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The success, satisfaction and experiences of international students in an immersive block model

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The success, satisfaction and experiences of international students in an immersive block model

Abstract

Despite growing interest in immersive block models in higher education, very little is known about the experiences of international students in these non-traditional forms of learning. To enable an initial view of how international students perceive and perform in an immersive block model, we used an exploratory mixed methods approach to examine the academic success, satisfaction, and experiences of international students in a 6-week immersive block model at a regional public Australian university. Inferential statistical tests were used to explore the success rates and unit and teaching satisfaction of onshore and offshore international students in the immersive block model and in the traditional trimester model. Overall, the immersive block model made a significant positive difference to the academic success of international students, both onshore and offshore. However, a decline in satisfaction was observed among science and engineering students, contrasting with an increase in satisfaction among business and arts students. Data collected through semi-guided interviews with 10 students from this latter group indicate several key benefits and challenges associated with immersive block learning. Students reported heightened focus and motivation, supportive teaching, and a healthy study-work-life balance. Challenges included not knowing what to expect, forming social connections with classmates, and the fast turnover between assessments. These findings indicate that it is important for institutions to prepare international students well for the pace and time management demands of studying in an immersive block model and to encourage the formation of social connections. Assessment timing, volume, and scaffolding should also be key considerations in immersive block model curriculum design.

Practitioner Notes

- The findings from this research show that immersive block models can significantly improve the academic success and satisfaction of international students in higher education, heightening their focus and motivation while allowing them to maintain a healthy study-work-life-balance.
- 2. Impacts may vary across disciplines, and satisfaction can be susceptible to negative change in immersive block models.
- 3. Institutions should aim to prepare international students for the pace and time demands of studying in an immersive block model before they arrive in the host country and/or commence their studies in an English-medium instruction context.
- Academic and professional staff should design activities and initiatives to encourage the formation of social connections between international students and their peers in immersive block models.
- 5. Assessment design should be a key consideration in immersive block model curriculum development, with particular attention paid to timing, volume, and scaffolding.

Keywords

international students, immersive scheduling, block model, student success, study-work-life balance

Introduction

In an era of rapid change in higher education (HE; Buck et al., 2023), immersive block models are an example of an evidence-based teaching and learning innovation that can enhance students' engagement and academic achievement. There are many terms used to describe such models, including "intensive", "accelerated", and "block mode" (Samarawickrema et al., 2022). The term "immersive block model" is used here as an umbrella term for delivery models that engage students in shorter, more focused, and active learning experiences compared to a traditional 12–15-week semester or trimester.

In this paper, we explore the impact of a 6-week immersive block model – the Southern Cross Model (SCM) – on the academic success, satisfaction, and learning experiences of international students studying business, arts, science, or engineering with a regional public Australian university. After the outbreak of the COVID-19 pandemic, international students are continuing to return to anglophone countries, as well as continuing to study in their own countries in English-medium instruction (EMI) courses offered by anglophone universities. More than 392,000 student visas were granted in Australia in 2022, exceeding the number of visas granted in the prepandemic year of 2019 (Department of Education, 2023); by February 2023, there were some 547,000 international students in Australia, with approximately 315,000 of those enrolled in HE (Australian Trade and Investment Commission, 2023).

However, little is known about the experiences of international students in immersive block models. This exploratory mixed methods study therefore aims to provide an initial view of how international students perceive and perform in a 6-week immersive block model. In what follows, we explore outcomes and perceptions among international students studying in the discipline groups of either business and arts, or science and engineering, and enrolled either onshore in Australia or offshore in their country of origin through the same Australian university. Four key questions are addressed in relation to these student groups:

- 1. How has an immersive block model affected students' academic performance?
- 2. How has an immersive block model affected students' unit and teaching satisfaction?
- 3. What do students perceive as the benefits and challenges of a 6-week immersive block model?
- 4. How do students perceive their study-work-life balance (SWLB) in a 6-week immersive block model?

Literature Review

Evidence from Australia and the United Kingdom indicates that immersive block models can enhance academic achievement across a range of course levels and modalities (Goode et al., 2023a), as well as among pathways cohorts (Goode et al., 2022b), undergraduates (Loton et al., 2022; Turner et al., 2021; Wilson et al., 2023), and students from disadvantaged or minoritised backgrounds in HE (Jackson et al., 2022;

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Roche et al., 2023; Samarawickrema & Cleary, 2021; Winchester et al., 2021). Recent studies suggest that these performance enhancements may be due to the reduced cognitive load and added focus of studying one or two units at a time (Buck & Tyrrell, 2022; Goode et al., 2022b, 2023a; Richmond et al., 2015), as well as the purposeful application of active learning pedagogies that engage students more effectively in their learning (Ambler et al., 2021; Goode et al., 2022a, 2022b, 2023a; Lee & Horsfall, 2010; Loton et al., 2022; Samarawickrema & Cleary, 2021). Research on the satisfaction of students in immersive block models has yielded equivocal results. Some studies report that students are less satisfied in the shorter models (Colclasure et al., 2018); others found improvements (Goode et al., 2023b; Lee & Horsfall, 2010; Richmond et al., 2015) or equivalent satisfaction (Ferguson & DeFelice, 2010; Harwood et al., 2018). Some research has noted that despite small and statistically insignificant declines, high satisfaction was maintained in the initial year of an immersive block model (Goode et al., 2023a, 2023b; Loton et al., 2022).

