Volume 16 (3) 2025

https://doi.org/10.63608/ssj.3766

Transition Pedagogy in the Age of AI: The Role of Self-Regulated Learning

Lisa-Angelique Lim
University of Technology Sydney, Australia
Louise Ainscough
University of Queensland, Australia
Chris Deneen
University of South Australia, Australia
Helena Pacitti
University of New South Wales, Australia
Daniel Taylor-Griffiths
University of Queensland, Australia
Sally A Male
University of Melbourne, Australia
Sarah Frankland
University of Melbourne, Australia

Abstract

Generative artificial intelligence (genAI) has the potential to change how we teach and how students learn. While genAI can support learning by offering personalised assistance, improving efficiency, and providing feedback, there are concerns that students may become overly dependent on it, potentially offloading their cognitive and metacognitive processes. This article explores the role of transition pedagogy in navigating the use of genAI for teaching and learning and proposes that self-regulated learning provides the skills that students need in this new learning environment. The challenges and opportunities of genAI are applied to the transition pedagogy principles, with recommendations for educators. We conclude that transition pedagogy remains crucial in the age of genAI, offering a framework for educators to guide students in using genAI intentionally - to enhance rather than hinder their learning.

Keywords: Self-regulated learning; artificial intelligence; generative AI.

Background and Motivation

While Artificial Intelligence (AI) has been in existence for at least half a century, the public release of generative AI (genAI) in 2022 expanded widespread use of AI tools. From virtual assistants to information management and decision-making systems, these tools are increasingly becoming a part of everyday life, due to their affordances of efficiency and capability (Gerlich, 2025). Within education, genAI has been present in the form of intelligent tutoring systems as well as adaptive learning tools, offering personalised learning scaffolds and feedback (Yan et al., 2024). With the advancement of genAI technologies, some of these learning tools have started to offer more human-like conversations, leveraging large language models to enhance the learning experience. Students are becoming increasingly cognizant of genAI and there is strong interest by institutions to incorporate genAI in teaching and learning (O'Dea, 2024).



GenAI offers many positive opportunities to ease the demands of life and work, to enhance students' learning experiences, and to complete tasks efficiently (Kutty et al., 2024; Rožman et al., 2023). However, genAI presents efficiency at a potential cost to the human skills of cognition, metacognition, and learner agency (Darvishi et al., 2024; Fan et al., 2024; Gerlich, 2025). In addition, the adoption of genAI in education raises ethical concerns, including integrity risks, biased output, privacy violations, and inequality of access (Francis et al., 2025). Worryingly, studies are showing a reduction in self-regulated learning (SRL) (Darvishi et al., 2024) and metacognitive skills (Fan et al., 2024) when learners continue to use genAI tools. As findings of negative impacts of genAI on student learning processes continue to emerge, it is critical to consider this trend in relation to transition pedagogy. As stated by Kift (2009), the six interconnected principles of transition pedagogy support student engagement, success, and retention. With adoption of genAI expected to increase, how students learn will surely be impacted. It is timely to evaluate how transition pedagogy may inform the use of genAI for learning. With thoughtful integration into the curriculum via the transition pedagogy principles, genAI could foster students' development of critical SRL skills which are crucial for an increasingly complex world.

This article illustrates the complex interplay between SRL and genAI in transition pedagogy. As outlined above, while genAI offers opportunities to enhance SRL across its phases (forethought, performance, and reflection), it also presents risks of overreliance that could hinder students' development of crucial self-regulatory skills. To effectively implement transition pedagogy, institutions should integrate genAI tools gradually, redesign assessments to promote SRL, ensure equitable access, and maintain a balance between genAI-supported learning and collaborative activities, thereby preparing students for a technology-enhanced academic environment while fostering essential self-regulatory competencies. The idea for this article arose at the first Self-Regulated Learning (SRL) Summit in Melbourne, Australia, December 2024, which brought together SRL researchers from diverse disciplines across Australia to explore the challenges, opportunities and outcomes associated with SRL in education. Using a World Cafe approach (Brown & Isaacs, 2005), delegates discussed the future of SRL research from the lens of (a) the learning context; (b) research problems, gaps or risks; (c) relevant research; (d) opportunities; and (e) recommendations. Participants concluded that genAI was both an opportunity and a challenge to student learning. Discussing how students can use SRL to support their meaningful engagement with genAI as they transition from school into, through and beyond university, we apply the outcomes of the Summit to transition pedagogy.

Theoretical Framework

Transition Pedagogy Principles

Transition pedagogy, developed by Kift (2009), involves intentionally supporting students through transitions into, through and beyond university. Kift identified six generic and interconnected principles, aimed at fostering engagement, success, and retention, regardless of discipline.

