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Reconceptualising the role of academic language and learning advisers in the artificial intelligence age

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Abstract

Generative artificial intelligence (AI) tools are profoundly transforming learning, teaching and assessment in higher education. These tools present a major challenge for academic language and learning (ALL) advisers, as they are increasingly capable of performing many of the individual learning support functions that ALL advisers have traditionally provided to students. This conceptual article reimagines the role of ALL advisers in an AI-dominated world. Through applying the theory of practice architectures, it argues refocusing on four areas of practice: professional learning for educators, AI literacy, peer learning communities, and self-regulated learning. By embracing these areas of practice, and through collaboration with other third space professionals, ALL advisers can leverage the opportunities presented by AI to adopt a leading role in building staff and student capabilities essential for delivering a contemporary high-quality university experience.

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Practitioner Notes

1. Four areas of practice will be important to the future work of ALL advisers: professional learning for educators, AI literacy, peer learning communities, and self-regulated learning.
2. The availability of generative artificial intelligence tools means ALL advisers need to rethink the delivery and scope of traditional support services, such as individual consultations.
3. Additional empirical research is required to substantiate the benefits of embedding academic skills development in the curriculum.
4. Practice architectures theory provides a useful lens in which to understand the evolving role of ALL advisers as third space practitioners.

Keywords

Academic language and learning, artificial intelligence, third space, practice architectures

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Introduction

The increasing sophistication of generative artificial intelligence (AI) tools such as ChatGPT, Microsoft Copilot, and Google Gemini are significantly transforming the higher education landscape. These tools can complete most types of typical assessment tasks—or, at the very least, significant components of a task—within seconds, which fundamentally undermines the capacity of universities to assure that students attain the learning outcomes in their respective courses (Chiu, 2024; Gašević et al., 2023; Lodge et al., 2023). In the Australian context, AI has been such a disrupter that it prompted the Tertiary Education and Quality Standards Agency (TEQSA) Chief Commissioner Peter Coaldrake to call for higher education institutions to undertake a collective "deep rethink" of all teaching, learning, and assessment practices (TEQSA, 2023a, para. 6). This is quite a significant statement for a national regulatory leader to make—it implies that almost everything that universities do to teach and assess needs careful interrogation and potential revision. Central to this rethink will be a sector-wide shift towards ethical engagement with AI and guiding students how to use these tools appropriately (TEQSA, 2023b). A survey of over 8,000 students across four Australian institutions, for instance, found that over 80% of students are already using AI in their studies and 40% have used AI in assessments in which they were not allowed (Chung et al., 2024).

AI is especially disruptive to the work of academic language and learning (ALL) advisers. ALL advisers contribute directly to student retention and success, especially for learners that are new to higher education, first-in-family to attend university, and from underrepresented backgrounds. In so doing, they play an important role in supporting equitable access to higher education for a diverse student cohort (Ashton-Hay & Doncaster, 2021). A pressing challenge is that much of the student support work ALL advisers currently provide to students—such as interpreting assessment task instructions, giving feedback on writing drafts, and advising students on general study skills—can be easily provided by tools like ChatGPT and Gemini instantly, at any time or location, and at a fraction of the cost (Imran & Almusharraf, 2024; Zhan et al., 2025). Thurlow (2023), a practicing ALL adviser working at an Australian higher education institution, conceded he had "fretful feelings" about AI because it may lead to "losing our roles as trusted guides to the occluded world of academic writing by generative AI tools" (p. 98). Moreover, well before the public introduction of generative AI tools, much of the scholarship that focuses on ALL practice was already consistently raising concerns about the marginalised, underappreciated, and misunderstood nature of this work (Evans et al., 2019). Without a rapid and significant shift in practice, the profession faces an existential threat that may ultimately materialise long-held fears held by ALL advisers that their contribution to the student learning experience is too much of an "expensive luxury" for universities to justify a continuing investment (Wilson et al., 2011, p. A139).

This conceptual article presents the first reimagination of the ALL adviser role in a world pervaded by AI. It does not detail the ways in which academic literacies are being reshaped by an AI inclusive learning environment; instead, it highlights the need for ALL educators to rethink the scope and focus of their role in a fast-changing learning and teaching environment. Through applying Reese's (2023) guide for conceptual articles, it critically analyses the current literature on academic language and learning as well as artificial intelligence in university learning and teaching. It focuses predominantly on the Australian ALL context, though also draws upon international scholarship. Through an exploration of the disruptions AI poses to the work of ALL advisers, this article argues for prioritising four areas of practice: professional learning for

educators, AI literacy, peer learning communities, and self-regulated learning. Through refocusing on these areas of practice, the authors call for an end to the academic discourse of ALL advisers being marginalised and underappreciated members of university communities. The ALL profession must alternatively position itself as a valuable member of the *third space* in higher education: university staff that frequently traverse the boundaries between professional and academic domains in a hybridised format (Veles et al., 2018; Whitchurch, 2008). Third space professionals are highly dynamic; the boundaries of their roles are often unclearly defined, yet this flexibility enables great opportunities to influence educational practice across disciplinary boundaries and enhance interdisciplinary collaboration (Veles et al., 2023). Leading institutions in areas such as the ethical use of AI and the development of self-regulated student learning enable a purposeful role for ALL educators to cement their place as critical contributors to delivering a high-quality contemporary university learning experience.