Few studies focus specifically on international students' experiences in these models, either in Australia or elsewhere. A rare example of disaggregating international student outcomes from the overall student population can be found in McCluskey et al.'s (2020) research at a metropolitan Australian university. This study found that international student success rose by 5.8% in the inaugural year of a 4-week block model compared to 9.9% for domestic students (McCluskey et al., 2020).

Post-pandemic data on the international student experience in Australia reveal a marked decline in satisfaction, with the percentage of international students who rate their overall experience positively falling from 75% in 2019 to 63% in 2020 and 67% in 2021 (Social Research Centre, 2021). A review of studies on the mental health of international students during the COVID-19 pandemic also found consistent evidence of adverse impacts on students' levels of stress, anxiety, and depression (Zhao et al., 2022).

Post-pandemic, there appears to be a need for institutions to continually improve international students' educational experiences. For students studying outside of their home country, adjusting to a new academic and social life in a foreign country can be a complex and daunting experience as they deal with potential cross-cultural issues and stresses (Andrade, 2006; Hertzum & Hyldegård, 2019; Lillyman & Bennett, 2014). The challenges they face can include feelings of isolation and limited social integration (Arkoudis et al., 2019); the need to develop confidence and competence in academic and digital literacies in an anglophone HE context (O'Neill et al., 2022; Roche, 2017); language and culture shock (Bai & Wang, 2022); racism and discrimination (Dovchin, 2020; Ramia, 2021); and employment, financial, and housing precarity (Arkoudis et al., 2019; Hastings et al., 2023).

One area that has received limited attention to date is international students' SWLB. Although adults' work-life balance has been widely researched, SWLB is a relatively new, under-explored, and under-theorised concept in the international student experience literature (Vokić et al., 2021). Early research on SWLB among international students conceptualises it as a window into their welfare, encompassing the interplay between three broad and overlapping "categories of commitment": study, work, and life balance (Ong & Ramia, 2009, p. 187; see also Outhred & Chester, 2013). The first two elements of SWLB comprise educational and paid employment experiences respectively, and the third refers to students' private lives, including overall life

satisfaction, wellbeing, leisure time, and meeting social and familial expectations (O'Mahony & Jeske, 2019; Vokić et al., 2021).

Universities have a duty of care and mutual interest to support international students to balance study with work, family, and/or other personal commitments (Moore & Loosemore, 2014; Ong & Ramia, 2009). The literature suggests that universities can support healthy SWLB among international students by providing a learning climate characterised by high intellectual stimulation and high support and social inclusion (Little, 1975; Outhred & Chester, 2013). Students who achieve what they perceive to be a satisfactory SWLB are more likely to be "engaged, happy, and productive" (Outhred & Chester, 2013, p. 320). Meanwhile, students who do not achieve a balance tend to overextend themselves, experience detrimental mental health outcomes such as increased stress, exhaustion, anxiety, and depression, and perform more poorly in educational and organisational settings (Vokić et al., 2021).

Although they have not moved abroad for their studies, students from an English as an Additional Language (EAL) background face specific challenges studying in EMI contexts, which can also impact their student experience (Harrington & Roche, 2014; Roche et al., 2016). Academic outcomes can be affected by English-language proficiency among both instructors and students (Jiang et al., 2019; Roche et al., 2016) and by the digital proficiency of teaching staff (Ahmed & Roche, 2022). In some non-English-speaking regions, such as the Middle East and Asia, EMI students may also expect and prefer more didactic approaches involving rote learning and teacher-centred instruction (Jiang et al., 2019; Sinha et al., 2018). When these expectations are not met, lower achievement, dissatisfaction, and attrition can result (Roche et al., 2015; Sinha et al., 2018).

There is some evidence that students in EMI contexts can enjoy and benefit from more active approaches to learning (Kim & Kim, 2021; Yao & Collins, 2019). However, employment and family commitments can be major factors that "pull" EMI students away from their studies (Sinha et al., 2018). This suggests that a focused immersive block model underpinned by active learning pedagogy has the potential to enhance the SWLB, and in turn academic outcomes, of EMI students. We investigated this issue, for both onshore and offshore international students, within the context of the 6-week immersive SCM.