The *Transition* principle focuses on supporting students as they transition into higher education from prior learning experiences, scaffolding them to become independent learners, and to feel welcomed and prepared with the requisite academic skills for university study. This principle can involve helping students appreciate that transition is not a one-off event, but an ongoing experience throughout their study. The *Diversity* principle emphasises the importance of recognising, respecting, and accommodating the varied backgrounds, experiences, and needs of students, by creating an inclusive learning environment. The *Design* principle focuses on intentional and thoughtful curriculum design that builds on students' prior knowledge and skills, scaffolding learning experiences to foster higher-order competencies such as critical thinking, and to support student success. The *Engagement* principle actively involves students in their learning through collaborative and participatory teaching, encouraging interactions between peers and between teachers and students. The *Assessment* principle focuses on assessment that supports "successful transition to assessment in higher education" (Kift, 2009, p. 41) increasing in complexity, including formative evaluations and providing feedback to students and staff. This principle emphasises using assessment as a tool for learning, by providing timely and constructive feedback to help students improve their learning and performance. Finally, the *Evaluation and Monitoring* principle refers to evaluating and refining curricula, and monitoring students based on relevant metrics, providing timely interventions to support students to achieve learning outcomes.

Since its articulation in 2005, transition pedagogy has seen substantial implementation across Australian and international institutions, with positive feedback validating this whole-of-institution and whole-of-student approach (Kift, 2015, 2023). Trends in the educational landscape have also found their expression in the principles. For example, learning analytics and adaptive learning technologies have been leveraged in service of the Evaluation and Monitoring principle (Kift, 2015). In view of these technological developments, transition pedagogy is noted to chart a new direction, namely, "a coherent, analytics-led 'third generation' (i.e., comprehensive, integrated, whole-of-institution) transition pedagogy" (TEQSA, 2020, as cited in Kift, 2023, p. 142). With the disruption (and opportunities) afforded by genAI, it is timely to consider how transition pedagogy's

"holistic and rational framework" (Kift, 2023, p. 145) could be implemented to support student success. To address this, we argue for a greater emphasis on SRL explicitly embedded in the principles of transition pedagogy.

Self-Regulated Learning in the Age of GenAI

Broadly defined, SRL is an iterative process involving learners' control over their thoughts, feelings and actions, in order to achieve learning goals. Many models of SRL exist to explain this complex, multidimensional concept (see for example, Panadero & Lipnevich, 2022). In this article we draw on Zimmerman's (2002) sociocognitive three phase model. The forethought phase includes analysing tasks, setting goals, and choosing strategies to achieve them, and is strongly influenced by motivation. Goal setting is crucial for self-regulation as it creates a feedback loop for self-evaluation (McCardle et al., 2017). During the performance phase, self-control processes, including volitional and learning strategies, help learners focus and implement their plans. During this phase continuous self-monitoring is important, providing metacognitive awareness and allowing for strategy adjustments. This self-monitoring feeds into the reflection phase, where learners evaluate their progress based on their initial learning goals and observations. Self-judgment assesses progress, while self-reaction is an emotional response, such as satisfaction or defensive reactions. Feedback from the reflection phase influences the next cycle of SRL by affecting motivation and processes in task analysis.

In short, SRL encompasses a coordination of processes around goal setting, metacognition, and strategy adaptability, driven by motivation. The control of these processes is essential for independent learning; accordingly, SRL is a key predictor of achievement differences among students (Blackmore et al., 2021). Research indicates that many secondary school students lack SRL skills upon entering higher education, contributing to first-year attrition rates (Vosniadou, 2020). However, studies have shown that students can improve their SRL during their transition period, with increases observed in self-regulation, deep learning, and analysis skills (Coertjens et al., 2017).

The growing prevalence of genAI tools may influence the development of students' SRL processes. Research suggests that genAI applications can support metacognitive, cognitive, and behavioural regulation in online learning (Jin et al., 2023). In genAI-assisted writing tasks, learners employ various SRL strategies, demonstrating adaptive management of their work with genAI support (Nguyen et al., 2024). Other studies have suggested that genAI might hinder SRL. Bastani et al. (2024) found that students with access to genAI support did better on formative mathematics questions than students without genAI support; however, these improved results were not replicated under exam conditions. The authors speculated that students with genAI support were relying on genAI for answers, rather than developing their skills in solving mathematics problems. These students may not have been effectively regulating their learning when attempting formative questions. In addition, Abbas et al. (2024) found that in a naturalistic setting, university students with more frequent ChatGPT use reported higher academic workloads and time pressure than students who used ChatGPT less often, suggesting students might become reliant on ChatGPT to complete tasks under pressure. Additionally, students who used ChatGPT more frequently had increased memory loss and lower academic scores (Abbas et al., 2024). Although this study demonstrates that students might over-rely on ChatGPT, it is unclear why this behaviour is associated with lower academic scores. One possibility is that students are struggling to regulate their learning while interacting with ChatGPT, such as planning when and how to engage with the tool, or evaluating the accuracy of the output. Therefore, students may benefit from explicit instruction on how to use generic genAI tools to regulate their learning, rather than offloading their cognition.

