ŌTAUTAHI CHRISTCHURCH AOTEAROA NEW ZEALAND
35TH AUSTRALASIAN ASSOCIATION FOR ENGINEERING EDUCATION ANNUAL CONFERENCE
8-11 DEC 2024
THE ENGINEER AND THE WORLD

Emotional Appraisals of International Engineering Students Studying in Australia: Insights from Reflective Writing Tasks

Hill, J. L. [a]; Cebon, P. [a]; Bellocchi, A.[b]; and Male, S[a].
University of Melbourne [a], Queensland University of Technology [b]
Corresponding Author Email: hill.j@unimelb.edu.au

ABSTRACT

CONTEXT

International students make up a significant portion of engineering education students studying in Australia, contributing diverse perspectives and experiences to the classroom. However, international students often encounter challenges such as cultural differences, language barriers, and feelings of isolation. Reflective writing is recognised as a valuable method for processing emotional experiences and developing self-awareness. However, there is limited research on how international engineering students emotionally evaluate their learning experiences through reflective writing tasks.

PURPOSE OR GOAL

This exploratory study aims to address a gap in understanding the emotional experiences of international engineering students through analysis of their reflective writing tasks. More specifically, we seek to answer the question: How do international engineering students emotionally appraise their learning experiences in an Australian university course?

METHODOLOGY/METHODS

We analysed the reflective writings of 80 engineering students (37 international, 43 domestic) using Scherer's Component Process Model as a theoretical framework. A deductive thematic approach was employed using a combination of manual and Large Language Processor coding. We compared the frequency of codes across domestic and international students and provided illustrative student quotes to exemplify any differences.

ACTUAL OUTCOMES

International students appraised emotions related to novelty, goal conduciveness, control, and adjustment more frequently than domestic students.

CONCLUSIONS/RECOMMENDATIONS/SUMMARY

The higher frequencies of these four emotional appraisal checks reflect the challenges and proactive approaches faced by international students in adapting to new cultural and academic environments. By understanding and addressing the emotional experiences faced by international students, engineering educators can foster a more inclusive and supportive learning environment. The study also highlights the value of reflective writing tasks in helping international students process their experiences and develop self-awareness while simultaneously providing opportunities for domestic students to gain insights into diverse perspectives.

KEYWORDS

Emotions, culture, professional skills.

Introduction

The globalisation of higher education and the increasing number of international students have been prominent aspects of Western universities for approximately three decades. Australia has played a significant role in the international student market, effectively attracting students from abroad due to policies and initiatives driven by the government and higher education institutions (Arkoudis et al. 2018). International students constitute a significant proportion of the student population in Australian universities, accounting for 50% of enrolments in 2023 (Universities Australia, 2024). Over the past decade, the number of international students in engineering education has doubled (Australian Council of Engineering Deans, 2022). Studying abroad in our interconnected world offers students numerous benefits, including the enrichment of their cultural understanding, enhancement of academic expertise, and development of informed citizenship, empathy, and professional skills. The experience is valuable not only for the students themselves but also for their universities, home countries, and future employers, who all gain from the knowledge and perspectives the students acquire while studying abroad. In our increasingly global economy, it is essential for engineers to be comfortable with and knowledgeable about other cultures (Perez-Juez & Eisenberg, 2018). This cultural competence enables students to participate successfully in international projects, work in multicultural teams, and design products that meet global community needs (Royal Academy of Engineering, 2023).

International students studying abroad face many challenges, such as cultural differences, language barriers, and feelings of isolation (Arkoudis et al. 2018; Perez-Juez & Eisenberg, 2018). However, in engineering education, the perspectives of international students are mostly overlooked, which is concerning given the high proportion of international students enrolled in Australian engineering courses (Arkoudis et al. 2018). Despite the challenges they face, international students often demonstrate resilience and employ various coping strategies to navigate their study abroad experiences (Lillyman & Bennett, 2014). Reflective writing can serve as a powerful tool for international students to process their emotions, make sense of their engineering education learning experiences, and develop strategies for success (Zelihic, 2015).

This exploratory study attends to these knowledge gaps by highlighting the experiences of engineering students studying abroad at a research-intensive urban university in Australia. Students were enrolled in a semester-long engineering education course focused on professional skill development and identity formation. Weekly written reflections were part of the assessment of this subject. Given the limited research on reflection and emotions among international engineering education students studying in Australia, this study explores the emotional appraisals of international engineering students through their reflective writing tasks. By providing a platform for international students to express their emotions and reflect on their experiences, this study seeks to contribute to a deeper understanding of their unique challenges and inform strategies for supporting their emotional wellbeing and academic success in engineering education.