The Southern Cross Model

The SCM was first implemented in 2021 across a pilot suite of courses at a regional public university in Australia (see Goode et al., 2023a; Roche et al., in press). In contrast to the typical one-unit-at-a-time block model, the SCM engages full-time students in two units across 6-week terms as shown in Figure 1.

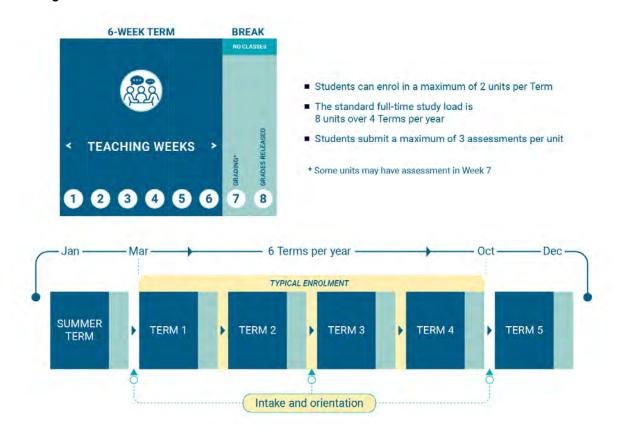
The core aim of the SCM is to improve student retention and drive better student engagement through a curriculum that is focused, active, and guided (Roche et al., in press). Units in the model have five core design features:

- teaching and learning are focused on developing learning outcomes, using constructive alignment (Biggs, 1996) and backward learning design (Wiggins & McTighe, 1998);
- online modules are interactive, responsive, and media-rich, guiding students through the curriculum;

- twice-weekly classes involve active and guided learning experiences (e.g., discussion or problem-based learning);
- learning experiences are designed to build communities of inquiry (Garrison et al., 1999);
 and
- assessments are designed to be authentic, scaffolded, and manageable within a 6-week term (see Roche et al., in press, for a more detailed outline of the pedagogical approach in the SCM).

Figure 1

Teaching Terms in the Southern Cross Model



Method

We employed a mixed methods design to investigate international students' experiences in the SCM. Southern Cross University's Human Research Ethics Committee approved both the quantitative and qualitative strands of the research. (approval numbers 2022/054 and 2021/051).

Quantitative

Data collection and filtering

Secondary data in the form of student performance and satisfaction records were provided by the university's Office of Business Intelligence and Quality and uploaded to STATA 17.0. Performance data included enrolment and grade details. The satisfaction data included responses on a 5-point Likert scale to questions in the university's Unit Feedback Survey, a voluntary,

standardised instrument delivered in the final weeks of a teaching period before the release of students' final grades.

Domestic, pathways, and postgraduate enrolments were removed from the data, leaving international undergraduate enrolments only. Students who enrolled as external (i.e., online) were also removed to avoid selection bias, as COVID-19 resulted in atypical numbers of external enrolments in 2021 and 2022. Records with an enrolled status were also removed, leaving only records identified as passed, withdrawn, or failed.

Two groups of matched-pair units were then identified in the data:

- immersive block model units delivered in the trimester model in Sessions 1–2 in 2019 and subsequently in the immersive block model in Terms 1–4 in 2021 and/or 2022, and
- control units delivered in the trimester model in Sessions 1–2 in 2019 and subsequently in Sessions 1–2 in 2021 and/or 2022.

The baseline year chosen for comparison was 2019, as that period represents a pre-COVID "business-as-usual" year when students were taught in the more traditional trimester model. Data from the 2021 and 2022 academic years were aggregated for analysis, as only a small number of pilot units were delivered in the immersive block model in 2021, before being rolled out across a much larger number of units in 2022.

Before analysis, records were separated into onshore (in Australia) and offshore (EMI) enrolments.

Data analysis

The performance observations were dichotomised into pass and non-pass (i.e., withdrawn or failed). To explore satisfaction, two items on the Unit Feedback Survey were selected: "Overall, I am satisfied with this unit" (overall unit satisfaction); and "Overall, I am satisfied with the teaching in this unit" (overall teaching satisfaction). The data for each question were dichotomised into agree (4 or 5 on a 5-point Likert scale) or neutral or non-agree (1, 2, or 3 on a 5-point Likert scale). Descriptive statistics were generated for selected sub-groups shown in Tables 1–5.

To test for significant change in success and satisfaction across the two models, Pearson's chisquare tests (see Field, 2018) were conducted. Effect sizes were also identified through Cramér's V outputs (see Akoglu, 2018).

Qualitative

The qualitative strand of this study draws on data gathered in the first phase of a larger study on international students' experiences (extending early form work by Zhang & Cetinich, 2022). The larger study follows a grounded theory approach, a systematic and flexible method of collecting and analysing qualitative data to construct theories that are "grounded" in the data themselves (Charmaz, 2006). Grounded theory approaches "are likely to offer insight, enhance understanding, and provide a meaningful guide to action" (Strauss & Corbin, 1998, p. 12) – all key aims of the initial qualitative phase, as well as the larger, ongoing investigation.

