able to successfully engage and participate in their study program without some form of scaffolding that makes the values and practices of their discipline clear (Duff, 2010). Ability to communicate both verbally and in writing is one of the core attributes expected of graduates. Students are expected to be able to engage in the discourses of their discipline while undertaking their professional placement and in the workplace after graduation. What this highlights is that academic and information literacies are important capabilities that need to be systematically scaffolded and developed in study programs. The initiative discussed in this paper highlights how this process can be undertaken. The grade distributions shown in Figure 3 indicate how student performance improved when resources associated with academic and information literacies as well as assessment genres had been designed and systematically embedded in four thematically-linked courses. With the provision of support and scaffolding it was found that student performance, especially in the two first-year courses, had improved rather significantly. For example, in 2015 when there was no such support provided in WELF1014, there were 22 students who obtained Distinctions (D) and five had obtained High Distinctions (HD) (together, only 12% of the cohort).

However, in 2016 after the initiative was implemented, this increased to 59 Ds and 12 HDs (together, 33% of the cohort). In 2017, the grades once again improved to 67 Ds and 18 HDs (together, 39% of the cohort).

While the statistical significance of the observed gains have not been tested for, and factors other than iSprings may have supported student learning gains, the positive qualitative feedback received (see Table 2) and the fact that no other major teaching changes were made in the courses over the relevant time periods, support the conclusion that the iSprings initiative has had a meaningful impact on student learning. The maintenance of the observed gains with future groups of students would provide further support for the efficacy of the approach. As the scope of this paper is only to describe an initiative that was undertaken to systematically scaffold and develop academic and information literacies in thematically linked courses, and not to claim any statistical significance between support and performance, the authors have chosen to leave this aspect to be addressed in future publications.

8. Conclusion

The initiative identified in this paper illustrates real innovation and contribution to student learning in that the project team recognised the: 1) problems students were facing with regards to disparate levels of language as well as varying academic and information literacies; 2) challenges faced by instructors in providing individual assistance to such a diverse cohort of students; 3) revolutionary ways students today learn and access information as well as knowledge; 4) need to address the call for instructors to embrace the University's Digital Learning Strategy; and 5) necessity to integrate the transformation of the Social Work programs into a blended learning model. The implementation of the processes occurred in a holistic and sequential manner in a cluster of courses and was facilitated by the digital environment. Learning of academic and information literacies was reinforced across the courses with a curriculum package that comprised 19 iSprings which sat parallel to students' core curriculum and embedded in course Learnonline sites. Students could access these iSprings from anywhere and at any time on different technology and platform and were able to self-regulate their learning. They were also able to use the e-Learning resources to suit their personal circumstance. The curriculum package of 19 iSpring presentations that sat alongside the core curriculum, augmented learning and literacies development that took place in the classroom. In 2017, the iSprings were further tweaked where necessary to incorporate tutors, course coordinators and students' feedback to make them more relevant to the assessment tasks and more accessible to the diverse cohort of students. The process of further fine-tuning the iSprings will continue based on the feedback from the various stakeholders and data from learning analytics. From student and staff feedback as well as learning analytics data in the form of frequency of access and grade performance, it can be concluded that these iSprings have efficiently contributed to the development of academic and information literacies in the 'Policy' stream of the Social Work program. The efficacy of the approach can be further evidenced by its implementation in the following courses and program in 2017: 1) COMM20179; 2) BEHL1004; 3) WELF1013; 4) EDUC1091; and 5) B. Communication and Media. Although, the resources had been created for the 'Policy' stream of the Social Work study program, they can be easily revised for skills and literacies development in other study programs. The approach highlighted in this paper can also be adapted and implemented in other study programs across the university.

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