Background

The Creating Innovative Engineering (CIE) context

This study examines student reflections in a postgraduate subject called Creating Innovative Engineering (CIE), which was introduced in 2017. CIE aimed to help engineering students transition to thinking and acting like professionals. Assessment and learning tasks consisted of two projects – one focusing on teamwork and innovation and the other on framing students' future careers as a series of innovation projects. The subject aimed to instil five core ideas in students: 1) The importance of a growth mindset, 2) problem-solving to create value for others, 3) the way professionals seek out and take advantage of opportunities on their journey,4) working with and through others, and 5) navigating the profession with an ethical compass. Students learned a wide range of relevant skills, from basic tasks such as writing thank-you notes to more

advanced skills like giving feedback and conflict resolution. Student reflections were integral to the curriculum and pedagogical design of the CIE subject.

Student reflection in engineering education

Reflection is a valuable process in engineering education, enabling deep learning and professional development. We define reflection as “a process in which people make sense of and interpret a specific experience to yield insight into where they stand and how to go on” (Herman et al., 2022, p. 4). Herman et al. (2022) further emphasised that reflection is a means to gain insight into experiences and one's position rather than an activity in itself. Recent studies have examined how to integrate reflective activities into engineering education and analyse students' reflections (e.g., Mattucci et al., 2022; Tabassum et al., 2024). Tabassum et al. (2024) explored how biomedical engineering students engaged in guided written critical reflections during clinical immersion experiences, revealing developments in their medical knowledge and heightened awareness of socioeconomic disparities impacting patient care. Mattucci et al. (2022) implemented a structured approach to integrate critical reflection into a first-year engineering curriculum, mapping students' reflections to experiential learning activities. Epstein and Zastavker (2017) examined reflective writing courses at an undergraduate engineering college, analysing how students' reflections helped them understand their relationships with themselves and others and navigate issues related to identity in the engineering field.

There are limited studies explicitly examining student emotions in engineering education through reflective tasks (Lönngren et al., 2024). Three studies that do address emotion in reflective tasks, highlight their role in transformative and critical learning incidents and growth of emotional intelligence. For example, Walther, Sochacka, and Kellam (2011) introduced a framework of emotional cues aimed at helping students engage in reflection. They sorted these cues into categories such as novelty, challenge, progression, exploration, and insight. This method was trialled in reflective focus groups within an interdisciplinary design studio, revealing that emotional students’ indicators provided intuitive access for students to recall and reflect on transformational learning experiences. Deveci and Nunn (2016) purported that reflection in project-based courses enhanced students' emotional intelligence, particularly in relation to emotion perception, utilisation, and management. Kellam et al. (2011) emphasised the role of emotions in engineering education through a narrative analysis, highlighting the significance of intense emotions in leading to critical learning incidents. Results from these studies provide support for further research on the role of emotion in engineering education students’ reflective writing.

International students’ experiences in engineering education

While extant literature has explored student reflection in higher education, there is limited research focusing on reflection for international students, particularly in engineering education. Studies examining the experiences of international students in engineering education have primarily focused on challenges related to cultural differences, language barriers, and pedagogical approaches (Murzi et al., 2020; Perez-Juez & Eisenberg, 2018;).

Perez-Juez and Eisenberg (2018) found that cultural shock, including language barriers and differences in pedagogical styles, was the biggest challenge for engineering students studying abroad in Spain. Murzi et al. (2020) reported similar challenges, such as cultural differences, language barriers, and feelings of isolation, which affected international graduate students' academic and social integration in United States engineering programs. Wrobetz et al. (2024) analysed weekly video reflections to understand the experiences of engineering students studying abroad. The students reflected on cultural challenges such as travel, housing, interactions with institutional personnel, language differences, and new regulations in the host country. Communication was the most discussed topic among the international students.

Despite these insights, there is a scarcity of research that identifies the unique emotional experience of international engineering students that can serve to highlight their learning needs. Tas (2013) found that reflective writing helped international students process their cultural

adjustment experiences, develop self-awareness, and set goals for personal growth, however, this study was not specific to engineering education.