This article also applies Kemmis's (2019) theory of practice architectures to the analysis of academic language and learning practice in an AI-dominated word. Practice architectures conceptualise practices as being shaped by three interrelated arrangements: cultural-discursive (sayings), material-economic (doings), and social-political (relatings) (Kemmis, 2019; Mahon et al., 2017). These arrangements enable and constrain professional practices, influencing how ALL advisers engage with students, other educators, and institutions. ALL advisers must navigate the cultural-discursive norms of their institutions and disciplines, the material-economic realities of a proliferation of AI-based learning tools, and their social-political positions as critical third-space professionals. By applying practice architectures in this context, this article provides a new lens in which to examine the factors that will shape ALL practice as AI permeates the learning and teaching landscape as well as the student experience of learning. Without acknowledging what is changing in the each of these three spaces (sayings, doings, relatings), ALL advisers cannot respond in an intentional way to best support students and educators. In exploring these topics, this article critically examines how ALL advisers can reposition themselves as leaders in professional learning, AI literacy, peer learning communities, and self-regulated learning, ensuring their continued relevance in a fast-evolving academic landscape.

Literature review

ALL advisers and the third space

ALL advisers have supported higher education students to succeed academically at university for over fifty years (Barthel et al., 2021). The specific nature of their roles, responsibilities, and organisational locations varies across institutions, though they traditionally provide similar types of student services individually and in group settings: study skills advice, numeracy and English language support, guidance on assignment instructions and demonstrating academic integrity, and the provision of feedback on written documents. They also play an important role in welcoming and transitioning students into higher education (Chahal, 2023), help them to navigate cultural norms and conventions (Pang, 2012; Strayhorn, 2015), build a sense of belonging (Gurney & Grossi, 2023), and develop skills for lifelong learning (Loads, 2007). More recently, a major focus for ALL advisory work has been on embedding academic skills development in the curriculum (Bassett & Macnaught, 2024). ALL advisers are quintessential examples of third space professionals: they are highly collaborative, work regularly across varied disciplinary boundaries,

and directly contribute to academic knowledge development (de Jong & del Junco, 2023; Fenton-Smith & Gurney, 2022).

Despite the broad range of learning support services that ALL advisers provide to students, a noticeable discourse in the current scholarship is that this work is consistently underappreciated. Articles published to date argue that ALL advisers are "under recognised" (Tran et al., 2018, p. 755), "poorly understood" (Fenton-Smith & Gurney, 2022, p. 160), operate in the "shadows" and "periphery" of universities (Evans et al., 2019, p. 1121; Gao & Reid, 2015, p. 34), and have been depicted as a "marginalised group of fringe-dwellers" (Edwards et al., 2022, p. 2). Barthel et al. (2021) argued that financial constraints, university restructures, and a gradual shift towards ALL advisers being employed in professional roles rather than academic ones are all symptoms of this marginalisation and underappreciation. In the context of practice architectures, these scholarly examples demonstrate how the cultural-discursive arrangements of ALL practice shape perspectives of the role and ALL adviser contributions to student learning. Adopting a binary delineation between professional and academic ALL roles does not acknowledge the growing space for and importance of third space professionals in higher education. Third space professionals are often educational leaders (Smith et al., 2021) that have flexibility to influence educational practice across multiple disciplines and increase opportunities for greater interdisciplinary collaboration (Veles et al., 2018). ALL advisers, in short, must lean into the opportunities to lead as third space professionals—especially in a world where AI has created uncertainty, confusion, and even panic (García-Peñalvo, 2023).

A continued discourse of marginalisation and underappreciation also suggests ALL advisers have not made a strong enough evidence-informed case for why this work is critical to the success of universities and their respective students. As Ma (2018) notes, empirical studies that evaluate the impact of academic skills services are limited. Even the evidence for the impact of embedding academic skills into the curriculum is not strong (Bassett and Macnaught, 2024). These services are then at risk of being "downsized and downgraded when [budget] belts are tightened" (Stevenson & Kokkinn, 2007, p. 50). In addition to needing stronger demonstrable evidence of impact on student retention and success, it is noticeable that almost all studies which argue that ALL adviser work is underappreciated or marginalised have been authored by ALL advisers themselves (examples from ALL researchers and practitioners include Fenton-Smith & Gurney, 2022; Chahal, 2022; Edwards et al., 2022; Barthel et al., 2021; Evans et al., 2019; Gao & Reid, 2015; Chanock, 2007). These studies tend not to position ALL roles explicitly as third space professionals, which misses an opportunity to enhance their reputation as critical support roles on par with learning designers, academic developers, and educational technologists (Aitchison et al., 2020; Veles et al., 2023).

