

# Going digital: Challenges and opportunities in transforming face to face ALL workshops into online versions

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(Received 18 September, 2017. Published online 11 February, 2018.)

This paper reports on the experience of transforming the face-to-face workshop ‘Writing a Literature Review’ (WLR) into an online version. This genre-based pedagogy workshop guides HDR students through the process of finding, synthesising and evaluating sources and structuring this content effectively to build a coherent argument. The paper focuses on the pedagogical and technological challenges and opportunities arising from this process from the perspective of an experienced academic literacy educator with limited expertise in developing online materials. It discusses the shift from an inductive to a deductive instructional approach and explores the affordances of the selected software: Camtasia and Smart Sparrow, to create more student-centred activities. It also describes how an interdisciplinary collaborative approach was implemented to address the need for training and evaluating usability and accessibility. Finally, it argues that starting the process of creating online materials has benefits for all stakeholders, not just the virtual audience.

**Key Words:** online learning, academic literacy, Literature Review, Camtasia, Smart Sparrow, accessibility, usability.

## 1. Introduction

Increasingly diverse student cohorts have made academic literacy support a pressing need for tertiary institutions. The University of Sydney enrolls nearly 5000 students per year in research and honours degrees. In 2014, around 20% of these were international students, many from an English as Additional Language (EAL) background. Success at this level requires writing skills that go beyond what an EAL test or tertiary coursework can reliably demonstrate. Thus, it would be fair to assume that writing needs will vary greatly within this large cohort. One issue that has been identified is that EAL students structure their texts differently. Typical moves of academic writing in an English-speaking context such as stating a position early in the text, presenting supporting evidence or rebutting an argument may be completely unfamiliar to students from different cultural contexts. Rather than the result of low English language proficiency, this is due to a lack of genre awareness, which can be solved through instruction and sample analysis (Pérez, 2002). Another issue is the lack of substantial engagement with writing from L1 English students from areas such as maths or fine arts. As these disciplines require significantly reduced amounts of writing, students may not have developed the academic literacy skills needed to undertake a research degree (Lamm, Clerehan, & Pinder, 2007). This situation has stretched the capacity of academic and information literacy units, prompting the need for the development of online resources.

While the motivation behind this move may be purely practical, an emerging body of literature suggests that the online format may be “as or more effective than face to face instruction” (Gonzales, 2014, p. 45). However, in moving online, novice educators cannot expect to simply translate their classroom practices to a screen, as these may be inefficient or simply unfeasible (McMenomy, Hill, & DuBose, 2010). While the literature documents a number of examples of successful online academic literacy courses (Kim, Mendenhall, & Johnson, 2010; Mort & Drury, 2012; Wijewardene, Patterson, & Collins, 2013; Wingate & Dreiss, 2009), little is available on completely independent (i.e. with no instructor or peer interaction) writing courses. This paper aims to raise awareness among novice e-learning educators about a series of issues that will allow them to fully exploit the pedagogical potential of the online medium.

This paper reports on the experience of adapting the face-to-face workshop ‘Writing a Literature Review’ (WLR), designed to support research students with this crucial section of their thesis, to the online environment. After comparing the content and structure of the face-to-face and online versions of WLR, it will outline the pedagogical and technological challenges and opportunities encountered in this journey.

## **2. The course ‘Writing a Literature Review’**

### **2.1. The face to face version**

The literature review is a crucial section of a doctoral thesis. Examiners expect students to demonstrate not only an appropriate level of coverage, where most relevant work is cited, but also the ability to marshal evidence to build a coherent argument, to critically appraise previous work and to connect these ideas to their own findings (Holbrook, Bourke, Fairbairn, & Lovat, 2007). However, this seems to be the aspect of thesis writing to which supervisors devote the least time and energy (Zaporozhetz, 1987, p. 132). This may be due to an overvaluation of students’ information and academic literacy abilities or the belief that “it is NOT (emphasis in the original) the supervisors’ job to provide training” in these areas (Warburton & Macauley, 2014, p. 160). Awareness about supervisors’ unwillingness or inability to provide support in these areas has made libraries and academic literacy units attempt to fill this gap.

