

# Supporting international students with discipline-specific, course-embedded ALL instruction

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(Received: 26 June, 2024. Published online 18 April, 2025.)

Academic language and learning (ALL) support at Australian universities plays a crucial role in the academic success, acculturation and wellbeing of many student cohorts, including international students. This paper examines the implementation and effectiveness of a course-embedded, discipline-specific ALL support initiative, SCANA (Student Communication and Needs Analysis), at the University of Sydney. The paper evaluates the iterative development of SCANA support within a single postgraduate education program over four semesters, and focuses on how and why the design and delivery of ALL instruction changed over this time, towards an increased focus on digital literacy and a more inclusive learning environment. It complements this evaluation with student performance data and student feedback data demonstrating improvements in academic outcomes and student satisfaction. Ultimately, this paper highlights the importance of discipline-specific, course-embedded ALL support in addressing the challenges faced by international students at Australian universities and offers a practitioner's view of the iterative development of one particular ALL support initiative. This research contributes to the growing body of literature on best practices in ALL support, particularly the inclusion of digital and AI resources and a focus on digital literacy.

**Key words:** Academic language and learning (ALL), discipline-specific ALL support, digital literacy, international students, course-embedded ALL support, practitioner view.

## 1. Introduction

Academic language and learning (ALL) support at Australian universities plays a crucial role in the success, acculturation and wellbeing of many student cohorts, including international students. This paper examines the implementation and effectiveness of a discipline-specific ALL support initiative, SCANA (Student Communication and Needs Analysis), at the University of Sydney. It evaluates the iterative development of SCANA support within a single postgraduate education program over four semesters, focusing on this support's design and impact on a cohort of international students.

The following introduction looks at six key topics around creating ALL support for international students before the paper progresses to the SCANA case study and then conclusion.

### **1.1. The challenge of academic literacy for international students**

International students arriving at Australian universities often face significant challenges in academic literacy, particularly in discipline-specific contexts. The assumption that these students possess the necessary academic literacy upon arrival at university is both unrealistic and unreasonable, especially considering their English proficiency and lack of exposure to Australian-academic culture (Ghenghesh, 2014; Hussein & Schiffelbein, 2020; Phakiti et al., 2013). International students' academic literacy challenges are compounded by the limitations of pre-enrolment English assessments such as IELTS, TOEFL, and PTE to predicting academic success, primarily because they fail to measure discipline-specific academic literacy (Neumann et al., 2018). The issue is further exacerbated by some universities setting questionably low language-ability entry thresholds to remain competitive in the international student market (Murray, 2015). Consequently, Neumann et al. (2018) emphasises the importance of universities providing ALL support for international students to mitigate their language and literacy challenges and help them to achieve academic success.

### **1.2. The need for targeted support**

Contrary to some beliefs, mere immersion in university life does not guarantee the development of discipline-specific academic literacy (Humphreys, 2022; Stacey, 2011). In contrast, research demonstrates that international students who receive discipline-specific ALL support during their studies are more likely to succeed academically, maintain higher motivation levels, experience greater wellbeing, and feel more connected to their university and peers (Calvo et al., 2020; Wilson, 2021). Conversely, a lack of such support correlates with poorer degree outcomes, lower self-efficacy, feelings of isolation, and reduced overall satisfaction (Wilson, 2021). Despite all Australian universities offering centralised ALL support, its impact is sometimes questionable (Baik & Greig, 2009) and students are often not motivated to access it. This may be because students find it challenging to connect centralised ALL support to their course requirements and learning outcomes or because it is not timely. Consequently, it is increasingly argued that Australian universities should reform their ALL support by increasingly offering discipline-specific support embedded in students' degree courses (Velliariis & Warner, 2009, Wingate, 2018).