Sampling and data collection

The qualitative data were gathered in Terms 2 and 3 in 2021, the first year of the immersive block model's implementation. In Week 5, all international students enrolled in SCM units were emailed

an invitation to participate in semi-guided interviews. Due to the staggered implementation of the immersive block model, only students enrolled in business-related courses were eligible to participate in this initial phase of the research.

Eleven out of 47 invited students participated, with one withdrawing midway due to external factors. Participants included male and female students aged between 18 and 60 from South America, Northern Europe, South Asia, Southeast Asia, and East Asia. Due to COVID-19 restrictions, two students were studying offshore online from their home country, and some onshore students were required to switch between online and on campus. Participants included a mix of first-year and subsequent-year students. Interviewees were enrolled in the Bachelor of Business and Enterprise, Diploma of Business, Bachelor of Business, Bachelor of Business in Tourism and Hospitality Management, Bachelor of Accounting, and Study Abroad.

Interviews were scheduled between Week 5 and the term grade release date. A semi-guided interview protocol was established before the interviews commenced. Semi-guided interviews fit well with grounded theory methodologies, as they can facilitate insights into an interviewee's subjective perspective on topics of interest (Charmaz, 2006), while allowing time for the interviewer to follow up on emerging ideas and themes. The guide included a series of openended questions about experiences in the immersive block model; perceived benefits, challenges, and concerns; perceived study demands; and how students managed their SWLB. Interviews were conducted via Zoom by staff in the university's International Office and lasted for approximately 40 minutes. The Zoom recordings were transcribed. Students were assigned codes (S1–S11) to maintain anonymity.

Data analysis

A grounded theory approach of gathering rich data and simultaneously analysing the data through coding, memo writing, theoretical sampling, and saturation was followed (Charmaz, 2006). A small sample of transcripts from the first round of interviews was tested using a two-step process of initial and focused coding, and an initial coding sheet was developed. This was then tested on other interviews to enhance reliability. Refinements to coding and themes continued until agreement was established among the interviewing team. Building on prior work by Zhang and Cetinich (2022), the first and fourth authors of this paper undertook a final phase of analysis to further refine the themes into broader concepts reflecting key ideas raised by participants.

Results

Quantitative

Descriptive and inferential statistics are included in Tables 1–5. Compared to 2019, overall enrolments fell in 2021 and 2022 for both the control group and the immersive block model group, with sharp declines observed among onshore students from South Central Asia and China as shown in see Table 1. Meanwhile, the number of offshore students from China and the Pacific increased in 2021 compared to 2019, before falling again in 2022.

Table 1

International Student Enrolments by Region of Origin in a Baseline Year of Traditional Delivery (2019) and in Subsequent Years (2021 and 2022)

	20)19		2021 and 2022 (Control)		nd 2022 B)	Total		
Region	n	%	n	%	n	%	n	%	
			C	nshore					
SC Asia	3,850	65.8%	1,273	61.8%	1,150	57.5%	6,273	63.4%	
China	1,252	21.4%	358	17.4%	319	16.0%	1,929	19.5%	
SE Asia	319	5.5%	201	9.8%	171	8.6%	691	7.0%	
Latin America	43	0.7%	82	4.0%	182	9.1%	307	3.1%	
Other	386	6.6%	147	7.1%	178	8.9%	701	7.1%	
Total	5,850	100.0%	2,061	100.0%	2,000	100.0%	9,901	100.0%	
			C	Offshore					
China	792	46.8%	1,547	56.0%	666	74.9%	3,005	56.2%	
Pacific	893	52.7%	1,210	43.8%	223	25.1%	2,326	43.5%	
Other	9	0.5%	4	0.1%	0	0.0%	13	0.2%	
Total	1,694	100.0%	2,761	100.0%	889	100.0%	5,344	100.0%	

Note. IB = immersive block model; SC = South Central; SE = South East.

Onshore student outcomes

Tables 2 and 3 show results of the chi-square tests for the onshore samples. As courses in some disciplines did not transition to the immersive block model until 2023, international student enrolments in law and health were too small to generate meaningful findings in this study (n < 20). Few international enrolments were also observed in education. Results have therefore been omitted for these disciplines, leaving a focus on business and arts, and science and engineering cohorts.

Success rates in 2021 and 2022 increased to a statistically significant extent for all of these cohorts, both IB and control. However, increases and effect sizes for the IB groups exceeded those of the equivalent control groups across all cohorts. IB and control results were nonetheless comparable for science and engineering students.

Significant negative changes in unit and teaching satisfaction were observed for onshore science and engineering IB groups. Contrastingly, there was a significant increase in unit and teaching satisfaction for onshore business and arts students.