Recommendations for Transition Pedagogy in the Age of GenAI

The review above highlights a shift in the educational landscape. GenAI has permeated almost every area of life, including education. While genAI technologies provide opportunities for increasing efficiency and facilitating the accomplishment of tasks, there is a risk that efficiency gains may come at the price of students' ability to regulate aspects of their learning, such as motivation, metacognition, and self-evaluation. In this section, we suggest several practical recommendations to make SRL more explicit in the principles of transition pedagogy, while leveraging the affordances of genAI and recognising its challenges.

Transition

The Transition principle emphasises the proactive support of students to develop SRL skills, helping them manage their affective responses to the challenges of transiting into a demanding academic environment, and to understand the tacit "norms, behaviours and values required for discipline success" (Kift, 2023, p. 41). However, the availability of genAI tools may offer students alternatives to engaging in the academic community, circumventing both the challenges and benefits of learning in such an environment (Lodge et. al., 2024). If students do resort to cognitive offloading through such tools, they are unlikely to develop necessary SRL skills, such as planning and time management, metacognitive awareness and self-evaluation (Fan

et al., 2024). Therefore, to mitigate against the possibility of cognitive offloading through genAI, students' use of such tools should be steered by educators in ways that foster SRL. One possible way to achieve this goal is through co-regulation. Co-regulation describes the social interactions between learners and educators through which learning processes and SRL are facilitated (Bransen et al., 2022). GenAI offers new opportunities for students to receive co-regulatory assistance for learning as they transition into and through the higher education environment (Lodge et al., 2023). When effectively designed, genAI can also provide avenues to develop self-reflective capabilities, helping students to find their place at university more effectively and efficiently, informing program and course decisions in more personalised ways. Provision of timely genAI-facilitated feedback cycles provides a further mechanism by which institutions can flatten the (learning) curve, supporting and supplementing existing orientation and transition programs.

The growing need to support students' SRL capabilities as they transition into, through, and out of university creates an opportunity for adoption of ePortfolios across the higher education sector. An ePortfolio is a dynamic digital repository that captures evidence of a student's educational journey (Hallam et. al., 2008). In addition to providing students with a curriculum roadmap through their program of study, ePortfolios can record both learning processes and artefacts, together with general academic literacies and discipline-specific skill development. These tools support transition by enhancing transparency between learning activities, assessments, learning outcomes, and graduate capabilities. This transparency enables students to self-reflect, integrate their learning experiences, identify strengths, limitations, and areas for improvement, thereby supporting development of SRL capabilities. A well-designed ePortfolio platform works as a co-regulation tool that fosters, directs, and enhances students' SRL skills throughout the student's learning trajectory.

Finally, as students transition out of university, they require lifelong learning competencies, for a world that is complex and uncertain. Acknowledging genAI in the workplace, educators must help students to prepare for this ever-changing technology with skills and attributes required to use tools effectively, responsibly, and critically (Hashmi & Bal., 2024). Graduates will need to be agents within a network of co-regulation (Lodge et al., 2023), therefore understanding and embodying principles of self- and co-regulated learning will be more important than ever.

Diversity

Traditionally under-represented students at university face higher attrition risks (Li & Jackson, 2024), often due to varying preparedness for higher education, which can negatively impact self-efficacy and motivation. Creating an inclusive first-year environment is crucial for retention. GenAI could help level the playing field by personalising learning experiences (Francis et al., 2025) and supporting international students with language practice and concept translation (Farrelly & Baker, 2023).

However, there is growing awareness that genAI also poses risks to diversity and inclusion. Large language models may reinforce biases and underrepresent minority views (Francis et al., 2025; Holmes & Miao, 2023). As models expand to include Indigenous languages, respecting cultural and intellectual property rights is essential (Commonwealth of Australia, 2023). Tools for detecting genAI use may also disadvantage under-represented groups. For example, genAI detectors are more likely to misidentify non-native English writing as AI generated (Liang et al., 2023), whilst writing generated by subscription-based advanced models might be less likely to be detected, (Farrelly & Baker, 2023) creating financial inequities. Additionally, privacy concerns arise when students upload work to genAI tools (Francis et al., 2025). Institutions will therefore need to carefully consider these risks when creating policies and procedures about genAI use and support. Institutional licenses for vetted genAI tools with transparent privacy policies and diverse training data will be crucial for ensuring an equitable student experience.

Design

GenAI is likely to become an integral part of educational ecosystems (Yan et al., 2024). It is of utmost importance that this integration occurs mindfully and deliberately, with learning principles at the forefront of educational design. It is difficult to ban genAI, and perhaps detrimental to students' employability to do so. Therefore, educators need to help students learn how to engage with genAI tools in ways that support their learning, rather than hinder it. Maintaining and facilitating student agency when working with genAI will be a key component of appropriate educational design (Darvishi et al., 2024).