### **1.3. Course-embedded discipline-specific ALL support: A solution**

Course-embedded, discipline-specific ALL support integrates academic literacy development with course curricula. This approach focuses on discipline-specific discourses and skills needed for success in a particular course and discipline (Macnaught et al., 2022) and can be fully embedded in lectures or tutorials or provided as adjunct support, such as workshops outside of class time but still created to align with course curricula (Satılmış et al., 2015). Wingate (2018) argues that academic literacy involves unique ways of engaging with knowledge within specific fields and therefore the most effective academic literacy instruction should be discipline-specific. Bretag et al. (2014) found that decontextualised ALL lessons are often difficult for students to apply to their own learning, highlighting the need for embedded, discipline-specific resources, and Kift (2023) emphasises integrating academic skills development into first-year curriculum design, improving literacy skills and enhancing understanding of academic practices. By embedding ALL support within courses, students better understand the relevance of academic literacy skills to their discipline, and support can be discipline-specific and timely, leading to improved learning outcomes and smoother transition into academic communities for the supported students.

### **1.4. Interactive academic acculturation: Beyond academic success**

In addition to supporting academic success, effective ALL instruction supports students' interactive acculturation into the university community which positively affects students' wellbeing. Interactive academic acculturation is a dynamic process involving reciprocal engagement between international students and the host academic culture, where both parties influence each other (Berry, 2005; Morita, 2000). This process encourages students to negotiate their identities,

cultural practices, and academic norms, resulting in a mutually enriching experience (Lea & Street, 2010). ALL support facilitates this acculturation by providing structured engagement opportunities and greater understanding of university culture. Effective ALL support enhances interactive acculturation by fostering cultural bridging, enabling students to navigate the host culture while sharing their own perspectives (Tran, 2013). It also develops discipline-specific language skills, improving communication with peers and faculty (Arkoudis et al., 2019) and aids in academic socialisation through culturally relevant literacy practices (Duff, 2010). Furthermore, ALL support encourages students to reflect on their academic identities, integrating prior experiences with new expectations (Morita, 2004) and promoting intercultural competence (Leask & Carroll, 2011). This approach aligns with graduate qualities and supports international student integration while maintaining wellbeing (Department of Education, Skills and Employment, 2021).

### **1.5. Addressing cultural differences in learning approaches**

International students, particularly those from Confucian Heritage Cultures (CHC), often encounter challenges when adapting to the problem-posing, dialogic, and critical-thinking-based educational model prevalent in Australian universities (Lee, 1996; Watkins & Biggs, 1996). While it is true that some CHC students may initially prefer rote learning methods, as described by Freire (1970) in the Banking Model of Education, this preference is not a fixed characteristic but rather a reflection of their previous educational experiences (Kubota, 2001). Critical thinking exists across all cultures and CHC students can demonstrate strong analytical skills when given the right context and encouragement (Kubota & Lehner, 2004).

Thus, while CHC students may initially struggle with certain aspects of Australian academic culture, it is essential to recognise their capacity for growth and adaptation. The misalignment between prior learning experiences and the expectations of Australian universities can be bridged through effective ALL support. By fostering an inclusive environment that encourages active participation, ALL support can help students develop the necessary discipline-specific critical thinking skills to thrive academically (Wingate, 2015). This approach not only enhances academic performance but also promotes cultural integration and understanding among all students (Wilson, 2021). With appropriate guidance and resources, CHC students can successfully navigate their educational journeys at Australian universities, enriching the academic community as they do so.

### **1.6. When and how to use AI**

The rapid advancement of artificial intelligence (AI) in education presents significant challenges for ALL support programs. These include ensuring the accuracy and quality of AI-generated content, ensuring that AI boosts rather than hinders student learning, and addressing issues of authorship and originality in student work (Yeo, 2023). The lack of consistent policies on AI use across institutions has led to confusion about its legitimacy for learning purposes (Perkins & Roe, 2023). From an ALL practitioner's perspective, this inconsistency is evident in the varied approaches taken by different faculties, or even courses within institutions, and this inconsistency presents challenges for ALL support that must teach students to use AI effectively and ethically in a way that is allowed in their context and does not undermine assessment integrity. Consequently, there is a need for universities and individual courses to create and follow clear and comprehensive guidelines on AI use that are available to students taking courses and ALL professionals supporting courses. Another AI challenge is student over-reliance on AI tools, which could potentially undermine the development of critical thinking and problem-solving skills (Hasanein & Sobaih, 2023). Consequently, it is crucial that AI tools supplement rather than replace students' cognitive efforts, maintaining a balance that leverages AI benefits while prioritising essential skill development.