Appraisal Theory of Emotion: The Component Process Model

There is limited research on how engineering students evaluate emotionally triggering events through reflective tasks, especially for international students, presenting an opportunity for further investigation. In this study, we use Scherer's (2013) Component Process Model (CPM) to analyse students' emotions. This model views emotions as processes made up of various components, called *stimulus evaluation checks,* and can capture commonalities of emotions across cultures (Scherer, 2013). Thus, CPM offers a relevant theoretical choice to interpret the emotional appraisals undertaken by engineering students from diverse backgrounds

Regarding the emotional appraisal dimension of CPM, the theory assumes that individuals evaluate the education process as a series of events based on stimulus evaluation checks like *relevance, implications/consequences, coping potential,* and *norm compatibility*. The way the individual evaluates the event impacts whether and what they learn from it. In Table 1, we summarise these 13 CPM checks. These checks underpin our analysis of emotional appraisal processes conveyed through the students' reflections.

Table 1: CPM emotional appraisal stimulus evaluation checks (Scherer, 2013)

Stimulus Evaluation Check	**Sub-categories**				
Relevance	Novelty	Intrinsic Pleasantness	Goal/need pertinence		
Implications/ Consequences	Causal attributions	Outcome probability	Discrepancy from expectation	Goal/need conduciveness	Urgency
Coping potential	Control	Power	Adjustment		
Norm compatibility	Internal standards	External standards			

The current study

This exploratory study aims to understand the emotional experiences of international engineering students through their reflective writing tasks. Using Scherer's (2013) CPM as a theoretical framework, we analysed students' weekly reflections from the CIE course. Specifically, we sought to answer the question: *How do international engineering students emotionally appraise their experiences in an Australian university engineering education course?*

Methods

The reflective task in CIE

The CIE required students to write seven 750-word reflections over the semester. In week two, students formed teams and submitted a 'Project Brief'. Week three's class focused on the subjective nature of perception and conducting unbiased research. The reflections accounted for 22.5% of the students' total marks and were guided by specific instructions and a developmental progression guide. The reflection instructed the students to choose a significant CIE experience or event to reflect upon that evoked strong feelings (e.g., anger, surprise, elation, embarrassment). The emotional event had to be connected to CIE (e.g., lecture topic, team dynamics, personal role in CIE etc.) in some way.

Participants

In this paper, we focus on 80 postgraduate engineering students enrolled in CIE at an urban university in Australia. The sample comprised 37 international (37%) and 43 domestic (54%) students. The international students were mostly from mainland China (22 students), and also Indonesia (3), New Zealand (2), Sri Lanka (2), Taiwan (2), India (1), Pakistan (1), Philippines (1), Thailand (1) and the United States of American (1). All students provided written consent for their reflections and demographic data to be anonymously published for research purposes, consistent with the project's human research ethics approval.

Data analysis

Our data analysis employed a qualitative deductive thematic coding approach, utilising Scherer's (2013) CPM stimulus evaluation checks as the coding framework. Given our substantial dataset (60,000 words across 80 reflections), we employed the Spark Large Language Processor platform, based on OpenAI's GPT-4, to assist with the coding process.

Initially, Author 1 manually coded five randomly selected student reflections using the CPM framework. These manually coded reflections, along with Scherer's (2013) theoretical paper, were used to train the Spark. Spark then extracted and categorised quotes from the remaining 76 reflections according to the 13 CPM codes. Author 1 conducted a comprehensive review of each quote extracted by Spark, confirming its alignment with the assigned CPM code across all 80 reflections.

The overall agreement rate between Spark's initial coding and the final researcher-verified coding was 93% (472 out of 508 quotes). This high level of agreement suggests strong consistency between Spark's assisted coding and human judgment. This approach, combining the computational efficiency of a Large Language Processor with final researcher oversight, supported the accuracy of our thematic analysis while efficiently processing a large volume of written reflection data.

Results and Discussion

Analysis of student reflections revealed notable differences in the frequencies of emotional appraisals between the international (*n* = 37) and domestic (*n* = 43) students across four key CPM checks: *Novelty, Goal Conduciveness, Control,* and *Adjustment (*Scherer, 2013), as shown in Table 2. These differences highlight the unique challenges and emotional experiences of international students in engineering education. In this section, we present the quantitative differences in appraisal frequencies and illustrative student quotes from the reflections. We also discuss the implications of these findings for understanding and supporting international students' emotional experiences in engineering education.