Table 2Descriptive and Inferential Statistics for Onshore International Students' Academic Success in a Baseline Year of Traditional Delivery (2019) and in Subsequent Years (2021 and 2022)

	2019		2021 a	nd 2022	Success			
		Success			rate change	2/4)		Cramér's
Cohort	n	rate (%)	n	rate (%)	(%)	$\chi^{2}(1)$	р	V
All onshore (IB)	5,779	61.1	2,000	78.6	17.5***	201.26	<.001	.16
All onshore (Control)	5,801	61.3	2,061	75.1	13.7***	126.13	<.001	.13
Business and arts (IB)	2,819	68.1	582	78.7	10.6***	25.54	<.001	.09
Business and arts (Control)	2,860	68.5	773	75.7	7.2***	15.09	<.001	.06
Science and engineering (IB)	2,419	52.5	1,041	74.5	22.0***	145.81	<.001	.21
Science and engineering (Control)	2,400	52.5	1,132	73.7	21.2***	143.42	<.001	.20

Note. IB = immersive block model. Data include onshore internal mode students only. Enrolments in law, education, and health were too small for meaningful analyses (n < 20) and results have therefore been omitted for these disciplines.

Table 3

Descriptive and Inferential Statistics for Onshore International Students' Unit and Teaching Satisfaction in a Baseline Year of Traditional Delivery (2019) and in Subsequent Years (2021 and 2022)

	20	2019		nd 2022				
Cohort	n	% agree	n	% agree	% agree change	χ²(1)	p	Cramér's <i>V</i>
-			Unit sat	isfaction				
All onshore (IB)	1,408	78.5	633	72.2	-6.3**	9.60	.002	07
All onshore (Control)	1,417	79.0	784	81.9	2.8	3.63	.057	.04
Business and arts (IB)	666	78.1	182	87.9	9.8**	8.70	.003	.10
Business and arts (Control)	682	78.3	266	85.0	6.7*	5.34	.021	.08
Science and engineering (IB)	603	77.7	330	63.6	-14.1***	21.25	<.001	15

^{***}p < .001.

Science and engineering (Control)	598	77.4	439	79.5	2.1	0.64	.423	.02
		Te	eaching sa	atisfaction				
All onshore (IB)	1,408	79.1	633	78.4	-0.7	0.13	.724	01
All onshore (Control)	1,417	79.0	784	83.2	4.1*	5.47	.019	.05
Business and arts (IB)	666	78.7	182	88.5	9.8**	8.81	.003	.10
Business and arts (Control)	682	78.9	266	86.1	7.2*	6.43	.011	.08
Science and engineering (IB)	605	77.4	330	71.5	− 5.8*	3.92	.048	06
Science and engineering (Control)	598	77.1	439	80.9	3.8	2.15	.142	.05

Note. IB = immersive block model. Data include onshore internal mode students only. Enrolments in law, education, and health were too small for meaningful analyses (n < 20) and results have therefore been omitted for these disciplines.

Offshore student outcomes

Tables 4 and 5 show results of the chi-square tests for the offshore samples. Samples in health, law, and education were again too small for meaningful findings. Offshore business and arts enrolments also numbered less than 20, leaving a focus on offshore science and engineering students.

Success rates in 2021 and 2022 increased to a statistically significant extent for all cohorts, both IB and control. The IB and control results were again comparable for science and engineering students

Both unit and teaching satisfaction decreased to a statistically significant degree for students in the "all offshore (IB)" group. No other significant results were observed for offshore student satisfaction.

Table 4

Descriptive and Inferential Statistics for Offshore International Students' Academic Success in a Baseline Year of Traditional Delivery (2019) and in Subsequent Years (2021 and 2022)

	2019		2021 a	nd 2022	Success			
Cohort	n	Success rate (%)	n	Success rate (%)	rate change (%)	χ²(1)	р	Cramér's <i>V</i>
All offshore (IB)	1,694	68.8	889	85.6	16.8***	86.55	<.001	.18
All offshore (Control)	1,694	68.8	2,761	81.4	12.5***	91.72	<.001	.14

^{*}p < .05. **p < .01. ***p < .001.

Science and engineering (IB)	552	65.6	839	87.6	22.0***	96.89	<.001	.26
Science and engineering (Control)	552	65.6	660	86.5	20.9***	74.35	<.001	.25

Note. IB = immersive block model. Data include offshore internal mode students only. Enrolments in business and arts, law, education, and health were too small for meaningful analyses (n < 20) and results have therefore been omitted for these disciplines.