This paper will now progress to the SCANA case study.

## **2. A Course-embedded, discipline-specific ALL support initiative: SCANA**

This section introduces a case study within a course-embedded, discipline-specific Academic ALL support program called SCANA (Student Communication and Needs Analysis) at the University of Sydney. The SCANA program comprises two main components: an online post-entry language assessment (PELA) and follow-up ALL support workshops. While the name SCANA originally referred to the PELA component, it has since become the designation for the entire program, and a comprehensive review of the SCANA program is available in García Marrugo et al.'s (2023) JANZSAA article, with the current case study focusing on the design of the support workshops rather than the whole program. Although SCANA supports both domestic and international students, this case study focuses on a single postgraduate program cohort within SCANA that consisted predominantly of CHC international students. Consequently, this paper primarily addresses the experiences and needs of international students within this context.

The data on student grades and student feedback presented in this study were collected primarily to measure the success of an ALL support program and not for research purposes. The data on grades are from university records and the data on student feedback are from online quantitative and qualitative surveys taken by the students after each support workshop. Much of this data has previously been reported in García Marrugo et al.'s (2023) JANZSAA article and it has not been re-analysed for this paper. It is being used here to complement the description and analysis of ALL workshop design.

### **2.1. SCANA Structure and Implementation**

SCANA, initiated in 2021 by the University of Sydney Learning Hub, builds upon the Academic English Screening Test PELA. This PELA comprises two tasks: text completion and speed reading, taking a maximum of half an hour. The Language Testing Research Centre at the University of Melbourne has extensively validated it as a predictor of students' ALL abilities (Knoch et al., 2016). The PELA, as used in SCANA, classifies test-takers into three bands, with Band 1 requiring the highest level of support. While effective in identifying at-risk students, the instrument does not provide specific insights into the aspects of ALL needing support and so follow up support must be designed after further needs analysis conducted by Learning Hub Learning Success Advisors.

The program was first piloted in semester 2 of 2021, and was initially integrated into seven Units of Study (UoS). In the following year, the program expanded significantly, reaching more than 1,200 students across 30 UoS. By 2023, it had been integrated into more than 70 UoS across various faculties.

### **2.2. The SCANA in a postgraduate teaching degree: A case study**

This section describes and evaluates the iterative design process of the SCANA support workshops for one particular postgraduate teaching degree. It outlines the workflow in three stages: needs analysis, content design, and innovative redesign conducted over four iterations. It also reports on student evaluations and presents data showing improved student grades. The ALL support for this course was primarily online workshops via Zoom, conducted over four semesters between 2021 and 2023. While SCANA support is designed for both domestic and international students, this cohort was predominantly CHC international students, thus this paper's focus on international students. In 2021, international students represented 28% of enrolments at the University of Sydney (Clarke et al., 2022).



**Figure 1.** SCANA initiative workflow of Learning Success Advisors (LSAs).

### 2.3. Stage 1: Needs analysis

Effective needs analysis is essential for a successful learning intervention, and is a central tenet of data-driven learning. Best practice involves creating and analysing a task (i.e., a written assignment) to identify student needs (Serafini et al., 2015). Analysis of past student papers coupled with convenor interviews provides historical context of student learning and challenges, informing the main areas needing support (Brooks & Normore, 2015).

The needs analysis comprised four parts:

1. Interviewing and information gathering from Unit Coordinators (UCs)
2. Analysing past semester student artifacts
3. Gathering past semester student experiences (if possible)
4. Implementing an iterative feedback-review loop on the support.