At the University of Sydney, the Learning Centre offers the face-to-face workshop *Writing a Literature Review* (WLR). Targeting HDR students, it clarifies the role and purpose of the LR, differentiating it from a summary or an annotated bibliography. It also demonstrates how to analyse and synthesise information, evaluate this content, structure it to create a coherent argument and develop the linguistic resources necessary to establish an effective authorial voice. The course is designed from the theoretical perspective of Systemic Functional Linguistics (SFL) and its teaching approach is based on ‘genre literacy pedagogy’ (Martin, 1993; Rose, 2009). This means texts are ‘deconstructed’ with students to identify linguistic patterns that convey particular meanings for a specific purpose in a well-defined context. Authentic samples from different disciplines are analysed to identify their functional stages focussing on how linguistic resources such as evaluative language, tense or theme (the initial part of a sentence) are deployed to achieve particular purposes. For instance, the use of passive voice, which is promoted in some contexts as a feature of academic writing, and in others, proscribed as an obstacle for readability, is explored descriptively rather than prescriptively. Students examine how passive voice can be used as a resource for textual organisation, allowing the writer to place a certain piece of information in focus, at the beginning of the sentence (Halliday & Matthiessen, 2014).

WLR is delivered in two three-hour sessions held on the same day 12 times a year, making it the most frequently taught workshop for graduate students. Attendees consistently rate this workshop with the highest possible marks, usually highlighting its usefulness and effective methodology. Despite its frequency, HDR students located on different campuses, doing their degrees by distance learning or simply with other commitments find it difficult to attend this workshop at the point where it is required. Thus, the need for an online version of the workshop became evident.

## 2.2. The online module

The online version of WLR was created by integrating, expanding and improving on already existing material available from three different divisions at the university. With the joint expertise of the Library and the Learning Centre, the online WLR aims to guide students through the intellectually demanding and labour intensive process of planning, conducting and writing a literature review. This unit targets the specific issues involved in writing a literature review: starting with understanding its role and purpose, finding and filtering information, analysing and synthesising content, evaluating sources, structuring an argument and developing the linguistic resources necessary to produce a document that is evidence of good scholarship. It also provides examples from a wide range of fields, showcasing a variety of discipline specific features of literature reviews. The online WLR was designed as a self-contained module that offers students the flexibility to select the activities that suit their particular needs in the sequence and timeframe they desire. Making this resource available through the institutional Learning Management System (LMS) not only centralises access to this content, but also provides immediate support to every research student at the university, including distance students. It also allows Academic Liaison Librarians and Learning Centre staff to provide more targeted help during face-to-face individual consultations.

The online WLR is structured similarly to the face-to-face version. As seen in Table 1, both address the issues of understanding the role and purpose of the LR, developing an analytical framework and evaluating the literature. However, the sections on finding and organising sources and synthesising information were expanded and improved based on the information literacy expertise from the Library. On the contrary, the section on referring to sources was not included in the online version. Instead, students were directed to a detailed e-learning module, 'Quoting, summarising and paraphrasing' previously developed by the Learning Centre. The online version also separates the overlap between synthesising, analysing and evaluating the literature that is evident in the structure of the face-to-face workshop. While these processes are unquestionably linked, different stages are presented discretely to facilitate comprehension.