One challenge associated with genAI use is that students may be tempted to offload their cognition by using genAI tools to create an end-product (such as an assignment), thereby reducing their opportunity to learn through the process of creating that end-product (Lodge et al., 2023). As discussed earlier in the *Transitions* section, students encountering the higher education environment for the first time may be particularly vulnerable to the temptation of cognitive offloading, given the increased autonomy and reduced oversight characteristic of tertiary study. By teaching SRL skills, institutions can help to ensure that students – humans – remain in the driver's seat when working with genAI. For example, instructors could embed explicit

opportunities for students to engage in the phases of the SRL cycle while using genAI during a learning task, such as planning when and how they will use genAI, monitoring the accuracy and appropriateness of genAI output, and reflecting on the quality of the end-product and the effectiveness of genAI use during the learning process. Scaffolded reflective tasks may be valuable for achieving this goal (Colthorpe et al., 2018). Once students have developed these skills, the scaffolding could be reduced to allow students greater autonomy in how they engage with genAI. Effective use of genAI could also be encouraged by assessing the learning process in conjunction with the end-product. For example, assessment rubrics could incorporate criteria evaluating students' use of genAI tools, with different standards reflecting the quality of genAI use. In this way, rubrics could be used to incentivise collaboration with genAI rather than cognitive offloading (Tregloan & Song, 2024).

Engagement

A growing body of literature has begun to demonstrate the impact of genAI on students' emotional, cognitive, and behavioural engagement (Lo et al., 2024). When understood through the lens of SRL, these results are not surprising.

GenAI offers opportunities to support deeper, more interactive, and more consistent behavioural engagement, thereby helping students to self-regulate their studies more effectively. Timely, iterative feedback cycles between students and genAI can support more sustained engagement where impasse might have otherwise prevented student progress (Sikström et al., 2022). By shortening feedback loops, genAI offers students more opportunities to iteratively improve their understanding and requires students to take "smaller steps" in their development, increasing the likelihood of sustained motivation.

GenAI can also help students to regulate their emotional and social engagement with their studies, offering a "synchronous" substitute for peers and/or instructors when they are less accessible. Emerging evidence suggests that some students prefer to interact with genAI than with people, particularly when engaging with novel material, in attempts to avoid perceived judgement from others (Lo et al., 2024). Other studies have demonstrated that genAI offers richer modes of communication (e.g., auditory v. written, audiovisual v. unimodal), which are better suited to effecting emotional and motivational regulation than their simpler counterparts (see for example, Ng et al., 2024). GenAI offers avenues to break down some social and emotional barriers to engagement. By integrating genAI into students' learning environments, institutions can ensure that students learn how to engage with these technologies to best self-regulate their learning within, rather than outside, the educational interface.

Assessment

Assessment is often the area of curricula hardest to change yet most important to achievement (Deneen & Boud, 2014). Assessment performs a critical, bridging role between two key curricular intentions: providing summative determinations of student achievement, and advancing that achievement through formative feedback. Both intentions are critical to students' successful transitions into and through higher education. This is especially true for learners who may experience substantively different practices and emphases around pedagogy and assessment, such as international students (Zhou et al., 2023). Assessment should serve as a bridge to successful transition rather than a barrier (Kift, 2009). Determining productive approaches to engaging students' SRL skills and the uses of genAI must therefore involve careful consideration of assessment and feedback practices.

Emphasising SRL in formative assessment is not new. For decades, there have been calls to shift the focus of feedback away from monologic narratives advising students about the quality of their recent work, towards dialogic invitations to consider the nature of quality, their performance relative to this, and how to cross gaps in future performances (Sadler, 1998; Tai et al., 2018). Inherent in this approach are qualities fundamental to SRL. In practice, however, the feedback students experience at multiple educational levels remains strongly anchored to monologic narratives about recent performance, rather than a more dialogic, "feedback literate" approach addressing sustainable SRL capacities (Deneen & Hoo, 2023). The emergence of genAI has intensified assessment and feedback challenges while also creating new opportunities for designs and approaches that support SRL development.

Rather than focussing solely on the challenges posed by genAI, educators can leverage the new opportunities it presents. While there is an urge to revert to more restrictive assessment designs and conditions, Lodge (2024) argues that institutions must resist returning to proctored, closed-book, examinations. These assessment types exacerbate the problems with assessment and feedback noted above, and fail to evaluate the entire range of knowledge, skills and abilities required of graduates (Lodge, 2024). This also reduces both the potential of assessment to foster SRL and assessment's authenticity in relation to professional practices. In so doing, students may also be inhibited from developing adaptive relationships with tools that will be central to their professional futures, such as genAI. Instead, assessment design should leverage genAI affordances to enhance rather than undermine SRL development. This requires greater transparency around constructive alignment—helping students understand

not just what assessments require, but how assessment approaches develop specific SRL capacities. Students often misunderstand assessment requirements and purposes; in a genAI context, this disconnect may be amplified when they cannot see how assessment design intentionally scaffolds their learning to work adaptively with these tools.