In the UC interview for this course, issues such as referencing, paraphrasing, paragraph structure, and coherence were highlighted. The UC also set boundaries around addressing unit assignments in ALL support workshops and using AI proofreading tools. Analysis of past student artifacts revealed key ALL issues, as shown in Table 1.

**Table 1.** An analysis of 20 past papers (created for this article, 2023).

Needs to address	Number of assignments
Paraphrasing	17
In-text referencing, Sentence clarity	16
Evidence, Reference list	11
Following assignment instructions	9
Analysis/critical thinking, Linking evidence/analysis to topic (cohesion), Coherence	6
Paragraph formatting	5
Proofreading (spelling and sentence grammar)	4

After the first implementation, student feedback on the support, collected using online surveys distributed at the end of each workshop, was also used to implement ongoing improvements.

The following sections will compare the first iteration of the support to the latest one.

### 2.4. The first iteration (semester two, 2021)

In semester two, 2021, the Learning Hub support workshops for the unit cohort ran every week for ten weeks from weeks 3 to 13. Of a cohort of 173 students, 142 took SCANA, eight of whom were in band three (low risk), 61 in band two (medium risk), and 73 in band one (high risk). The

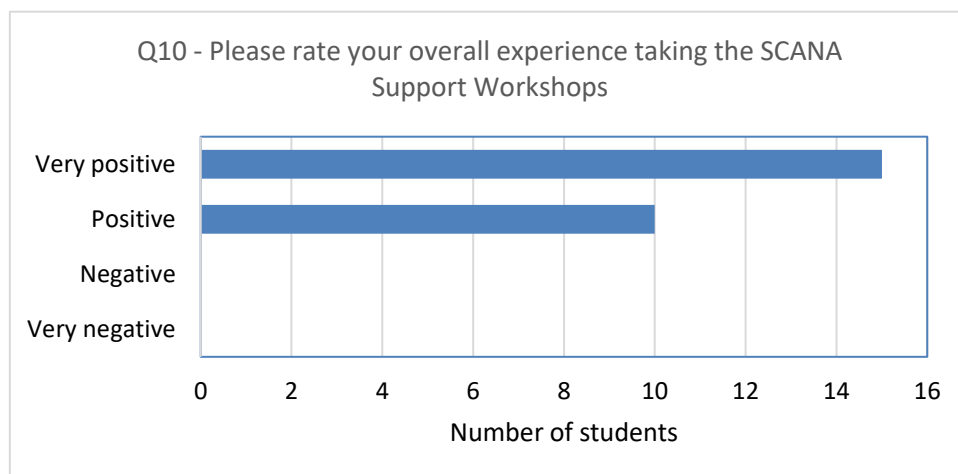
PELA part of the SCANA program was promoted to all students in the first lecture of the unit and advertised on the unit Canvas site. Subsequently, weekly reminder emails about workshops were sent to band one students only, with students in bands two and three being informed about other Learning Hub offerings such as general workshops and self-study resources. This was a choice to keep the support workshops focused on the needs of band one students.

The one-hour workshops were designed to cover key topics highlighted in the needs analysis, except for looking at assignment instructions, which the UC had requested not to be covered. The materials used in each workshop to teach ALL skills paralleled the topics in the unit of study, making the workshops as relevant to the unit as possible while still making it clear to the students that they were optional, not part of the unit of study nor run by the unit teaching team, and unnecessary to learn unit content.

The first iteration of the ALL workshops syllabus was as follows:

1. Finding and evaluating sources
2. Reading academic sources, pt.1
3. Reading academic sources, pt.2
4. Paraphrasing and synthesising
5. Referencing
6. Writing an effective paragraph, pt.1
7. Writing an effective paragraph pt.2
8. Editing and proofreading
9. Understanding assessment feedback
10. Giving oral presentations.

Although feedback on the workshops was positive, as shown in Figure 2, attendance was very low, with 14 out of 73 band one students attending in week one, dropping to three by week ten. There was some variation in which students attended each week, so the total number of students who attended at least one workshop was greater than 14.