**Table 1.** Content of Face-to-face and Online versions of WLR.

Face-to-face WLR	Online WLR
<p><b>1. The Role of a Literature Review</b></p> <ul style="list-style-type: none"> <li>• Incorporating the literature review into the whole thesis</li> <li>• The purpose of a literature review</li> <li>• Characteristics of a literature review</li> </ul> <p>• Problems of writing a LR</p> <p>• Organising your sources for the LR</p> <p>• Analysing and synthesising the literature</p>	<p><b>1. The Role of the Literature Review</b></p> <ul style="list-style-type: none"> <li>• Describing the role and purpose of LRs</li> <li>• Identifying limitations in previous studies</li> <li>• Identifying the research gap</li> </ul>
	<p><b>2. Finding and organising sources</b></p> <ul style="list-style-type: none"> <li>• Finding and filtering relevant information based on suitable criteria</li> <li>• Selecting resources for a comprehensive search</li> <li>• Creating and running a search strategy</li> </ul>
	<p><b>3. Synthesising information</b></p> <ul style="list-style-type: none"> <li>• Evaluating results by applying REVIEW</li> <li>• Selecting appropriate applications to save and manage sources</li> </ul>

Table 1 continued

Face-to-face WLR	Online WLR
<p><b>2. Developing an Analytical Framework to achieve your purpose</b></p> <ul style="list-style-type: none"> <li>• Natural or Artificial criteria for an analytical framework</li> <li>• Setting up analytical frameworks for different purposes</li> <li>• Evaluating the literature to develop an argument</li> </ul>	<p><b>4. Developing an analytical framework</b></p> <ul style="list-style-type: none"> <li>• Incorporating the LR into the whole thesis</li> <li>• Developing an analytical framework</li> <li>• Building a coherent argument</li> </ul>
<p><b>3. Evaluating the literature</b></p> <ul style="list-style-type: none"> <li>• Synthesising the literature to stage an argument</li> <li>• Reviewing individual studies</li> <li>• Comparing and contrasting the literature</li> <li>• Concessions</li> </ul>	<p><b>5. Evaluating the Literature</b></p> <ul style="list-style-type: none"> <li>• Identifying aspect being appraised</li> <li>• Identifying writer's alignment with cited works</li> <li>• Identifying evaluative language</li> <li>• Identifying linguistic resources to modify claims</li> </ul>
<p><b>4. Referring to and evaluating sources</b></p> <ul style="list-style-type: none"> <li>• Incorporating sources: quoting, paraphrasing or generalising</li> <li>• Varying the focus of the review</li> <li>• Grammatical resources for referring to sources</li> <li>• Grammatical resources for evaluating sources</li> </ul>	<p>Students directed to 'Quoting, Summarising and Paraphrasing' online module developed by the Learning Centre.</p>

### 3. Pedagogical concerns

While the content of both the online and face-to-face versions of WLR are remarkably similar, the online version requires a major shift in its pedagogical approach. In the face-to-face version, text deconstruction is an interactive process initiated by teacher elicitation and followed by individual analysis, peer and group discussion. The role of the teacher is 'visible and interventionist' (Martin, 1999, p. 124) "as the teacher's modelling, questioning, prompting and commenting guides learners to slowly and systematically articulate their knowledge and understanding of the genre until a shared conception is reached" (Drury, 2004, p. 243). This interaction is not possible in the online version, as it was conceived as a resource for completely independent learning; assessment activities needed to be completely self-marked with no intervention from an instructor or collaboration with peers. While knowledge in the face-to-face workshop is built inductively through dialogue among students, their peers and the instructor, the virtual version relies on monologic discourse and interaction with software, rather than humans. Thus, selecting the appropriate technological tools becomes a top priority.

While tool selection may be limited by what is available, affordable and compatible with institutional systems (e.g. the LMS and its grading system), it ought to respond to the pedagogical needs of the course. Rather than letting technology dictate the instructional approach, the selected software needs to demonstrate its ability to facilitate learning (Lynch, 2002, p. 101). Since lack of interaction dictates a more deductive approach (i.e. showing and telling the student rather than

asking what they notice), the text deconstruction process was presented using screencast videos, as they reduce the cognitive load for students (Tempelman-Kluit, 2006, p. 366). In order to produce these videos, the Camtasia software from TechSmith, which has been successfully tested in tertiary institutions (Suhr, 2006; Blevins & Elton, 2009), was selected. The affordances (i.e. what it can do) of Camtasia include the ability to highlight text, zoom in, or annotate the screen through a tablet (mimicking the use of a board). These features allow the instructor to showcase specific linguistic features of texts in an engaging manner. Best practice guidelines also suggest limiting the length of these videos and using a conversational tone for the narration (Charnigo, 2009). Camtasia also includes interactivity features such as Multiple Choice, True or False, Fill in the Blank and Short Answer question types, which, to some extent, can compensate for the absence of dialogue between instructor and student.