By prompting students to reflect then act on feedback and analyse their learning processes—including their genAI interactions— rather than focusing solely on the final product, we can encourage deeper self-awareness. Increasing awareness of how they learn, how they collaborate with genAI tools, and assessing the effectiveness of both independent and AI-assisted approaches helps students build critical SRL skills (Colthorpe et al., 2018). Providing opportunities for reflection can also serve as a catalyst for setting meaningful learning goals. Instead of aiming exclusively for a particular mark or grade, reflection activities encourage students to consider how they approached an assessment—both independently and with genAI support—using feedback to identify and address underdeveloped SRL skills. Once students recognise where they need to improve, they can establish more purposeful goals and become true agents of their own learning in a genAI-enabled environment.

Evaluation and Monitoring

The Evaluation and Monitoring principle focuses primarily on the role of institutions and educators in evaluating the effectiveness of the first-year curriculum and monitoring student progress. This principle would benefit from explicitly including strategies that develop students' abilities to *self*-evaluate and monitor. Monitoring is a metacognitive, process-related skill that self-regulated learners employ while they are performing a task (Zimmerman, 2002). During the learning process, self-regulated learners employ monitoring to make judgements about task difficulty, their comprehension of the material, their "sense of knowing" a construct, and their degree of confidence in their understanding (Nelson & Narens, 1990). To work adaptively and effectively with genAI tools, students need to develop an accurate self-awareness of both their strengths and their shortcomings as learners (Lodge et. al., 2024). However, for the novice student transitioning into higher education, often this level of insight of one's own learning is underdeveloped (Larmar & Lodge, 2014). Students who are yet to develop this insight lack the metacognitive capital and SRL skills to accurately self-evaluate where they are versus where they need to be. A student who self-regulates has this self-awareness, monitors what they are doing while they are studying, and can recalibrate when they are off track, adapting their behaviour to optimise academic achievement. Therefore, supporting students to develop metacognitive monitoring skills and accurate self-evaluation in a genAI empowered world presents an opportunity to address the challenge faced by many first year students—being "unskilled and unaware of it" (Kruger & Dunning, 1999, p. 30).

To support monitoring and self-evaluation, teachers can develop assessment structures that scaffold a larger assessment piece by breaking it down into smaller "chunks", incentivising completion of these scaffolding activities with summative marks and providing individual or general feedback to the class (Pacitti et. al., 2024). These small adjustments to existing assessments can encourage students to self-evaluate and recalibrate throughout the assessment process. Self- and peer-assessment can also support monitoring and self-evaluation (Panadero & Alonso-Tapia, 2013; Panadero & Broadbent, 2018). When students are provided with the opportunity to assess their own work, that of their peers, or indeed that of an output generated by genAI against a rubric, we teach them to evaluate the quality of that work against established standards (Panadero & Broadbent, 2018). It is essential that students understand the performance expectations of assessments by allocating class time or learning activities that introduce assessment rubrics, encouraging students to interrogate these tools and use them to their advantage (Panadero & Broadbent, 2018). These types of assessment designs give students time to monitor and evaluate their learning process, not just the product, and encourages their development of accurate self-awareness as learners.

Conclusion

Transition pedagogy provides a resilient framework for higher education and highlights the risks and opportunities that genAI has introduced to higher education. To support students into university and beyond in the age of genAI, educators must intentionally foster the development of students' SRL in implementing each of the principles of transition pedagogy. Table 1 presents a summary of the challenges and opportunities posed by genAI in relation to the transition pedagogy principles, along with recommendations for these pertaining to self-regulated learning as discussed in this article. From Table 1, it can be observed that, across the six principles, most of the recommendations address the reflection (especially self-evaluation) and forethought (especially motivation) processes in Zimmerman's (2002) SRL process model. The emphasis on reflective processes is particularly important for enhancing metacognitive development. Similarly, motivation is also vital as a driver for continuing persistence in following through the cycle of self-regulated learning. Educators can embed these self-regulated learning competencies within transition pedagogy practices to ensure that students not only leverage the opportunities of genAI in their academic journey but develop the metacognitive skills needed to remain active, intentional learners throughout their educational and professional futures.

 Table 1

 Challenges and Opportunities Posed by GenAI as they Relate to the Transition Pedagogy Principles. Recommendations for Educations and how they Relate to Self-Regulated Learning