**Figure 2.** Postgraduate teaching degree student feedback on SCANA support workshop in semester two, 2021.

Written feedback on the workshops was also positive; however, there was a clear message from both feedback and attendance that ten workshops were too many, so the decision was made to plan three 90-minute workshops for semester one in 2022 (iteration two), which were to be taught between semester weeks four and seven when students begin preparing for their first written assignment. This remained the format through to semester one, 2023. The second significant change

between iterations one and two was that the whole cohort was invited to the workshops rather than just the students in band one. This has the benefit of supporting more students and providing equal access to support but risks sidelining students most at need if the support is not carefully designed.

## 2.5. The latest iteration (semester one, 2023)

After four semesters of feedback, the current syllabus for the SCANA support workshops is shown in Table 2, and these are covered in three 90-minute workshops taught between weeks four and seven. Each workshop has a handout, and workshop one is accompanied by an extensive interactive reading skills activity designed in H5P, a software for interactive content creation.

**Table 2.** SCANA workshop syllabus in semester one, 2023.

Workshop	Topics
1	<ul style="list-style-type: none"> <li>• <i>Finding good sources of information</i></li> <li>• <i>Reading with a purpose</i></li> <li>• <i>Notetaking</i></li> </ul>
2	<ul style="list-style-type: none"> <li>• <i>Different elements we can include in an academic paragraph</i></li> <li>• <i>Structuring paragraphs clearly</i></li> <li>• <i>Information structure and how to clearly connect sentences</i></li> </ul>
3	<ul style="list-style-type: none"> <li>• <i>Paraphrasing and avoiding plagiarism</i></li> <li>• <i>Referencing using Zotero</i></li> <li>• <i>Writefull and other online tools</i></li> </ul>

Compared to the first iteration, more than 150 students attended each workshop in the latest iteration of the program (462 over three workshops), including every student in band one. This was more than 75% of the cohort. Although comparable data are not available for semester two, 2021, on average, band one students who attended SCANA support workshops in semester one, 2023, scored 77% (distinction) for the unit, with 53% of students who attended attaining a distinction or high distinction for one assignment. No band one student who attended the support workshops failed the unit, and, on average, students who attended the workshops received 10% higher grades than those who did not. The overall student satisfaction measure for the workshops was 4.7/5 (García Marrugo et al., 2023). Across all units of study supported by the Learning Hub, band one students who attended at least two workshops were five times less likely to fail their unit of study and received an average grade 12% higher than their band one classmates who did not attend a workshop (García Marrugo et al., 2023).

Student feedback was thematically analysed (Bruan & Clark, 2012; Bruan et al., 2019) into four themes exemplified below. The qualitative feedback supported that students who attended SCANA workshops felt better prepared for their assessments, found the workshop teaching materials useful, felt they had improved their reading skills, and felt they understood academic writing better.

### **Better prepared for assessment**

*I wasn't sure what I wanted from this session so I can't really say what it was missing, but I feel a lot more prepared to approach my assessment now. [I] didn't really have any clue how to research/write so [LSA] gave me a really good basis to start ... I feel a lot less overwhelmed now.*

### Useful teaching materials for learning

*[The] workshop and PowerPoint provided is very helpful. [I] didn't have this type of teaching before! I thought I was just not that smart, lmao. Thanks so much!!!*

### Improvement in reading skills

*The best thing is that it really help[s] me, such as how to read and what to pay attention to in reading. And what's even best is that [LSA] told us step by step so that we can learn more clearly and intuitively. Also, there is a website that [LSA] designed for us to train our skills that [we] learnt from this workshop.*

### Understanding academic writing better

*This workshop was very helpful to me because I am a freshman and very unfamiliar with foreign academic writing. However, [LSA] really explained this workshop in detail and gave me ideas. It was really great. Thank you so much.*

Additionally, comparing the first and latest iteration of support shows that two fundamental changes were implemented, which are, as will be discussed next, the introduction of online assistive learning tools, and fostering a more inclusive and empowering learning environment.