The ALL scholarship, in other words, is generally too siloed in its articulation of ALL adviser contributions to higher education. Much of the ALL related research is too inward looking and framed in terms of self-justification (Briscoe & Olson, 2024). Some recent publications, however, do directly describe ALL advisers as third space professionals—especially from practitioners based in the United Kingdom (Briscoe & Olson, 2024; Gurney & Grossi, 2023; Pollard, 2023; Webster, 2022). Others have made a similarly strong case for ALL forming an important sub-component of the broad scholarship of teaching and learning (Chanock 2007; Malkin & Chanock, 2018) and English language development (Briguglio, 2014). Briscoe and Olson (2024) specifically argue that positioning ALL in the third space means that advisers can "relate many of our identity

challenges to those experienced by many other higher education professional groups which do not fit neatly in the traditional academic/professional classifications" (p. 2).

Scalability of ALL programs

One possible reason for an often-narrow view of ALL advisory work is a longstanding focus on extracurricular individual student support. This support is typically one-to-one sessions conducted between an ALL adviser and a student on specific topic (such as a student writing draft or interpreting assessment instructions). In an Australian context, one study reports that 90% of ALL units include individual consultations in their services (Ashton-Hay, Barthel, & Müller, 2021). In defining the dynamic work of the ALL advisers, Evans et al. (2019) suggested individually advising students was the "most prominent aspect" of the role (p. 1122). Similarly, Gao and Reid (2015, p. 34) suggested that working with students individually is a "core" part of the work. Many other studies have focused specifically on individual appointments as a key part of the ALL adviser role (Chanock, 2007; Roberts & Reid, 2014; Stevenson & Kokkinn, 2009; Wilson et al., 2011). As recently as 2024, Macnaught et al. (2024) suggested that most of the teaching that learning advisers deliver is through individual appointments.

While valuable for the select students that choose to engage, focusing on individual appointments as a major component of the ALL-adviser role is becoming increasingly problematic. Such an approach is not a scalable way to improve student learning outcomes, especially at institutions that enrol tens of thousands of students. It is a costly service to provide, methods for evaluating it systematically are limited, and research into its effectiveness largely focus on student satisfaction rather than empirical analyses of improved academic performance (Ma, 2018; Walkinsaw et al., 2015). Uptake of individual appointments also tends to be low (Walkinsaw et al., 2015). Low engagement in appointments may be due to staff availability, but also possibly because of student perceptions that they have no academic value, no relevance, or it is a remedial option (Macnaught et al., 2024). If specific workload time is allocated to appointment availability, this then limits the amount of time available for ALL advisers to collaborate with staff on embedding skills development in the curriculum. In applying practice architectures to the context of individual appointments, material-economic arrangements such as staffing capacity fundamentally restrict the extent to which this type of learning support can be scaled.

Perhaps most critically, AI tools can now provide similar advice that traditionally has been given in individual appointments. AI tools are accessible and dialogic in nature, meaning that students can ask further questions if they do not understand a piece of advice or would like to explore a topic in more detail. This mirrors the opportunities for "extended dialogues on learning" that are available through individual appointments with an ALL adviser (Hamilton & Bak, 2025, p. 22). A common reason why students seek support from an ALL adviser is feedback on an assignment or writing draft, and yet recent major surveys indicate half of students now use AI for feedback (Chung et al., 2024). Successful use of these tools, however, can depend on the literacy and prompting skills of the user (Pinski & Benlian, 2024). AI literacy, prompting skills, and critical thinking will therefore form an important aspect of how the ALL adviser role needs to evolve in the future. This will be explored in more detail later in this article.

Collaborating with academic staff to embed skills development in the curriculum provides a more scalable and impactful approach to ALL-based work. The need for prioritising such an approach has been well established in the literature. It was perhaps best articulated by Wingate (2006)

when she argued that generic study skills programs are largely ineffective because the process of learning cannot be disconnected from subject content. Subsequent studies have since reinforced the benefits of embedding language and learning development in the curriculum (; Aitchison et al., 2020; Barber, 2020; Chanock et al., 2012; Macnaught et al., 2024; Wingate, 2019). However, there is not a consistent definition of what constitutes “embedding” across the literature. For example, Johnson et al. (2015) argued that embedding involves the explicit teaching and assessment of communication skills in the curriculum. This includes activities such as developing communication skills rubrics and delivering staff professional development workshops.