| Transition Pedagogy principle | GenAI challenges and opportunities | Recommendations | Associated SRL component(s) |
|-------------------------------|--|--|---|
| Transition | Opportunity for genAI to flatten the learning curve during the transition into university, providing assistance with navigating the first weeks of university and gradually releasing regulatory responsibility to students. Risk that students might become overreliant on genAI to overcome learning challenges. | Supplement and support existing orientation and transition initiatives with real-time AI generated coregulatory support. Implement ePortfolios to foster reflection. Educate students on responsible use of genAI. | Forethought phase (planning, motivation), Performance phase (monitoring) Reflection phase (self-evaluation). |
| Diversity | Opportunity to harness genAI to improve equity, such as providing personalised tutoring or language support. However, risk that genAI models can exacerbate biases and inequities or violate privacy rights. | Institutions should ensure that all students have access to vetted, fit-for-purpose genAI products. | Forethought phase (self-efficacy, motivation). |
| Design | Opportunity to redesign assessment by thoughtfully integrating genAI. Risk that students may be tempted to offload their cognition to genAI. | Design curricula and assessments that incentivise effective use of genAI. Scaffold the use of SRL skills when engaging with genAI to complete learning tasks. Scaffolding can be reduced in later years, releasing responsibility to students. | Forethought phase (planning); Performance phase (monitoring & selfcontrol); Reflection phase (self-evaluation). |
| Engagement | Opportunity for genAI to enhance student engagement by providing timely, iterative feedback and multimodal support. Risk that overreliance on genAI may reduce opportunities peer interaction, potentially weakening students' collaborative skills. | Leverage genAI for personalised learning. Balance genAI use with collaborative activities, discussions, and peer feedback to ensure students develop social and communication skills. | Forethought phase (motivation); Reflection phase (self-evaluation). |
| Assessment | Opportunities for genAI to support and formatively develop key, self-regulating capacities of reflection and self-evaluation. Challenges involve achieving assessment change, as well as assuring that assessment and feedback serve to facilitate transitions, not inhibit them. | Build students' self-evaluation capacity by developing assessments that allow greater opportunities for timely, iterative formative feedback. Include focus on process of learning and future performance, rather than solely on product and past performance. | Reflection phase (self-evaluation). |
| Evaluation & monitoring | This principle emphasises strategies for institutions and/or educators to evaluate and monitor students. However, this might foster reliance on external feedback, especially with genAI affordances. Students may lose their ability to do this by themselves in the absence of scaffolding. | Support students to develop <i>self-</i> evaluation and - monitoring skills. | Performance phase (monitoring); Reflection phase (self- evaluation). |

References

- Abbas, M., Jam, F. A., & Khan, T. I. (2024). Is it harmful or helpful? Examining the causes and consequences of generative AI usage among university students. *International Journal of Educational Technology in Higher Education, 21*(1), 10. https://doi.org/10.1186/s41239-024-00444-7
- Bastani, H., Bastani, O., Sungu, A., Ge, H., Kabakcı, O., & Mariman, R. (2024). Generative AI can harm learning. The Wharten School Research Paper. https://ssrn.com/abstract=4895486 or http://dx.doi.org/10.2139/ssrn.4895486
- Blackmore, C., Vitali, J., Ainscough, L., Langfield, T., & Colthorpe, K. (2021). A review of self-regulated learning and self-efficacy: The key to tertiary transition in science, technology, engineering and mathematics (STEM). *International Journal of Higher Education*, 10(3), 169-177. https://doi.org/10.5430/ijhe.v10n3p169
- Bransen, D., Govaerts, M. J., Panadero, E., Sluijsmans, D. M., & Driessen, E. W. (2022). Putting self-regulated learning in context: Integrating self-, co-, and socially shared regulation of learning. *Medical Education*, 56(1), 29-36. https://doi.org/10.1111/medu.14566