Table 5

Descriptive and Inferential Statistics for Offshore International Students' Unit and Teaching Satisfaction in a Baseline Year of Traditional Delivery (2019) and in Subsequent Years (2021 and 2022)

	20	019	2021 a	ınd 2022				
Cohort	n	% agree	n	% agree	% agree change	χ²(1)	p	Cramér's <i>V</i>
			Unit sat	isfaction				
All offshore (IB)	243	87.7	174	77.0	-10.6**	8.22	.004	14
All offshore (Control)	243	87.7	684	85.2	-2.4	0.87	.352	03
Science and engineering (IB)	59	81.4	174	79.0	-2.4	0.15	.699	03
Science and engineering (Control)	59	81.4	168	78.6	-2.8	0.21	.650	03
		Te	aching s	satisfaction				
All offshore (IB)	243	85.6	174	77.0	-8.6*	5.07	.024	11
All offshore (Control)	243	85.6	684	86.0	0.4	0.02	.887	.00
Science and engineering (IB)	59	76.3	157	78.3	2.1	0.11	.744	.02
Science and engineering (Control)	59	76.3	168	79.2	2.9	0.22	0.642	0.03

Note. IB = immersive block model. Data include offshore internal mode students only. Enrolments in business and arts, law, education, and health were too small for meaningful analyses (n < 20) and results have therefore been omitted for these disciplines.

^{***}p < .001.

^{*}*p* < .05. ***p* < .01.

Qualitative

The qualitative analysis resulted in the identification of three themes related to learning in the immersive block model: keeping pace, disconnection, and maintaining a healthy SWLB.

Keeping pace

Keeping pace encapsulates sentiments about time and workload. Interviewees expressed that the 6-week term felt "busy", and "quick", with one student commenting, "the thing is, you really have to do it fast ... everything you have to do like now, now, now" (S2).

Students reported heightened motivation and better time management as two of the primary advantages associated with this quicker pace. The shorter term duration, coupled with knowing there would be a break after 6 weeks, seemingly encouraged students to "learn more ... and understand more" (S9), as S1 expressed:

... like thing that motivate me ... now we have like 6 weeks and you think, OK, now I'm gonna study really hard for 6 weeks but then I will have 2 weeks break to recover all the energy and come back, like focused. (S1)

Students also reported being compelled to focus, work hard, and manage their time: "I enjoyed that it was very fast paced, like it kind of forced me to like work double time and actually manage my time better" (S11).

Several challenges were also identified, such as the shorter (typically 2-week) time frame between assessment tasks: "there's no breaks between assignments. So, after doing the first one, I have to get on to the next one, or I'll run out of time" (S4). Nonetheless, most interviewees acknowledged that this was "manageable", as they only needed to maintain this pace for 6 weeks and felt reassured by being able to rejuvenate after the term.

Language difficulties were nominated by several students as an additional challenge, with students required to engage with self-access online modules over the 6-week timeline: "Like each unit had ... six or five modules and I had to, you know, read and understand it before the class. But it was very difficult English for me, so it takes a lot of time" (S8). Interviewees emphasised that the presence of supportive teachers who encouraged questions and dialogue was pivotal in relieving these stresses:

If I don't feel open and free to ask these questions and to receive this feedback, I would be totally lost ... [I like that] every time I ask in the class, the tutor say, "No, that's such a good question, thanks for asking". So I don't feel like I say stupid question ... And it's important this. (S10)

Teachers who were perceived as kind, respectful, and supportive helped many of the international students in this study to understand expectations, grow in confidence, and "keep pace" in the immersive block model.

Disconnection

Some forms of *disconnection* were also identified. Students reflected on a sense of disconnect with the model itself, whereby they were initially not sure what to expect. This was partially due to cultural differences, as one student from Brazil explained: "I didn't know how the things would work and I was expecting something really different. I dunno, I was watching movies and I thought

maybe it'd be like the United States in like college" (S1). Finding out that their units would be completed in 6-week terms caused some anxiety in the early weeks, as the following student expressed: "When I heard that one is going to only 6 weeks ... my God ... I am so worried, how can I manage? Because even I'm part-time worker in here, because I want to manage my living cost and everything" (S7). Several participants reflected that their transition would have been smoother if they had been given more information about what to expect before commencing:

Like someone comes to say ... "Okay, when you start your unit ... [write] everything like all the assessments that you need to do and put in your wall because this will be really helpful so you don't get lost because it's just 6 weeks". I think if someone told me [this] before your unit started, it would be really helpful. (S10)

Despite their early fears or uncertainties, most students stated that their concerns subsided once they became familiar with the model – often with the assistance of supportive teachers, as described earlier. One student commented, "when I was starting the university, I really don't understand how it works ... But after when you get it, it's easy" (S10).

Students also tended to describe their peer-to-peer relationships in terms of disconnection. Some interviewees felt that, although social connections were important to them as international students, they had limited opportunities to develop relationships with classmates. Acknowledging the impact of COVID-19, one student recalled that there were fewer social opportunities than expected:

I don't have friends, I don't even have my family here, so I was expecting to create a new group really fast ... [but] the first day the professor didn't give the opportunity to like, hey, go and talk around, or say your name ... Of course there's that COVID problem and my culture is different from Australian and so it's difficult to fit into a group, but, yeah, that kind of support I think would be good to connect. (S1)

Another participant stated, "If you have 12 weeks, you might know someone in the class ... it means they will know your personnel and how to talk to each other. But this one is 6 weeks ... I think it's hard to connect" (S2). A few students found communication with peers about groupwork tasks particularly challenging, citing a lack of timely communication from other group members as something that was "very tough" (S8) to resolve in a shorter time frame.