In addition to the explanatory videos, the online WLR includes a formative assessment component consisting of independently created lessons using the award-winning Smart Sparrow authoring tool. In these lessons, students are prompted to identify the textual features that have been illustrated in the videos in actual samples of LRs from a wide range of disciplines. In addition to the traditional question types listed above, the Smart Sparrow software includes 'Drag and Drop', 'List sorting', 'Text highlighting' and 'Matching' activities that increase student engagement and facilitate learning 'by doing'. Figure 1 shows an example of a 'Drag and drop' question. Another advantage of the Smart Sparrow platform is the ability to provide high quality feedback, which, research suggests, leads to improved learner outcomes (Marden, Ulman, Wilson, & Velan, 2013; Wojcikowski & Kirk, 2013). Rather than just indicating whether the answer is correct or incorrect, the feedback can show why the selected choice is incorrect. This can lead the learner to a different learning pathway depending on their performance. It can present a new screen including hints, lead the learner to more practice exercises, or provide a detailed explanation for the correct answer. In Figure 2, the red bolded text and the underline comments in square brackets show the students why their answers are incorrect. Another use for Smart Sparrow's adaptivity is the inclusion of an initial diagnostic task which points the students to the specific activities that would address their particular needs. This means students do not need to revise material they are not interested in or that they have already mastered.

**– How is the law evaluated?**

How is the law evaluated in each account? Drag the words in the item bank to the corresponding box. Hover over the pop up icons to read each section.

ITEM BANK	2.1.1.2 The Critical Account	2.1.1.1 The Traditional
UNCONTROVERSIAL		
CONTEXT-DEPENDENT		
EVOLVING		
LOGICAL		
PREDICTABLE		
BIASED		

< > HISTORY FEEDBACK NEXT

**Figure 1.** Drag and drop activity.

## – Q1. Study limitations

**According to the writer, what are the limitations of discourse studies on blame and responsibility?**

Discourse studies of blame and responsibility have therefore been carried out in different contexts, and with different priorities. However, virtually all of the studies subsumed responsibility into the concept of blame, and thus used the concepts interchangeably. **Blame avoidance and denial have mainly been examined as discursive strategies, [This section states what previous studies have done. The limitation is in what they have NOT done, which is stated in the rest of the sentence. Thus, option 3 is incorrect]** with no systematic examination of discursive strategies which accept responsibility or acknowledge responsible actions. Furthermore, most studies have been set in one specific cultural context or environment, except for 't Hart and Tindall's (2009) case studies on how the global economic downturn was framed in **public leaders' speeches. [Speeches are the object of one of the studies, cited as an example only. It doesn't affirm that studies are limited to speeches as option 5 states]** In most cases, therefore, other studies have not examined how differing contextual factors might affect how blame and responsibility are expressed.

**You may select more than one option**

- They don't differentiate between blame and responsibility.
- They don't examine how responsibility is accepted.
- They focus on strategies for blame avoidance and denial.
- They don't take into account the role of context.
- They limit their analysis to speeches, excluding other text types.

That is incorrect!  
See some hints in the text above.

**Figure 2.** Feedback for incorrect answer.

Quality feedback is crucial not only when it is provided to the student, but equally important when obtained from the student. In a traditional classroom, teachers can gauge students' level of engagement and understanding through simple observation of their body language and interaction with peers and contributions to group discussion. This allows the teacher to adjust pace, elaborate on concepts, provide more examples or adjust the methodology. In a completely autonomous online course, learning analytics can provide designers with information about engagement with the resources (e.g. number of views and visitors) and students' performance beyond a numerical score. This includes the number of attempts before obtaining the correct answer or a particular section that makes student restart or abandon the lesson. This is valuable data which facilitates the process of adapting and updating the module.