Other studies have interpreted embedding academic skills in curriculum differently. Malkin and Chanock (2018), for instance, described embedding as collaboration with teaching staff to develop academic skills in curricula. When these authors surveyed 105 ALL advisers, the details of what each ALL adviser and academic staff member did specifically when collaborating to embed was not clearly defined. In their survey of 29 ALL managers in Australia, Evans et al. (2019) found that 22 universities embedded ALL advisers through teaching in timetabled classes. Bassett and Macnaught (2024) reached similar results; in their systematic review of 20 research articles that focus on embedding academic literacy development, 13 of them applied the concept of embedding to teaching within classes. For the design of teaching materials, most ALL educators co-designed with academic staff but over a third of respondents indicated they designed teaching materials individually. This suggests ALL teams approach embedding in different ways, and in most cases through delivering tailored academic learning activities to a specific discipline. In these cases, they do so either on behalf of academic staff or through a co-teaching model.

The most scalable form of embedding, and arguably the most impactful, is through the provision of professional learning for academic staff. Embedding language development through upskilling teacher capabilities enables students to build their communication skills in the context of their discipline of study because it is meeting students “where [they] already are” in the classroom (Bassett & Macnaught, 2024, p. 2). Such an approach includes advising teaching staff on ways in which they can build their own capabilities to develop and assess the requisite academic literacy skills for their specific discipline. Macnaught et al. (2024) referred to this approach as the “gradual handover” (p. 1004) of responsibility from learning advisers to academics in the development of academic literacies in a disciplinary context. For this approach to be effective, there needs to be strong collaboration between ALL advisers and academic staff (Barber, 2020) as well as institutional support (Ashton-Hay & Chanock, 2023). Even then, the published data on evidencing impact of embedding academic literacy into the curriculum is “relatively weak” (Bassett & Macnaught, 2024, p. 10). “Far more evidence related to the contribution of teaching to changes in academic performance is needed”, Bassett and Macnaught (2024) argue, so that ALL advisers can build a “more rigorous body of knowledge on the benefits and limitations of embedded approaches to academic literacy development” (p. 17).

This lack of empirical evidence on the value of embedding in curriculum is concerning, especially because some academics question embedding study skills development into curriculum as an effective paradigm for enhancing student success altogether. Jones (2009), for instance, highlights that academic skills are strongly influenced by the disciplinary context in which they are taught. If that is true, then the inherent value of skills development comes from the disciplinary

subject. In other words, the ultimate success of embedding skills in the curriculum relies much more on the disciplinary expert rather than the ALL adviser. Richards and Pilcher (2020) took this one step further, arguing that there is no published peer review research involving components such as control groups that demonstrate the success of these types of disciplinary based study skills programs. Instead, they argue that because subjects and the unique skills required to achieve success are so different across disciplines, that the learning value is inherently in the subject itself and that generic skills are not transferable across disciplines (Richard & Pilcher, 2020).

Devaluing efforts to embed skills development in curriculum is a contentious position. Nonetheless, the ALL focused literature does not have a large empirical evidence base to refute these claims strongly (Bassett & Macnaught, 2024). The specific impact of embedded ALL programs is difficult to measure, as curriculum-based learning support is not easily isolated from other teaching and learning initiatives that support student retention and academic success. It is therefore critical that ALL practitioners start to reconceptualise part of their role as a specialised form of academic developer, so that they can enhance educators' capabilities to develop the key disciplinary skills for their respective students (Macnaught et al., 2024). In so doing, methods for evaluating the impact of these professional development initiatives will also need consideration such as the collection of staff feedback and investigating correlations to improved student performance.

AI as a great disrupter to ALL practice

While building a stronger empirical evidence base to demonstrate the sustained impact of embedding academic skills into curricula is an undoubtedly high priority for ALL practitioners, the release of freely available generative AI tools from late 2022 onwards presents an even more urgent challenge to address. Research into the impact of artificial intelligence in education has been conducted for decades (Brown et al., 1978; Crompton & Bruke, 2023; Garito, 1991; Popenici & Kerr, 2017), but the introduction of generative tools like ChatGPT is a new and complex challenge. These tools are highly sophisticated, able to create bespoke content on demand, and freely available (Chiu, 2024). There are concerns about the ethics, bias, data ownership, and slowness of educational institutions to respond (Gašević et al., 2023), yet universities must undoubtedly play an important role in preparing students to live and work with AI (Thompson et al., 2023).