## 2.6. Introducing online assistive learning tools

The first fundamental change was introducing online assistive learning tools. Tools like Zotero, Writefull, Notion, Connected Papers, and Research Rabbit were integrated to enhance students' digital literacy and research capabilities (see Table 2 for details).

**Table 2.** Online tools with their main function and features.

Online tools	Main features	Main function
Zotero	Zotero is an open-access reference management tool that helps collection, organisation, citation, and sharing of research sources.	Referencing
Writefull	Writefull is an assistive writing tool supported with AI to provide feedback on writing including grammar, spelling, syntax, paraphrasing, and vocabulary.	Proofreading, Editing
Notion	Notion is an assistive notetaking tool that offers a platform for thinking, writing, and planning with customisation and collaboration functions for users to share and co-develop ideas together if needed.	Notetaking
Connected Papers	Connected Papers is a visual tool to find and explore research papers. It provides a system diagram/map to represent the connection between papers according to their similarity.	Literature search
Research Rabbit	Research Rabbit is an online citation-based literature mapping tool. It searches for scholarly papers to help planning essays and literature reviews.	Literature search

A main reason for using these online tools is to improve students' digital literacy, which is an essential part of ALL instruction. They also shifted the pedagogical approach from teacher-centred to learner-centred as these tools could support students to become more autonomous learners. Finally, the tools facilitated the instructors moving away from providing monologic explanations supported with static PowerPoint slides to dialogic explanations using the interactive online platforms. To exemplify these points, Figure 3 and Figure 4 below show how APA referencing was taught prior to the introduction of Zotero versus after the introduction of Zotero. Zotero can be considered superior to manual referencing for students because it automates the process of collecting, organising, and citing sources, saving significant time and reducing errors. It is also free and the easiest reference manager to use, so a good first choice for students. Finally, it removes the need for lengthy explanation of APA formatting by the ALL instructor, which is unlikely to be remembered beyond a single assignment and is therefore of questionable long-term value.

## How to reference using APA 7

**In-text citation:**

**A ) Direct quoting** → "Providing feedback is often seen as one of the ESL writing teacher's most important tasks." (Hyland, 2003, p. 177).

**B ) Paraphrasing** → Teacher's writing feedback is very highly valued by their students (Hyland, 2003).

**End reference:** Hyland, K. (2003). *Second language writing*. Cambridge University Press.

Figure 3. Teaching APA 7 in 2021 (an excerpt from the workshop PPT).

The screenshot shows the Zotero application window with the 'Zotero - Document Preferences' dialog box open. The 'Citation Style' list includes 'Elsevier - Harvard (with titles)'. The 'Language' is set to 'English (US)'. Under 'Store Citations as', 'Fields (recommended)' is selected. The 'Automatically update citations' checkbox is checked. The dialog box has 'OK', 'Cancel', and 'Help' buttons at the bottom.

to how one sees oneself, both as an individual and in relation to others. It thus am and how I want others to understand who I am. Identity is something that is both nstructed (reflecting beliefs, self-image, values, age, gender, etc) as well as socially eacting the context of an interaction and the participants and activities involved). nderstanding of identity sees it as a stable feature of a person's inner life that is ealized in contact and interaction with others. More recently, this view has been l by a dynamic understanding of identity that sees it as something which emerges in uring interactions, making use of a variety of verbal, non-verbal and semiotic actions that a person has at their disposal (Martel and Wang, 2015; Pennington and ). These resources include aspects of language (e.g. dialect, register, style, s well as topics, attitude, gestures, and stance (Kiesling, 2016; Martel and Wang, is essential to how a person positions themselves in relation to others, as seen in the be to ourselves or others, such as teacher, student, family member, friend, employee, customer, expert, novice, lover, foreigner, etc. (Martel and Wang, ton and Richards, 2016), and can be seen in how a person portrays themselves in their and storytelling (Wolff and De Costa, 2017).

Figure 4. Teaching APA 7 in 2023 using Zotero (an excerpt from workshop 3).