The process of adapting face-to-face materials for the online environment is also an opportunity for revising the content and methodologies of existing courses. The process of segmenting and structuring content that needs to be processed by the student independently can raise awareness about the flaws in trialled and tested materials. In the case of the face-to-face WLR, dated LR samples were replaced with more recent and interesting content, and Part 4 "Referring to sources" is being adapted to focus on more specific issues of LRs such as an overuse of strong author orientation (e.g. Smith (2010) argues...; Johnson (2013) states...), which backgrounds the main ideas being discussed. Other workshops are undergoing complete restructuring to better suit students' needs. Part of this curricular revision consists of integrating the information literacy component into our academic literacy workshops. Options such as team teaching with Library staff and the creation of more online materials to be included in blended workshops are being explored.

## 4. Technological issues

In addition to the pedagogical affordances of the selected software, educators need to consider aspects such as how they will learn to use the selected technologies, how user-friendly the software is, and whether adjustments are possible to make the resources accessible to users with disabilities. These issues will be discussed as follows.

### 4.1. Training

Designing online educational materials requires a set of skills additional to sound pedagogy and solid grasp of subject matter (Brown & Voltz, 2011, p. 3). While all tertiary educators are required to use technology to share information and communicate with students and colleagues, the ability to produce multimedia content or create activities using specialised software cannot be taken for granted. Ideally, educators would have mastered the authoring tools and video editing software that they intend to use before embarking in the development of online resources (Watkins, 2005). However, with the constant emergence of cutting-edge educational software and the institutional pressure to move resources online, this is rarely the case. In fact, time constraints and the immediate need for knowledge are some of the reasons that draw students to online courses. A novice online educator can only benefit from following a similar pathway to that of an online learner: limited traditional face-to-face training sessions, extensive non-linear self-directed learning and valuable peer collaboration. Becoming online learners themselves exposes educators to a wide range of practices, allowing them to gain a deeper understanding of the medium (Ko & Rossen, 2001).

One aspect to consider is the level of training provided by software developers. The online video tutorials for the Camtasia screen capture software was a factor that strongly influenced its selection. A five-minute tutorial requiring no more technical skills than using a mouse is sufficient to master the basics of recording, editing and sharing videos. Four more videos of a similar length allow the user to include effects such as animations, zoom, and more refined audio editing. Smart Sparrow was able to provide two one-hour workshops as part of their agreement with the university. This was sufficient for designing lessons including basic inputs such as Multiple Choice, True or False or Fill in the Blank questions. Yet, more advanced components such as Drag & drop and Text Highlight proved a challenge. To solve this and other issues, it was necessary to adopt both independent and collaborative approaches.

In addition to training provided by developers, autonomous learning and peer collaboration proved extremely useful. For trouble shooting issues or selection of hardware, the Web offers a wealth of information in the form of e-learning and technology blogs (and vlogs) that provide sound advice, demonstrate techniques or compare products, which can represent savings of hundreds of dollars by purchasing the appropriate equipment for the project's needs. Equally useful was collaboration with peers, which was achieved through networking, whether through traditional word of mouth or via the university's social network Yammer. More experienced software users would answer questions or even create screencasts demonstrating how to perform a task. These would be shared via either social post, email or document sharing clouds. The network would expand through attendance to TechTalks: lunch hour talks showcasing innovative use of technology in the classroom organised by the Education Innovation team. In this way, novice e-learning instructors can build their technical capabilities using a wide range of sources including the software developers, the Web and more experienced peers.