The availability of AI tools undermines current approaches to assessment and inferences of learning. For example, questions about the feasibility of continuing to teach writing skills have already been raised (Karaali, 2023) as well as the usefulness of setting essay tasks when they can be produced by AI within seconds through basic prompting (Chiu, 2024; Gašević et al., 2023). This disruption will be more significant than the introduction of other past technologies, such as the impact of calculators on numeracy skill development (Lodge et al., 2023). AI models, in short, are far more powerful and transformative, demanding that the sector now rethink the ways in which universities approach all learning, teaching, and assessment. As Lodge and Ashford-Rowe (2023) shrewdly point out, there needs to be a shift towards focusing on the process of learning rather than products:

> "The reason behind an increased focus on learning processes is that generative AI can now produce artefacts previously used to infer that learning had occurred. Outputs can be

> generated independently of the process. Artefacts such as essays, lab reports, and exam scripts are widely used to infer that the learning process has played out, hence the problem." (p. 2)

This problem is exactly the motivation behind regulatory bodies such as TEQSA calling for universities to move towards authentic engagement with AI. To this end, educators will need to enact inclusive assessment design that recognises the diverse needs of students (Tai et al., 2023), engages in students in active learning (Børte et al., 2020), and ensures that technological considerations do not come at the expense of good pedagogical practice (Kirkwood & Price, 2013).

In this rapidly changing teaching and learning environment, the work of ALL advisers will also need to support students with the appropriate use of AI. In the context of academic writing, for instance, Thurlow (2023, p. 99) described ALL advisers' responsibility as acting as both an "enforcer" and "liberator". "Enforcer" refers to supporting students to understand and develop the conventions or "rules" of academic writing when using AI, and "liberator" refers to supporting students to still ideate and develop critical thinking skills when using AI (as these tools tend to converge the most well established paradigms on a topic into its outputs rather than offering a critical perspective on accepted norms). It is also important to note, though, AI can also provide other types of support that has traditionally been provided by ALL advisers. For example, students can engage in dialogic conversations with AI tools to build study plans, interpret assessment task instructions, receive feedback on writing drafts, and revise discipline-specific content in simple accessible formats (Kelly et al., 2023; Sullivan et al., 2023). No appointment is needed, nor is there a cap on the amount of time or advice that can be provided. AI models are also developing at such a pace that it will enable organisations to customise their own tools (Sharma, 2024). In practice, this means that universities will soon have the capability to develop and deploy their own custom AI tools that can act as a quasi-ALL adviser. Articulating a vision for the role of the ALL adviser in an AI-dominated world therefore becomes a significant priority with which the profession must respond—and respond quickly.

What type of role, then, must ALL advisers occupy in the future of higher education? Kemmis's (2019) practice architectures provides one framework for understanding how AI might reshape the ALL adviser role. The cultural-discursive arrangements surrounding academic integrity are fast-evolving, as AI-generated content becomes more prevalent. Students need simple, clear advice on how to use these tools appropriately for learning and for academic communication; both of which ALL advisers can support well. The material-economic arrangements are also shifting, as universities invest in AI-powered tools and rethink assessment practices. In this context ALL advisers need to adapt how their traditional support roles might complement student learning in new ways.

In adopting AI, universities will still need curricular and extracurricular learning activities that build basic skills in critical thinking and logical reasoning (Walter, 2024; Karaali, 2023). More than ever before, there will be an even greater need to focus on developing students' higher-order thinking skills rather than the memorisation of information (Mao et al., 2023). Teaching staff will also need advice and support on how to apply this skills development in practice, including strategies for supporting students to self-regulate their learning (Chiu, 2024; Schellekens et al., 2023; Thompson et al., 2023). As experts in student learning, this presents a great opportunity for ALL advisers to collaborate with learning designers and academic developers to deliver professional

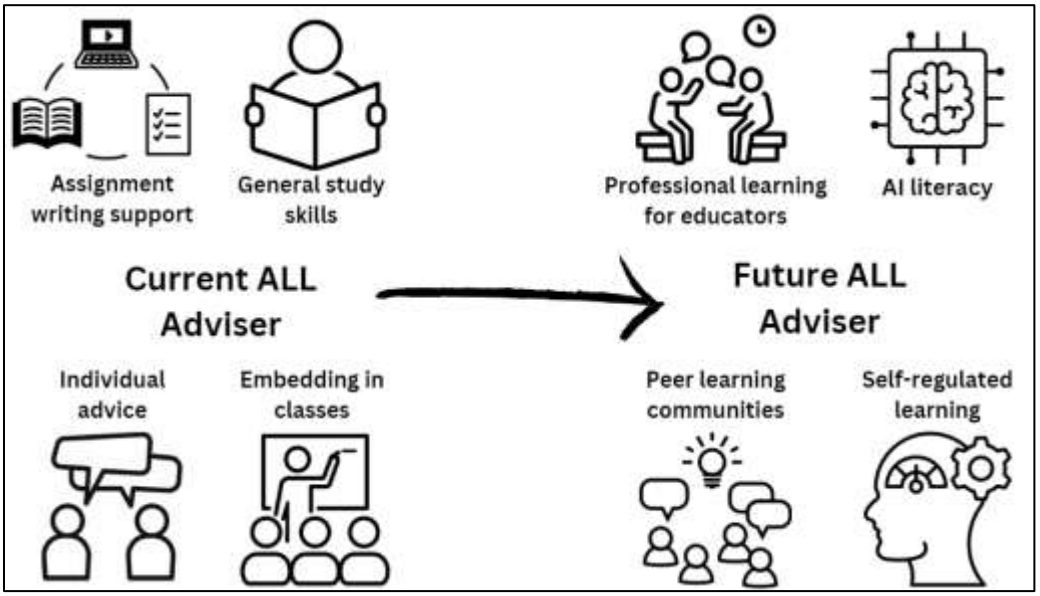
learning programs that enhance educator capabilities to develop these skills in diverse disciplinary contexts. Students also need opportunities to learn formally and informally with other peers—these types of activities are not easily replicable by AI models. Herein lies some of the foundation for how ALL advisers can uniquely contribute to the major curriculum and technological challenges faced by higher education institutions.