Maintaining healthy SWLB

Despite the challenges mentioned earlier, participants indicated they were able to *maintain a healthy SWLB* in the immersive block model. Students felt the study workload was manageable, reporting that they spent 5–15 hours per week per unit outside of classes working through unit modules and completing assessments. All but one student (S8) found time for leisure activities alongside their study and work commitments. This appeared to be helped by not needing to focus on family commitments while living onshore in Australia.

Some students who had previously studied in trimesters reported that "there's much more free time" (S4) in the immersive block model. Others found that, contrary to their initial expectations, the study workload was equivalent: "I thought that maybe this 6-week program would be so compressed that I wouldn't have any, like, free time to do other things. No, actually, it felt pretty much the same" (S11).

Five of the 10 interviewees were working part-time and believed it was possible to manage work, study, and their personal lives, provided they applied good time management strategies. Indicative comments included, "If you are doing 6-week [classes] with the good quality ... we can manage the balance, balance the life as well" (S7). Another student who was working part-time noted, "I feel like time is not a problem for me. I'm not always in a rush because I have free time and then working, I don't have to go for long shifts" (S1).

It is of note that during the time of the study, previous restrictions of working 40 hours per fortnight were lifted on international students in Australia. However, some interviewees felt that even though it was permitted, working this much would negatively affect students' SWLB, and specifically their ability to enjoy free time around work and study commitments:

You cannot work fully 20 hour [per week] ... you have to make sure, like, okay, you might work 1 or 2 days a week, but realise that you have to find a research and you have to think carefully because [the 6-week model] is fast ... Week 2 you make assessment already. (S2)

Other students noted that there were pressure points, particularly around Weeks 5 and 6, where they needed to devote most of their time to study, impinging upon their sense of SWLB. However, students again referred to the importance of time management, which made the temporary increase in workload feel manageable: "I feel it gets, definitely gets harder on the fifth to sixth week. But it's, it's nothing that's not manageable if you plan your time well" (S9).

Finally, students reported that their overall sense of healthy SWLB in the immersive block model, albeit with some challenges, led to heightened confidence: "I think I feel much more confident, and much more, like, I learn a lot more things if I do two at a time for 6 weeks" (S4); and increases in academic performance: "I was really happy 'cause I didn't expect, um, I went from having, almost struggling to get a pass last year, and now I'm scoring credits and almost distinctions". (S3). Overall, students reported striking a better SWLB through the immersive block model.

Discussion

In this exploratory mixed methods study, we have examined the academic success, satisfaction, and experiences of international students studying in a 6-week immersive block model (the SCM) at a regional public Australian university. Overall, for onshore and offshore international students, the SCM appears to have made a significant positive difference to their academic success. This finding is congruent with prior studies that have explored the impact of immersive block models on the academic performance of diverse undergraduate cohorts (Goode et al., 2023a; Loton et al., 2022; Wilson et al., 2023) and on Australian students from non-traditional or equity backgrounds (Goode et al., 2022b; Jackson et al., 2022; Roche et al., 2023; Samarawickrema & Cleary, 2021). Together, this body of work indicates that immersive block models can be an effective way of enhancing academic outcomes for a variety of students, both domestic and international.

Nonetheless, it is evident that success rates in control units that stayed in the traditional model across all years of the study also increased, albeit to a lesser extent. We hypothesise a number of factors that may underpin these observations. First, during the academic years of 2021 and 2022, COVID-19 restrictions continued to exert substantial impacts on the mobility and campus

experiences of international students. Although there were deleterious effects for students' employment, housing (Freeman et al., 2022; Hastings et al., 2023), and mental health (Dingle et al., 2022; Zhao et al., 2022), for some, lockdown restrictions meant less time commuting, socialising, or working, thus fewer distractions while studying (Hews et al., 2022). This may have resulted in an uplift in academic results for students, regardless of the delivery model.

Measures undertaken at the university may have also lifted success rates for students in both models. Special consideration policy was amended during 2021–2022 to allow for automatic assessment extensions of up to 5 days in cases of COVID-19. University policies for teaching and learning were also revised, driving an institution-wide shift towards active learning pedagogy, team-based curriculum development, authentic assessment, and greater consistency across coursework units (see Roche et al., in press). It is possible that these changes, along with an associated uplift in pedagogical practice across the university, may have assisted students in both delivery models.