### 4.2. Usability

While usability appears to be a transparent concept, it entails a number of considerations that may go unnoticed until the materials reach the learner, causing disengagement and a poor performance. The first of these considerations is how the learners will access the course. Educators may design their course with mobile users in mind due to the ubiquity of smartphones. Yet, tertiary students

seem to favour laptops for educational purposes while using smaller mobile devices for entertainment or accessing quick information (e.g. social media, news, weather forecasts) (Vassilakaki, Moniarou-Papaconstantinou & Garoufallou, 2016, p. 418). In addition to the device, the World Wide Web Consortium (W3C) (2008) recommends using technologies whose only requirement is an internet connection. That is, students should not be required to download any software, as this would make the material inaccessible from public computers or devices with insufficient memory. Following this standard not only increases access, but facilitates updating the module as well and allowing all users to access the changes instantly (Mikkonen & Taivalaari, 2011, p. 4).

To maximise lesson usability, aspects such as video length, slide design and pace of narration need to be considered. The length of a screencast will depend on the depth and breadth of the content or the procedure being explained. However, limiting their duration to under ten minutes will not only facilitate learning and increase student satisfaction (Baker, 2014, p. 73), but will also increase access as low bandwidths and excessive mobile data costs are an issue in Australia. The slide design can also increase usability by relying on an uncluttered format, large sans-serif fonts and contrasting colours. Camtasia also offers features to focus attention such as zoom, highlight or annotate. These are particularly useful when deconstructing texts and making linguistic features salient. In Smart Sparrow, longer texts can be presented with an additional scroll function that allows the student to remain on the same screen without losing readability. Likewise, the provision of Cascade Style Sheets (CSS) keeps the formatting consistent, increasing predictability (e.g. the location of buttons, the formatting of questions). Finally, for the novice achieving the right pace of narration may take practice. In Camtasia, audio and video can be edited separately. Thus, improving the audio does not equate to re-recording the video in its entirety. Fragments of speech can be deleted and re-recorded easily, taking care to use the same microphone and location to keep sound quality consistent.

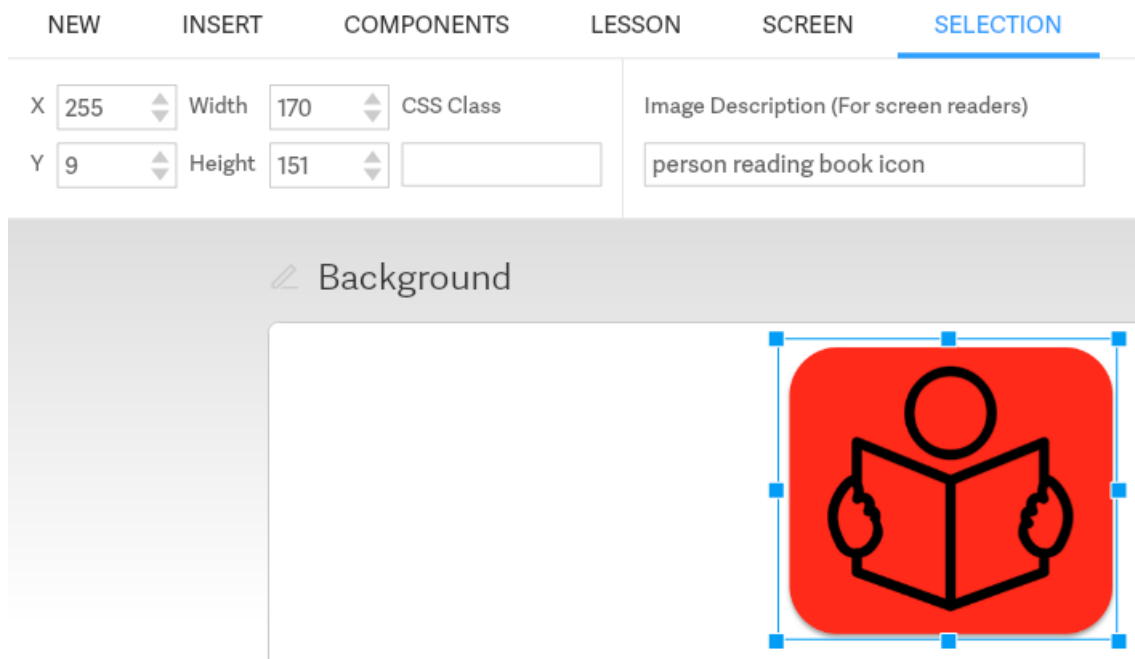
### **4.3. Accessibility**

Although a more inclusive approach to education has made accessibility a priority, the novice e-learning designer may overlook the necessary provisions for a particular disability. This section will discuss some of the technological and design requirements as established by the Web Content Accessibility Guidelines 2.0 (W3C, 2008) to cater for students with visual, hearing, physical and cognitive disabilities.