- Brown, J., & Isaacs, D. (2005). The world café: Shaping our futures through conversations that matter (1st ed.). Berrett-Koehler Publishers.
- Coertjens, L., Donche, V., De Maeyer, S., van Daal, T., & Van Petegem, P. (2017). The growth trend in learning strategies during the transition from secondary to higher education in Flanders. *Higher Education*, 73, 499-518. https://doi.org/10.1007/s10734-016-0093-x
- Colthorpe, K., Sharifirad, T., Ainscough, L., Anderson, S., & Zimbardi, K. (2018). Prompting undergraduate students' metacognition of learning: Implementing "meta-learning" assessment tasks in the biomedical sciences. *Assessment & Evaluation in Higher Education*, 43(2), 272-285. https://doi.org/10.1080/02602938.2017.1334872
- Commonwealth of Australia. (2023). *Australian framework for generative artificial intelligence in schools*. Australian Government Department of Education. https://www.education.gov.au/schooling/resources/australian-framework-generative-artificial-intelligence-ai-schools
- Darvishi, A., Khosravi, H., Sadiq, S., Gašević, D., & Siemens, G. (2024). Impact of AI assistance on student agency. Computers & Education, 210, 104967. https://doi.org/10.1016/j.compedu.2023.104967
- Deneen, C., & Boud, D. (2014). Patterns of resistance in managing assessment change. Assessment & Evaluation in Higher Education, 39(5), 577-591. https://doi.org/10.1080/02602938.2013.859654
- Deneen, C. C., & Hoo, H. T. (2023). Connecting teacher and student assessment literacy with self-evaluation and peer feedback. *Assessment & Evaluation in Higher Education*, 48(2), 214-226. https://doi.org/10.1080/02602938.2021.1967284
- Fan, Y., Tang, L., Le, H., Shen, K., Tan, S., Zhao, Y., ... & Gašević, D. (2025). Beware of metacognitive laziness: Effects of generative artificial intelligence on learning motivation, processes, and performance. *British Journal of Educational Technology*, 56, 489–530. https://doi.org/10.1111/bjet.13544
- Farrelly, T., & Baker, N. (2023). Generative artificial intelligence: Implications and considerations for higher education practice. *Education Sciences*, *13*(11), 1109. https://doi.org/10.3390/educsci13111109
- Francis, N. J., Jones, S., & Smith, D. P. (2025). Generative AI in higher education: Balancing innovation and integrity. British Journal of Biomedical Science, 81, 14048. https://doi.org/10.3389/bjbs.2024.14048
- Gerlich, M. (2025). AI tools in society: Impacts on cognitive offloading and the future of critical thinking. *Societies*, *15*(1), 6. https://doi.org/10.3390/soc15010006
- Hallam, G. C., Harper, W. E., McCowan, C. R., Hauville, K. L., McAllister, L. M., & Creagh, T. A. (2008). ePortfolio use by university students in Australia: Informing excellence in policy and practice. *Australian ePortfolio Project, Stage 1.* Queensland University of Technology. https://eprints.qut.edu.au/216079/
- Hashmi, N., & Bal, A. S. (2024). Generative AI in higher education and beyond. *Business Horizons*, 67(5), 607-614. https://doi.org/10.1016/j.bushor.2024.05.005
- Holmes, W., & Miao, F. (2023). *Guidance for generative AI in education and research*. UNESCO Publishing. https://doi.org/10.54675/EWZM9535
- Jin, S.-H., Im, K., Yoo, M., Roll, I., & Seo, K. (2023). Supporting students' self-regulated learning in online learning using artificial intelligence applications. *International Journal of Educational Technology in Higher Education*, 20(1), 37. https://doi.org/10.1186/s41239-023-00406-5
- Kift, S. (2009). Articulating a transition pedagogy to scaffold and to enhance the first year student learning experience in Australian higher education: Final report for ALTC Senior Fellowship Program. Australian Learning and Teaching Council. https://transitionpedagogy.com.au/reports-and-resources/fellowship-report/
- Kift, S. (2015). A decade of transition pedagogy: A quantum leap in conceptualising the first year experience. *HERDSA Review of Higher Education*, 2(1), 51-86.
- Kift, S. (2023). Transition pedagogy for 21st-century student success. In C. Baik & E. R. Kahu (Eds.), Research handbook on the student experience in higher education (pp. 132-148). Edward Elgar Publishing. https://doi.org/10.4337/9781802204193