Figures 5 and 6 below show the move from teaching academic register conventions to teaching students to use Writefull to check their academic register. As of 2023, Writefull, unlike Grammarly or other tools, takes users through each suggested change, with explanation, giving users more autonomy and clarity in the proofreading process. This focus on digital literacy rather than explicit academic register knowledge was a more relevant, durable and valuable academic literacy for students in 2023.

**3: Academic style**

- **Everybody** believes that L2 reading is more challenging than L1 reading.
- **Undoubtedly**, digital stories are a useful classroom tool.

**BE PRECISE**

Avoid sweeping generalisation

**Figure 5.** A PPT slide on using academic register from 2021.

Writefull

writeln

Full Edit Mode | Check Document | Check Paragraph | Widgets

1 REMAINING | 0 ACCEPTED | 2 DISMISSED

Multiple regression analyses indicated that all four dimensions of satisfaction were positively associated with **students'** overall university experience and **so** more resources should be allocated **into** these forms of support.

Multiple regression analyses indicated that all four dimensions of satisfaction were positively associated with **the** overall university experience **of students** and **therefore** more resources should be allocated **to** these forms of support.

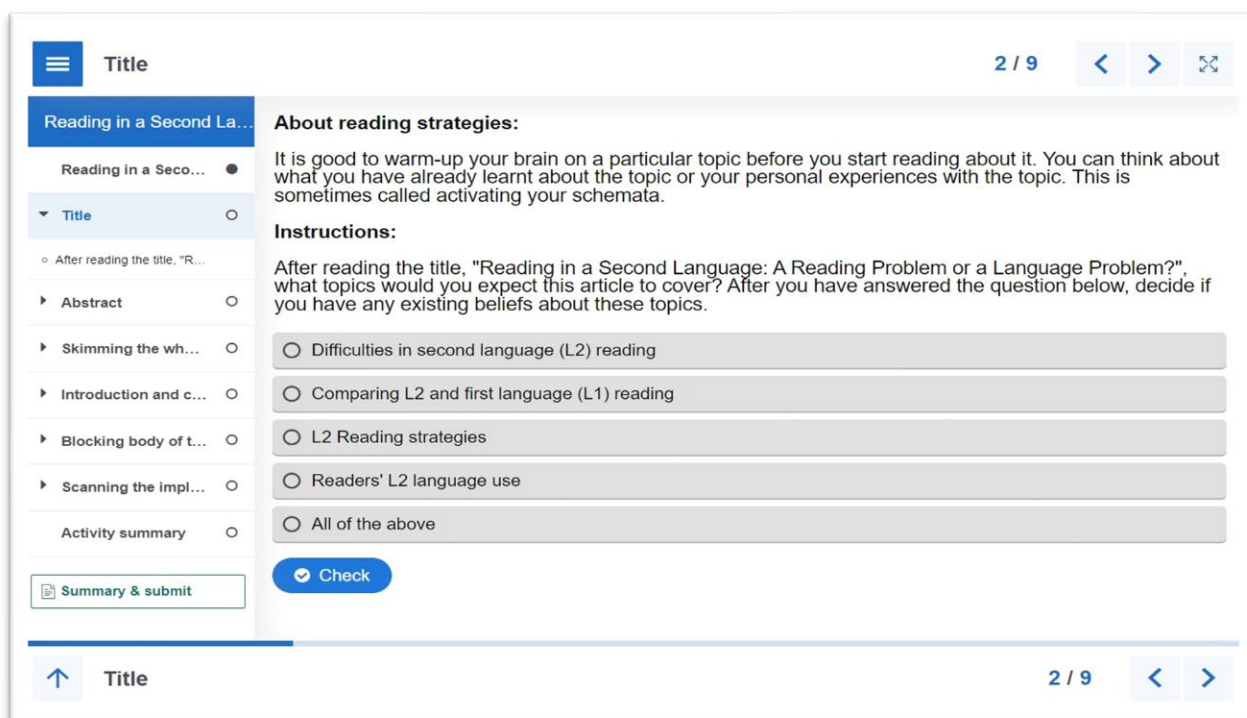
ACCEPT | DISMISS

**Figure 6.** A screenshot of an activity on proofreading for academic register from 2023.

Overall, student feedback shows that these additions have been well-received. They can promote learner autonomy and their increasing presence in academia is inevitable (Fuchs, Dooly, & Hauck, 2021), so it would be negligent not to introduce them to students where appropriate. Judging if they are appropriate, however, can be complex and involves the wishes of the UCs, faculties and the university as well as the capabilities of the LSA and the students (Fuchs, 2021). With the rapid development of AI, these decisions on when and how to introduce online assistive learning tools become more important but also more challenging. At the time of choosing them, these online resources were also considered through the SAMR (Substitution, Augmentation, Modification, and Redefinition) model to assess online tools for classroom suitability. Puentedura's (2010) SAMR model is a useful guide for ALL practitioners to think about and implement technology integration in classrooms.

## 2.7. Fostering an inclusive and empowering learning environment

A second key innovation in the latest iteration of support was the deliberate creation of a more inclusive and empowering learning environment. This was done in response to early iterations of the workshops being very teacher centred with few students choosing to interact or participate in activities. Drawing on Universal Design for Learning (UDL) theory, we reimagined our workshops to inherently embody characteristics that make all students feel welcomed, safe to ask questions, and encouraged to contribute. UDL is a research-based educational design framework with a focus on accommodating the diverse needs, abilities, and learning styles of all students, ensuring equal access and eliminating unnecessary barriers. This redesign was exemplified by the use of breakout room activities with