#### *4.3.1. Visual disabilities*

Visual disabilities may range from total lack of vision to simply requiring larger fonts on the screen, and include the often ignored colour blindness, which affects nearly one in ten men. (Burke, Clapper & McRae, 2016, p. 163). For those students with complete vision loss, the software needs to be compatible with screen reading software. Camtasia has been successfully tested in this regard (Wakimoto & Soules, 2011). Smart Sparrow does include the option to include an image description for screen readers (see Figure 3). For this to work effectively, the designer needs to avoid uploading text in the form of picture or pdf files, as these cannot be read by the software. Another consideration is that for activities that require visual identification (e.g. 'Drag & drop', 'Text Highlight', 'Matching'), a screen reader friendly version must be included (e.g. Multiple Choice). For those with different degrees of colour blindness, free online applications can check whether the colour scheme can be distinguished effectively. Another consideration is making sure colour is not the only way to communicate a message. For example, merely highlighting correct or incorrect answers in green or red can be confusing for the colour blind. Instead, adding a check and a cross can convey the same meaning. To facilitate zooming in or font enlargement, the designer should choose sans-serif fonts (as these are more legible) in an appropriate size relative to the screen.





**Figure 3.** Input for screen readers in Smart Sparrow.

#### 4.3.2. Hearing disabilities

As with visual impairments, hearing disabilities may range from slight hearing loss to complete deafness. To improve access, increasing the volume during editing so that it can be listened to at a high level and reducing background noise are effective strategies. The use of captions is another option that may not only benefit those profoundly deaf but also users with English as an additional language or simply someone without headphones in a public place. It is important that the captioning option is set to closed (CC), as this gives students the possibility of turning them off and on, as some find them distracting. All of these options can be included using Camtasia during the editing stage.

#### 4.3.3. Physical disabilities

Those with mobility issues may require software to be operable through a keyboard rather than a mouse. Videos produced with Camtasia can be controlled with a keyboard as any other YouTube video. In Smart Sparrow, on the other hand, basic functionality such as selecting the next page and answering MCQ can be done through a keyboard, but more advanced options such as ‘Drag & drop’ still require a mouse. At the moment, the Smart Sparrow platform is certified as WCAG AA compliant (the highest level of compliance is AAA) and claims it is committed to be working towards exceeding these standards in the near future (Ebenhoeh, 2015).

#### 4.3.4. Cognitive disabilities

Catering for students with cognitive disabilities relies more on design choices than on the technology available. Although this course is targeted at PhD students and consists of the analysis of complex texts, actions such as breaking longer texts into smaller chunks and breaking up tasks requiring higher order thinking skills into several steps can help avoid cognitive overload and facilitate completion for students with Executive Function Disorder. Controlling the number of pop-ups, call outs and other visual input on screens can also be beneficial for students with ADHD.

The process of creating online materials can make educators aware of the need to create more inclusive classrooms and exploit the potential of technology to enhance learning, even in face to

face contexts. At the Learning Centre, inaccessible materials (e.g. slides and handouts) and physical spaces are being upgraded to accommodate students with disabilities. Furthermore, classes are being technologically enhanced with the use of electronic polling systems via smart phones and the teaching space includes an interactive Smartboard that increases student engagement when performing text analysis. We have also successfully tried making face-to-face workshops available to students in a different campus through Adobe Connect. In addition to technologically-enhanced teaching practices, assessment of written assignments has also been moved completely online. Through the Turnitin Feedback Studio platform, examiners upload rubrics and pre-made comments (called 'Quickmarks') that not only considerably reduce marking time, but also increase the amount and quality of the feedback. The Quickmarks can also include links to online resources for targeted support. Part of the training required to master this tool was conducted online through a screencast created by one of the staff demonstrating how to use the software. In summary, we are embracing technology to improve the experience of all students.