Table 2: The frequency of CPM codes for the domestic and international student

Study mode	CPM code frequencies, *n* of students (%)												
	Adjustment	Goal cond.	Pleasant.	Goal pert.	Casual attribution	Novelty	Control	Discrep. expect.	Ext. stands.	Power	Int. stands.	Urgency	Outcome prob.
Domestic (*n* = 43)	34 (79)	28 (65)	29 (67)	27 (63)	27 (63)	20 (47)	18 (42)	19 (44)	12 (28)	8 (19)	5 (12)	3 (7)	1 (2)
International (*n* = 37)	34 (92)	33 (89)	29 (78)	28 (76)	25 (68)	25 (68)	26 (70)	17 (46)	7 (19)	9 (24)	6 (16)	2 (5)	0
N students	68	61	58	55	52	45	44	36	19	17	11	5	1

1. Novelty

International students exhibited a higher frequency of novelty appraisals (68%) compared to their domestic counterparts (47%). This heightened sensitivity to novelty was evident in students' reflections on *unfamiliar experiences and cultural differences* encountered in the CIE course. One student noted:

> *As an international student, I have observed the significant impact of cultural differences on perception. During group projects... I often found that my perception differed from that of my group members, leading to communication gaps and lack of understanding.*

This reflection exemplifies the challenges of navigating novel cultural contexts in academic environments. The novelty of *cross-cultural collaboration* may be less pronounced for domestic students who are more accustomed to local academic norms. The CIE course itself presented novel approaches to learning, as evidenced by another student's comment:

> *I guess this is anti-clockwise thinking on myself, or I would call it reverse engineering my brain, where I expose myself... Coming back to the event itself, I also wanted to find out why I would bring up the very uninteresting and brief story with my friend during the lecture. I guess it's because I felt safe and certain when I was around them. We were friends before I became an international student.*

This *level of introspection* in an academic setting may be unfamiliar for many international students, contributing to their higher frequency of novelty appraisals. The transition to studying in Australia also brought unexpected challenges:

> *I came here expecting things to be quite different but easy... But now after 3 weeks in Australia, I have found that a lot of stress is building up because of the fear of failing and falling behind.*

This quote highlights the novelty of the Australian academic environment and the unanticipated stressors that international students face. The gap between expectations and reality contributes to a sense of novelty that may be less prevalent among domestic students who are more familiar with the local educational system. The higher frequency of novelty appraisals among international students reflects their ongoing process of adapting to new cultural and academic norms, a challenge less prominent for domestic students.

2. Goal conduciveness

Goal conduciveness appraisals were markedly more frequent among international students (89%) than domestic students (65%). This suggests that international students more actively evaluate how events and experiences align with their *future goals in* the context of their engineering education journey abroad. For example, one international student reflected:

> *I realised that this characteristic was an opportunity to be improved hence I included this point in my learning objective this semester, but I saw this learning objective as a pressure and I had difficulty in maintaining my spirit to achieve my goal. Upon experiencing the situation this week, I felt motivated to know that I could be genuinely interested with a topic that also aligned with my plan to improve myself, and I was excited to continue the learning process further.*

This quote demonstrates how international students are particularly attuned to opportunities that align with their personal development goals. Another student recognised the *long-term benefits* of the skills they were developing:

> *I can see that this kind of practice of understanding others will be extremely helpful for my future career in marketing and management which most of the work is about understanding and connecting with others*

These reflections illustrate how international students often consider the future applicability of their current learning experiences, evaluating them in terms of their career goals. Most of the students originated from China. This forward-thinking approach aligns with Hofstede's (2011) concept of long-term orientation, which is valued more in some collectivist cultures, including people from China. The higher frequency of goal conduciveness appraisals among international students may reflect their cultural emphasis on long-term planning, future orientation, or greater

pressures to justify or evaluate their educational experience to support their future goal orientations.

3. Control

The frequency of control appraisals was notably higher for international students (70%) than for domestic students (42%). This difference may reflect international students' efforts to *exert control* over their new and often challenging circumstances. One international student outlined specific strategies to prepare for cross-cultural interactions:

> *Things I think I can do to get ready [for an interview] are as follow [sic]: 1. Understand the basic cultural difference [sic] between Australians and Indonesians... 2. Understand how they run things differently than in literature, especially regarding this solar panel project... 3. Research the interviewee first on online platforms... 4. Practice speaking English, talk a bit more, and try not to stutter.*

This detailed plan demonstrates how international students actively seek ways to control their experiences, particularly in unfamiliar cultural contexts. Another student noted the difficulty with a sense of belonging by taking control over their actions and interactions, aligning with earlier research reporting international students studying in Australia often struggle with social integration and belongingness (Arkoudis et al., 2019). For example, one international student in our study expressed:

> *To overcome this negative emotion of feeling excluded from the group, I think I can begin by talking to those in the group who I am more familiar with, sharing my thoughts, and seeking advice. By getting to know people individually, I can gradually increase my involvement in the group.*

These reflections demonstrate how international students consistently seek ways to exert control over various aspects of their academic and social experiences. From preparing for cross-cultural interactions to managing emotional responses to grades, developing coping strategies for social challenges, and pushing personal boundaries. These students show a heightened awareness of the need to actively manage their experiences in a foreign academic environment. The frequency of control appraisals for international students aligns with Hofstede's (2011) concept of uncertainty avoidance. International students, particularly those from cultures with high uncertainty avoidance values (e.g., Chinese), may be more inclined to develop strategies to control their environment and experiences as a way of managing the uncertainties inherent in studying abroad. This proactive approach to controlling their circumstances likely contributes to the higher frequency of control appraisals among international students compared to their domestic counterparts, who may feel more at ease in the familiar academic and cultural context.

4. Adjustment

The most pronounced difference was observed in adjustment appraisals, with international students showing a much higher frequency (92%) compared to domestic students (79%). This suggests that international students are more consistently engaged in processes of adaptation and coping with new situations, particularly in relation to cultural, social, and academic norms in Australia. Two international students described the challenges of adjusting to the Australian lifestyle:

> *And the lifestyle in Australia is quite different, exposing myself to a new culture while adjusting myself to the new environment seems to quite the tedious task. But I have found a method to deal with this, which is to take things step by step for now until I can get comfortable with the environment and then plan ahead.*

> *Another reason is that I come from a different culture than my group members. I was born in China, spent most of my time there, and maintain my Chinese living style while in Melbourne. This created a culture gap between me and my group members.*

These reflections align with the findings of Perez-Juez and Eisenberg (2018), who reported that "culture shock was one of the biggest challenges [of engineering students] studying abroad" (p. 170). The higher frequency of adjustment appraisals among international students reflects their ongoing efforts to integrate into and thrive within the Australian academic and social context.

The use of reflective writing tasks, as implemented in the CIE course, aligns with recommendations from Tas (2013) and Zelihic (2015), who found that reflective writing supports international students to develop greater self-awareness and adjust to cultural differences. Students studying abroad in Australia often face challenges with social integration, cultural differences, belongingness, and the lack of social interactions via group activities in their courses (Arkoudis et al. 2019). Our study confirmed the emotionally salient events involving novelty, alignment with students' goals, adjustment and a sense of control in a new culture and academic environment. However, rather than taking a deficit view, our study also points to the emotional strengths of these international students. For example, students often noted active coping strategies to support negative emotions and emotionally triggering events (e.g., engaging in conversations, developing awareness of self and others, having a flexible mindset) to address these challenges and develop resilience. For example, one international student noted that:

> *I want to be better, be more careful to what I am doing and how it affects those around me. Not just to improve my communicational abilities, but also listen and try to critically understand, just like what [my tutor] said during the lecture, "you make friends with how you listen, not how you talk".*

Although not reported here, the CIE course also incorporated peer reflections, where students reflected on other reflections. This peer reflection component of CIE offers a unique opportunity for domestic students to gain insights into the experiences of their international peers through written reflections, fostering empathy and intercultural understanding. This practice aligns with the goals of fostering global competence in engineering education, as emphasised by the Royal Academy of Engineering (2023)

Conclusion

This study provides valuable insights into international engineering students' emotional appraisals learning experiences while studying in Australia through analysis of reflective writing using Scherer's (2013) CPM framework. The findings underscore the importance of providing targeted support for international students in engineering education to foster academic success and wellbeing, as suggested by Asghar et al. (2023). By understanding the emotionally triggering experiences faced by international students, particularly events relating to novelty, goal conduciveness, control, and adjustment, engineering educators can foster a more inclusive and supportive learning environment that promotes the success and belonging of all engineering students. The use of reflective writing tasks, coupled with peer reflection opportunities, offers a powerful instructional tool for enhancing intercultural understanding and self-awareness in engineering education programs. These practices not only benefit international students by providing a platform for processing their emotional experiences but also enrich the learning environment for domestic students by exposing them to diverse perspectives. To provide targeted support, engineering educators might consider implementing peer mentoring programs, which could help address the novelty and adjustment challenges faced by international students. Additionally, incorporating mixed domestic and international student teams in group projects may foster cross-cultural understanding and potentially aid international students in building social connections. Future research could explore how international students' emotional experiences and appraisals change and develop as they progress through their engineering course.