Reconceptualising the ALL adviser role

The second half of this article presents a vision for the future state of ALL advisory work. It aims to complement the learning affordances offered by AI while still providing a unique contribution to student learning. Figure 1 visually summarises four of the most popular current focus areas for ALL advisers and proposes four new areas that should become the priorities. It is important to note that this reconceptualisation does not intend to capture all aspects of the ALL adviser role, nor is it intended to imply that ALL advisers would no longer do any of the work represented in the current state. Indeed, ALL advisers might still play a very important role in providing human support to particular learners who are not easily served by using AI as a tool to support their learning. Some current activities—such as learning programs that assist students to think critically and develop assignments—would be adapted to suit an assessment environment whereby AI is easily accessible. This section explores each of the four pillars of this reconceptualised ALL adviser role and a rationale for prioritising each one: professional learning for educators, AI literacy, peer learning communities, and self-regulated learning.

Figure 1

A visualisation of the reconceptualised role of an ALL adviser



Professional learning for educators

Focusing efforts to embed academic literacy skills in the curriculum must remain a high priority for ALL practitioners, but the precise way in which this embedding occurs must be more strategic. Delivering subject-specific workshops in timetabled classes, for instance, only benefits the

students that attend the class. There is also no strong empirical evidence that students that do attend these classes are more likely to succeed academically (Bassett & Macnaught, 2024). This approach to embedding is not scalable and may create dependencies whereby academic staff continue to rely on ALL advisers to develop student skills without taking the responsibility of developing these skills in their own teaching activities. A more sustainable way in which ALL advisers can embed in the curriculum is through upskilling academic staff to scaffold academic literacies and skill development in their teaching (Macnaught et al., 2024).

In an assessment environment where AI tools are freely available to students, teaching staff will need opportunities for professional learning in coaching students to self-regulate their learning and to build a portfolio of evidence. They will also need training on how to provide specific, targeted narrative feedback that aligns with competency milestones (Greenfield et al., 2023). As experts in student learning, ALL advisers are well placed to design professional learning programs, such as developing online modules and leading communities of practice, that enhance teaching staff capabilities in these areas (King et al., 2022). This is one way in which Kemmis's (2019) practice architectures theory can be applied to reveal the sayings, doings and relatings that govern the institution's professional learning systems. Professional learning is shaped by institutional norms and disciplinary expectations, and so ALL advisers can navigate these existing structures to reposition their role as key advisers in enhancing staff capabilities to teach feedback literacy and academic skills development. Kjær et al. (2025) recently highlighted how coming to understand practice architectures can, for instance, encourage reflective practice and build educational leadership skills.

In order to embed academic skills development through the provision of professional learning for educators, these types of programs need to be aligned with academic assessment and curriculum policies. They also must form part of the suite of compulsory staff development programs delivered at each institution (e.g., introductory teaching courses for new educators and graduate certificates in university teaching and learning). This is critical for several reasons. It ensures that the broad approach to embedding in curriculum is both scalable and consistent across disciplines. Integration within the broader suite of professional learning (rather than imposing additional mandatory learning activities) also ensures that the workload for completion is more likely to be manageable. Increased academic occupational stress is a known challenge and may impact the likelihood of staff engaging meaningfully in the learning opportunities (Lee et al., 2021). Work intensification, in other words, is a socio-political factor that shapes the ways in and extent to which academic staff can engage in enhancing their own professional teaching practices. Recognising this aspect of practice architectures can then inform how ALL advisers can intentionally contribute to professional learning programs to mitigate these workload pressures. Finally, an integrated approach facilitates opportunities for closer collaboration with other important third space professionals that deliver similar types of programs, such as learning designers, academic developers, and librarians. Greater third space collaboration will raise the profile of ALL advisers as key contributors to enhancing teaching and learning practice at the institutional level.