multipurpose interactive online resources such as H5P (see Figure 7). These activities were carefully crafted to cater to diverse learning preferences. For example, social learners could engage in peer-to-peer collaborations in interactive learning rooms whilst independent learners could complete exercises individually in the main room, and advanced learners were provided with extension questions to maintain engagement. This approach not only accommodates different learning styles but also promotes active participation and self-directed learning.



**Figure 7.** A screenshot of an H5P breakout room activity.

## 3. Conclusion

This case study of one cohort taking part in the SCANA program at the University of Sydney offers insights into how to design effective, course-embedded, discipline-specific ALL support for international students. Over four semesters, the support evolved from ten weekly sessions to three targeted 90-minute sessions, with an increased focus on digital literacy and an inclusive learning environment, resulting in improved attendance, student satisfaction, and academic outcomes.

The success of this particular ALL initiative can be attributed to several key factors. First, its design was informed by a comprehensive needs analysis, including input from Unit Coordinators, analysis of past student work, and ongoing student feedback. This ensured that the support provided was directly relevant to students' academic requirements and challenges. Second, the introduction of online assistive learning tools such as Zotero and Writefull enhanced students' digital

literacy, research and writing capabilities, offering future-proof academic literacy skills for students and shifting the workshops towards a more learner-centred pedagogy. Third, the redesign of workshops to incorporate UDL principles created a more welcoming and engaging atmosphere for all students, particularly benefiting international students who may face additional cultural and linguistic barriers.

The outcomes of this initiative are promising, with band one students who attended workshops achieving significantly higher grades (an average of 10% higher) compared to those who did not attend. Moreover, the impact of programs such as this may extend beyond academic performance, supporting students' acculturation and overall wellbeing within the university community. Ultimately, these findings align with previous research highlighting the importance of discipline-specific, course-embedded ALL support for international students, and the SCANA program addresses the limitations of centralised ALL support by directly connecting academic literacy development to course content and requirements. Future research could examine the long-term benefits of similar ALL support on students' academic trajectories, how similar ALL support benefits domestic students, and how similar ALL support influences students' sense of belonging and cultural integration within the university community.

## Declarations

**AI declaration:** Perplexity AI was used in the editing stage to improve the clarity, coherence and cohesion of the text. The authors have reviewed all content and wordings created by the generative AI tool used, edited this content as needed, and take full responsibility for the content of the publication.

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