References

Arkoudis, S., Dollinger, M., Baik, C., & Patience, A. (2019). International students' experience in Australian higher education: Can we do better? *Higher Education*, *77*(5), 799–813.

Asghar, M., Minichiello, A., & Ahmed, S. (2023). Mental health and wellbeing of undergraduate students in engineering: A systematic literature review. *Journal of Engineering Education*, jee.20574.

Australian Council of Engineering Deans. (2022). Managing technological change: Strategies for college and university leaders. Jossey-Bass.

Deveci, T., & Nunn, R. (2016). Development in freshman engineering students' emotional intelligence in project-based courses. *Asian English for Specific Purposes Journal, 12*(2), 54-92.

Epstein, G., & Zastavker, Y. V. (2017). Uneasy stories: Critical reflection narratives in engineering education. In D. Bairaktarova & M. Eodice (Eds.), *Creative ways of knowing in engineering* (pp. 173-196). Springer International Publishing.

Herman, P., Hermsen, P., Rooij, R., Rijnbeek, G., & Adrichem, T. (2022). *Reflection in engineering education: White paper '100 days of reflection'.* Delft University of Technology.

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. *Online Readings in Psychology and Culture*, *2*(1). https://doi.org/10.9707/2307-0919.1014

Kellam, N., Walther, J., Sochacka, N., & Kellam, N. (2011). Emotional indicators as a way to initiate student reflection in engineering programs. *2011 ASEE Annual Conference & Exposition Proceedings,* 22.557.1-22.557.13. https://doi.org/10.18260/1-2--17838

Lillyman, S., & Bennett, C. (2014). Providing a positive learning experience for international students studying at UK universities: A literature review. *Journal of Research in International Education, 13*(1), 63-75.

Lönngren, J., Bellocchi, A., Berge, M., Børgelund, P., Direito, I., Huff, J. L., Mohd-Yusof, K., Murzi, H., Rahman, N., & Tormey, R. (2024). Emotions in engineering education: A configurative meta-synthesis systematic review. *Journal of Engineering education.*

Mattucci, S., Zhuang, K., Harris, J., & Jadidi, M. (2022). Integrating a critical reflection framework for experiential learning activities into a large first-year engineering course. *Proceedings of the Canadian Engineering Education Association. (CEEA).* https://doi.org/10.24908/pceea.vi0.14157

Moon, J. A. (2004). *A handbook of reflective and experiential learning: Theory and practice.* Routledge.

Murzi, H. G., Martin, T. L., McNair, L. D., & Paretti, M. C. (2020). Comparative analysis of international and domestic engineering students' experiences. *Journal of International Students, 10*(4), 928-946.

Perez-Juez, A., & Eisenberg, S. R. (2018). Engineers aboard: Opportunities for sophomores in international education. In N. J. Gozik, & H. H. Barclay (Eds.), *Promoting inclusion in education abroad: A handbook of research and practice.* Taylor & Francis Group.

Royal Academy of Engineering. (2023). *Cultural inclusivity in engineering.* DJS Research.

Scherer, K. R. (2013). The nature and dynamics of relevance and valence appraisals: Theoretical advances and recent evidence. *Emotion Review, 5*(2), 150-162.

Tabassum, N., Higbee, S., & Miller, S. (2024). A qualitative study of biomedical engineering student critical reflection during clinical immersion experiences. *Biomedical Engineering Education, 4*(1), 15-31.

Tas, M. (2013). International students: Challenges of adjustment to university life in the U.S. *International Journal of Education*, 5(3), 1-10.

Universities Australia (2024). *Statistics and publications.* Retrieved from https://universitiesaustralia.edu.au/stats-publications/

Walther, J., Sochacka, N., & Kellam, N. (2011). Emotional indicators as a way to initiate student reflection in engineering programs. *2011 ASEE Annual Conference & Exposition Proceedings*, 22.557.1-22.557.13. https://doi.org/10.18260/1-2--17838

Wrobetz, A., Davis, K., Artiles, M. S., & Murzi, H. (2024). Engineering Students Learning Abroad: Experiences Captured via Longitudinal Video Reflections. *IEEE Transactions on Education*, *67*(3), 423–433. https://doi.org/10.1109/TE.2023.3337783

Zelihic, M. M. (2015). Reflective writing: A management skill. *International Journal of Management & Information Systems, 19*(2), 61-66

Copyright statement