AI literacy

Developing students' literacy to engage with AI effectively will form an increasingly important component of contemporary university curricula. In this pursuit, AI literacy is closely related to

digital literacy. In broad terms, the UK-based Joint Information Systems Committee (better known as Jisc) defined digital literacy as the capabilities required for someone to live, learn, and work effectively in a digital society (Jisc, 2014). As information sources are increasingly available in digital formats, librarians have typically taken responsibility for supporting the development of students' digital literacy skills (Johnston, 2020). This article argues that ALL advisers also have an important role in developing AI literacy skills. The effective use of AI undoubtedly requires critical assessment of the tool and its outputs, but it also requires a good command of language to design effective prompts, communication skills to participate in active dialoguing, and an ability to leverage these tools for academic skill development (Knoth et al., 2024; Pinkski & Benlian, 2024). ALL advisers have the expertise to guide students on these topics.

Practice architectures, again, provides a useful means in which to understand the critical role that ALL advisers must play in enhancing student AI literacy skills. For instance, the ubiquity of AI-based tools has fundamentally reshaped the material-economic arrangements that students are exposed to when studying at university. Some AI tools may be provided by their institution, and many others are freely available or available via paid subscription. Each tool has its own strengths and weaknesses as well as overall suitability for university learning. Cost of living pressures also might require some students to work longer hours, thereby incentivising the use of AI tools for parts of the learning process instead of dedicating specific time to read, research, brainstorm, write, and reflect. Regardless of each student's specific circumstances, ALL advisers play an important role in building foundational skills in understanding how AI generally works, its benefits, and its risks. Cultural-discursive arrangements also influence how students understand and use AI, requiring ALL advisers to develop resources that help students navigate AI-generated content with a critical lens. As Mahon et al. (2017) argue, practices are shaped by different social spaces. This means a student's AI literacy can be shaped by their social environment and interactions with peers. ALL advisers, either directly with students or indirectly through academic staff or peer learning programs, must then guide students appropriately in the acceptable uses in the context of their particular institution and discipline.

The ethical use of AI will form an increasingly important part of demonstrating academic integrity and developing employability skills. In the Australian context, TEQSA's guidance document on the future of learning in higher education outlines explicitly that it will expect "assessment and learning experiences equip students to participate ethically and actively in a society where AI is ubiquitous" (TEQSA, 2023b, p. 2). AI will enable a competitive advantage for private enterprises that leverage AI in the marketplace (Mollick, 2022), so it will be incumbent on universities to prepare students to use AI effectively as a means to improve their employment prospects (Thompson et al., 2023; Waring, 2023). Students will need to develop their literacy skills in broadly understanding how AI works, critically assessing outputs, dialoguing with AI, using the tools to solve practical problems, and communicating use effectively to others (Kelly et al., 2023). This presents a great opportunity for ALL advisers to collaborate with a key group of third-space professionals (librarians) as to how these AI literacy skills can be developed through in-curriculum and extracurricular learning activities.

Peer learning communities

Building strong connections between peers will form an important component to the academic success of students in a world pervaded by AI. Current programs such as Peer Assisted Study

Sessions (PASS) and other peer assisted learning strategies have been well documented to demonstrate that frequent participation is correlated with successful outcomes, such as greater student engagement and retention, enhanced wellbeing, and strengthened group-work skills (Dawson et al., 2014; Paloyoa et al., 2016; Wentzel & Watkins, 2002). Student feedback also suggests more focus on student-to-student interaction is needed, especially for the development of oral communication skills. The 2022 Australian Quality Indicators in Learning and Teaching Student Experience Survey gathered over 230,000 survey responses from students studying at 141 higher education institutions and reported that the lowest rated overall score for learner engagement was opportunities to interact with students outside of formal study requirements (35% and 28.7% positive responses from undergraduate and postgraduate students respectively). Moreover, the lowest rated score for skills development were opportunities for developing spoken communication skills (54.4% positive responses from both undergraduate and postgraduate students) (SES, 2023). Fostering meaningful peer connections is achievable through facilitating learning communities, which can be defined as an intentional structure of the curriculum and learning environments to focus on students' academic and social development in group settings (Love, 2012).

As universities adopt and embed new AI tools, current students will quickly become important advisers to how other students can use AI ethically for their studies. Facilitating peer learning communities are a means in which to share this experience; they can occur in-curriculum (such as programs that deploy high achieving second, third, and fourth year students in large first-year classes to support academics with facilitating active learning activities) and outside of curriculum (such as PASS programs). ALL advisers can play an important role in facilitating these peer learning communities. They are well placed to recruit, train, and quality assure peer-led learning communities as well as nurture a sense of wellbeing and connectedness, as both ALL advisers and peer advisers share expertise and an interest in supporting student academic skills and social development at university (Garcia-Melgar et al., 2021). As ALL advisers often work collaboratively with academic staff through embedding in curriculum (Edwards et al., 2021), they can also act as a conduit between teachers and peers to ensure that programs are coordinated and appropriately aligned to developing the requisite skills in target disciplines. Moreover, they enable greater opportunities to enhance student learning that are not easily replicable by AI. Current AI models are well suited to providing learning advice for individuals; they are far less capable of facilitating learning opportunities in group environments, especially in unique institutional and disciplinary contexts.