## **5. Evaluation**

Designing online educational resources requires a significant investment of time and resources. Regardless of the level of training, the strict following of guidelines or the designers' expertise, no project can be successfully accomplished without incorporating feedback from content experts, educational designers and students (Sinclair et al., 2017).

Rather than a final step, evaluation should be included at every stage of the process, from storyboarding to the final product. In this project, all members of the Learning Centre, who are academic literacy experts, provided feedback on the materials designed by the project leader. Comments included aspects such as the structure of video scripts, the use of imagery, the pace of narration and the accessibility of icons. Library staff recommended including diagnostic tasks and using a warm colour palette. Education designers made suggestions about the module structure and the potential for cognitive overload of some activities and students commented on the use of captions, the functionality of the activities and the module's relevance for their work. What this illustrates is that the feedback can be as varied as the number of reviewers and that its nature is not necessarily restricted to the reviewer's expertise.

Obtaining this feedback was possible through a number of strategies. While for members of Learning Centre, contributing was 'part of the job', collecting this information required implementing more efficient forms of communication than sending emails back and forth. Uploading materials or feedback forms to file sharing applications not only avoids having to download the same file multiple times, but also allows different reviewers to agree, disagree or elaborate on previous comments, making the process akin to discussing it in a meeting. For student feedback, the attendees to the face-to-face WLR workshop were enrolled in the unfinished online versions, as they had a direct interest in the topic. Electronic surveys were emailed to the participants who completed the lessons. Valuable information was collected through Likert scale questions; however, respondents would consistently leave open-ended questions blank. Hence, user-testing sessions were held to obtain detailed written feedback in exchange for gift cards. This comprehensive approach to the evaluation of the resources from their conception has visibly improved the quality of the course. This process will not be considered finalised once the course is launched in early 2018 but will continue based on the actual users' response collected through learning analytics software.

## **6. Conclusion**

This paper has outlined the pedagogical and technological challenges and opportunities posed by the process of adapting the face-to-face workshop Writing a Literature Review (WLR) to the online environment. For an experienced academic literacy educator with limited knowledge of e-

learning tools and principles, translating genre-based approaches, which normally rely on collaborative methodologies, to a screen-based medium, required a major shift in perspective. While the focus on deconstructing texts and highlighting their linguistic features as meaning-making resources has been maintained, the student-centred inductive approach had to be shifted to a more deductive one. However, the affordances of the selected software: Camtasia for the screencasts and Smart Sparrow for the formative assessment activities, have been exploited to enhance learning. Particularly useful is Smart Sparrow's adaptivity, which leads student in a particular pathway (e.g. hints, supplementary exercises) depending on their performance. The technological challenges involved obtaining the required training and complying with usability and accessibility guidelines. In order to address both the pedagogical and technological challenges, an intense evaluation process involving academic literacy experts, education designers and students was conducted at every stage of development. The knowledge gained through this project will certainly facilitate the adaptation and creation of new courses.

The purpose of this paper has been not only to offer advice to novice e-learning designers, but also to highlight the collateral benefits that embracing technology can yield for all aspects of academic literacy teaching and learning. From more streamlined communication processes, to interdisciplinary collaboration, to curriculum renewal, to technology enhanced face-to-face classes, to disability awareness, starting on the path of online learning design can only make us better educators.

## Acknowledgements

I would like to thank the DVC Education office at the University of Sydney for providing funding through the Strategic Education Grant scheme for the development of this resource; Mark Henderson for his invaluable guidance throughout this process; Michelle Harrison and Anne Goodfellow for sharing this responsibility, and the Learning Centre staff for crucial feedback and contributions to this project.

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