Kruger, J., & Dunning, D. (1999). Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated self-assessments. *Journal of Personality and Social Psychology*, 77(6), 1121-1134. https://doi.org/10.1037//0022-3514.77.6.1121

- Kutty, S., Chugh, R., Perera, P., Neupane, A., Jha, M., Li, D., Gunathilake, W., & Perera, N. C. (2024). Generative AI in higher education: Perspectives of students, educators and administrators. *Journal of Applied Learning & Teaching*, 7(2), 1-14. https://doi.org/10.37074/jalt.2024.7.2.27
- Larmar, S., & Lodge, J. M. (2014). Making sense of how I learn: Metacognitive capital and the first year university student. *The International Journal of the First Year in Higher Education*, *5*(1), 93-105. https://doi.org/10.5204/intjfyhe.v5i1.193
- Li, I. W., & Jackson, D. (2024). Influence of entry pathway and equity group status on retention and the student experience in higher education. *Higher Education*, 87(5), 1411-1431. https://doi.org/10.1007/s10734-023-01070-4
- Liang, W., Yuksekgonul, M., Mao, Y., Wu, E., & Zou, J. (2023). GPT detectors are biased against non-native English writers. *Patterns*, 4(7), 100779. https://doi.org/10.1016/j.patter.2023.100779
- Lo, C. K., Hew, K. F., & Jong, M. S.-Y. (2024). The influence of ChatGPT on student engagement: A systematic review and future research agenda. *Computers & Education*, 219, 105100. https://doi.org/10.1016/j.compedu.2024.105100
- Lodge, J. M. (2024). The evolving risk to academic integrity posed by generative artificial intelligence: Options for immediate action. Tertiary Education Quality and Standards Agency (TEQSA). https://www.teqsa.gov.au/guides-resources/resources/corporate-publications/evolving-risk-academic-integrity-posed-generative-artificial-intelligence-options-immediate-action
- Lodge, J. M., De Barba, P., & Broadbent, J. (2024). Learning with generative artificial intelligence within a network of coregulation. *Journal of University Teaching and Learning Practice*, 20(7). https://doi.org/10.53761/1.20.7.02
- Lodge, J. M., Yang, S., Furze, L., & Dawson, P. (2023). It's not like a calculator, so what is the relationship between learners and generative artificial intelligence? *Learning: Research and Practice*, 9(2), 117-124. https://doi.org/10.1080/23735082.2023.2261106
- McCardle, L., Webster, E. A., Haffey, A., & Hadwin, A. F. (2017). Examining students' self-set goals for self-regulated learning: Goal properties and patterns. *Studies in Higher Education*, 42(11), 2153-2169. https://doi.org/10.1080/03075079.2015.1135117
- Nelson, T. O. & Narens, L. (1990). Metamemory: A theoretical framework and new findings. *Psychology of Learning and Motivation*, 26, 125-173. https://doi.org/10.1016/S0079-7421(08)60053-5
- Ng, D. T. K., Tan, C. W., & Leung, J. K. L. (2024). Empowering student self-regulated learning and science education through ChatGPT: A pioneering pilot study. *British Journal of Educational Technology*, *55*(4), 1328-1353. https://doi.org/10.1111/bjet.13454
- Nguyen, A., Ilesanmi, F., Dang, B., Vuorenmaa, E., & Järvelä, S. (2024). Hybrid intelligence in academic writing: Examining self-regulated learning patterns in an AI-assisted writing task. In F. Lorig, J. Tucker, A. D. Lindström, F. Dignum, P. Murukannaiah, A. Theodorou, & P. Yolum (Eds.), *Proceedings of the Third International Conference on Hybrid Human-Artificial Intelligence* (Vol. 386, pp. 241-254). https://doi.org/10.3233/FAIA240198
- O'Dea, X. (2024). Generative AI: Is it a paradigm shift for higher education? *Studies in Higher Education*, 49(5), 811-816. https://doi.org/10.1080/03075079.2024.2332944
- Pacitti, H., Dracup, J., Lodge, J., & Richmond, J. (2024). Embedded online self-regulated learning activities improve student experience and learning outcomes. *ASCILITE Publications*, 380-385. https://doi.org/10.14742/apubs.2024.1127
- Panadero, E., & Alonso-Tapia, J. (2013). Self-assessment: Theoretical and practical connotations. When it happens, how is it acquired and what to do to develop it in our students. *Electronic Journal of Research in Educational Psychology*, 11(2), 551-576. http://dx.doi.org/10.14204/ejrep.30.12200
- Panadero, E., & Broadbent, J. (2018). Developing evaluative judgement. In D. Boud, R. Ajjawi, P. Dawson, J. Tai, (Eds.), Developing evaluative judgement in higher education (pp. 81-89). Routledge. https://doi.org/10.4324/9781315109251-9
- Panadero, E., & Lipnevich, A. A. (2022). A review of feedback models and typologies: Towards an integrative model of feedback elements. *Educational Research Review*, 35, 100416. https://doi.org/10.1016/j.edurev.2021.100416
- Rožman, M., Oreški, D., & Tominc, P. (2023). Artificial-intelligence-supported reduction of employees' workload to increase the company's performance in today's VUCA Environment. *Sustainability*, *15*(6), 5019. https://doi.org/10.3390/su15065019
- Sadler, D. R. (1998). Formative assessment: Revisiting the territory. *Assessment in Education: Principles, Policy & Practice*, 5(1), 77-84. https://doi.org/10.1080/0969595980050104
- Sikström, P., Valentini, C., Sivunen, A., & Kärkkäinen, T. (2022). How pedagogical agents communicate with students: A two-phase systematic review. *Computers & Education*, 188, 104564. https://doi.org/10.1016/j.compedu.2022.104564

Tai, J., Ajjawi, R., Boud, D., Dawson, P., & Panadero, E. (2018). Developing evaluative judgement: enabling students to make decisions about the quality of work. *Higher Education*, 76, 467-481. https://doi.org/10.1007/s10734-017-0220-3

- Tregloan, K., & Song, H. S. (2024). From How Much to Whodunnit: A framework for authorising and evaluating student AI use. *ASCILITE Publications*, 255-265. https://doi.org/10.14742/apubs.2024.1441
- Vosniadou, S. (2020). Bridging secondary and higher education. The importance of self-regulated learning. *European Review*, 28(S1), S94-S103. https://doi.org/10.1017/S1062798720000939
- Yan, L., Greiff, S., Teuber, Z., & Gašević, D. (2024). Promises and challenges of generative artificial intelligence for human learning. *Nature Human Behaviour*, 8(10), 1839-1850. https://doi.org/10.1038/s41562-024-02004-5
- Zhou, J., Deneen, C., Tai, J., & Dawson, P. (2023). Feedback seeking by first-year Chinese international students:

 Understanding practices and challenges. *Assessing Writing*, 57, 100757. https://doi.org/10.1016/j.asw.2023.100757
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory Into Practice*, 41(2), 64-70. https://doi.org/10.1207/s15430421tip4102 2

Please cite this article as:

Lim, L-A., Ainscough, L., Deneen, C., Pacitti, H., Taylor-Griffiths, D., Male, S. A., & Frankland, S. (2025). Transition pedagogy in the age of AI: The role of self-regulated learning. *Student Success*, 16(3), 57-66. https://doi.org/10.63608/ssj.3766

This article has been peer reviewed and accepted for publication in *Student Success*. Please see the Editorial Policies under the 'About' section of the Journal website for further information.

Student Success: A journal exploring the experiences of students in tertiary education.



Except where otherwise noted, content in this journal is licensed under a <u>Creative Commons Attribution 4.0 International Licence</u>. As an open access journal, articles are free to use with proper attribution. ISSN: 2205-0795