Through recognising the "sayings", "doings" and "relatings" of practice architectures, peer learning programs will be better placed to support students to succeed in fast-evolving university learning environments. For instance, institutional policies on ethical AI use and the expressed needs of employers to engage with AI will shape the skills students need to develop and the expectations set for them while they are at university. This, then, shapes the role peer programs play in supporting students to meet these expectations. The "sayings" (cultural-discursive arrangements) in programs such as PASS influence how AI is framed within academic discourse, requiring both peer leaders and ALL advisers to facilitate discussions on ethical AI use and responsible engagement with AI-generated content. The "doings" (material-economic arrangements) shape the tools and platforms available for peer learning activities, meaning ALL advisers must consider whether AI tools are used in peer-led learning programs; and if they are used, which ones and for

what purpose. The “relatings” (social-political arrangements) define the relationships between students, peer leaders, and ALL advisers, positioning advisers as facilitators who ensure that peer learning communities foster collaboration, critical thinking, and shared responsibility for academic integrity when using AI tools. In these ways, ALL advisers can strengthen peer learning communities as spaces where students engage in meaningful academic discussions, develop AI literacy skills, and build collaborative learning networks that enhance student success.

Self-regulated learning

The final key priority for the future role of the ALL adviser developing students’ self-regulation. Self-regulated learning is a central feature of good learning practice (Panadero et al., 2018)—it emphasises the role of students as active participants in their learning and highlights a need to regulate their motivation, cognition, and behaviour (Schellekens et al., 2024; Kim et al., 2023). Students engaging with AI will require guidance as they “adapt to a learning environment that provides frequent, narrative feedback as opposed to episodic, high-stakes examinations and grades” (Greenfield et al., 2023, pp. 971-972). Students, in short, will need to take greater responsibility for the development of their learning and develop capabilities to study independently. As part of a self-regulated approach to learning, students will need an ability to interpret and apply the various forms of feedback as they progress in their chosen course. This will be challenging for many students, as they often tend to find it difficult to take an active role in seeking feedback in ways that are part of an ongoing process rather than a once-off input (Baartman et al., 2022; Boud & Dawson, 2023).

Self-regulated learning is influenced by the interplay of cultural-discursive, material-economic, and social-political arrangements that shape student engagement with feedback and adopting independent learning practices. Put another way, the socio-economic background of a student, student peer cultures, institutional policies and practices, and disciplinary norms all impact the extent to which a student may successfully self-regulate their own learning (Kemmis, 2019). Practice architectures, then, help explain why ALL advisers must support students in developing self-regulation skills through supporting students to take an active role in their learning. Developing self-regulation skills will also be challenging as students increasingly use AI for their studies. For example, there is a risk that overreliance on AI will limit student capacity to develop cognitive abilities essential for self-regulating learning, including critical thinking, reflection, and making independent decisions (Zhai et al., 2024). Even before the release of tools like ChatGPT, research suggested that procrastination and late submission already increased the likelihood of student failure in satisfactorily passing assessment tasks (Kokoç et al., 2021). Without strong investment in programs that foster self-regulation and independent learning behaviours, there is a significant risk that students that do not engage in learning activities and feedback on a regular and ongoing basis will not develop the necessary skills to progress through their course. The resources that ALL advisers develop in the future must therefore be sharply focused on building self-regulated learning skills. Additionally, professional learning provided to teaching staff should focus on strategies for giving meaningful actionable feedback and guiding students to become self-regulated learners in their disciplinary context.

Conclusion

AI presents both challenges and opportunities for ALL advisers. As these tools become increasingly capable of performing services traditionally provided by ALL advisers, there is an urgent need to reconceptualise their roles and refocus on areas of practice relevant to a fast-evolving learning and teaching environment. Through considering the disruptions posed by AI and the theory of practice architectures, this article proposed a strategic shift to prioritising four new areas of ALL practice: professional learning for educators, AI literacy, peer learning communities, and self-regulated learning. By prioritising professional learning for educators, ALL advisers can ensure that academic staff are equipped to embed academic literacy skills within their curricula, fostering a more scalable and impactful approach to student support. Developing students' AI literacy skills will be crucial for navigating the ethical and practical implications of AI. Engaging students to facilitate peer learning communities can enhance peer-to-peer student engagement and success, providing a learning support network that AI cannot easily replicate. Finally, developing student capabilities to regulate their own learning will empower students and increase the likelihood of academic success in an environment that will require more independent behaviours. Through leading in these areas collaboratively with other third space professionals, ALL advisers can unequivocally continue to provide a unique contribution to a high-quality university learning experience.

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