Third, the changing demographics of the international student population at the institution may also be relevant. In the years immediately following the COVID-19 outbreak, when moving or studying internationally became more problematic, the university's international student enrolments may have comprised higher proportions of students who were better equipped to adjust to and succeed at an Australian university. It is feasible that a combination of these factors affected success rates in both the SCM and control groups, with the more focused immersive block model facilitating a greater lift in academic success overall.

There was also a clear contrast in the data between business and arts, and science and engineering students. For the former, success and satisfaction rose significantly in the SCM, clearly exceeding the control group. For the latter, success rate changes were comparable in the two models and satisfaction fell among SCM students – particularly those onshore. This latter finding echoes the national data, where the overall satisfaction of international students across Australian universities decreased by 8% in 2021 (Social Research Centre, 2021).

Contributing factors for these results could include disciplinary conventions, student expectations, workload, and disruptions caused by COVID-19. A study of over 2,000 STEM classes delivered in North American universities concluded that didactic lecturing remained the most prevalent instructional approach in STEM disciplines (Stains et al., 2018), where students are positioned as "passive, obedient and patient" (Ulriksen, 2017, p. 437). Research suggests that dissatisfaction can arise when international students' expectations and experiences do not align in educational settings (Arambewela & Hall, 2008; Roche et al., 2015; Sinha et al., 2018). When academics require more effort from their students, student evaluations can also be lower (Braga et al., 2014; Carrell & West, 2010). It is possible that the more active and less didactic approach to learning in the SCM represented a more acute shift in teaching and learning practice in science and engineering than it did for other disciplines, such as business. This shift may be one that both teachers and students need more time to adjust to – in terms of expectations and practices – to support heightened student outcomes.

It is also evident that the satisfaction of onshore science and engineering students was affected more negatively than for offshore students. Given the importance of SWLB for the overall experience of international students studying abroad (Ong & Ramia, 2009), some students may

have perceived the workload in their units as impinging upon their ability to maintain a desired level of SWLB in Australia – though this was not evident among the interviewees in this study. Research in EMI contexts has also shown that academic staff's ability to develop and deliver digital learning experiences impacts students' learning experiences (Ahmed & Roche, 2022). With this in mind, ongoing professional development of staff who are new to this approach to teaching and learning using media-rich, digital learning and constructive alignment may be needed to address some of these issues, if and where they exist.

Dos Santos (2021) further notes that on-campus and industry-based experiences are particularly important in engineering education and that a loss of these opportunities during COVID-affected years can negatively impact the experiences of international students. This may be the case for some students in this study, and particularly those in the immersive block model where there was less time available to design or arrange alternative practical or on-campus experiences.

In contrast, the implementation of the SCM in business and arts is an example of an immersive block model working well for international students, both onshore and offshore. Adding to the quantitative data, interviewees reported that the more focused experience of completing two units over 6 weeks rather than four over 13 weeks precipitated several important benefits, including enhanced motivation, better time management, and being able to maintain a healthy SWLB. This in turn heightened their confidence and academic performance – findings that align with prior studies of domestic cohorts in immersive block models (Buck & Tyrrell, 2022; Goode et al., 2022a, 2022b; Lee & Horsfall, 2010).

Although this research is exploratory in scope, the finding that students could maintain a healthy SWLB in the immersive block model is notable. It suggests that the risks of stress, exhaustion, and burnout identified in prior immersive block model literature (Daniel, 2000; Male et al., 2016) can be mitigated through the application of good practice unit design principles, as discussed here. There is some existing support in the literature for this, but almost exclusively in relation to domestic cohorts. For example, Nieuwoudt (2023) found that psychological distress was lower for domestic pathways students in an immersive block model compared to a traditional model. Another study of domestic pathways students also noted that a 6-week immersive block model enabled a manageable study load, provided that assessments were well scaffolded (Goode et al., 2022b).

The international students in this research further highlighted the importance of supportive and respectful teachers who encouraged questions. Once again, this echoes findings in relation to domestic students, who report valuing respectful, safe, and dialogic communities of inquiry in immersive block models (Goode et al., 2022a, 2022b). However, in this study, such teaching approaches helped international students to "keep pace" with study demands despite cultural and language differences, and thereby contributed in important ways to students' confidence, SWLB, and academic achievement. International students tend to have heightened needs for support from universities in comparison to their domestic counterparts, and providing this sense of support can be critical to SWLB and the associated benefits of belongingness, wellbeing, and achievement (O'Mahony & Jeske, 2019).

Assessment and workload emerged as key challenges in this study, reflecting the extant immersive block literature (e.g., Jackson et al., 2022; Kuiper et al., 2015; Male et al., 2016;

Samarawickrema et al., 2022; Scott, 2003). The business students interviewed for this study indicated that the workload was ultimately manageable, but the recurrence of assessment as a persistent area of concern suggests that issues with assessment timing, volume, or length could be salient to the lower satisfaction in science and engineering.

Interviewees in this study also identified multiple layers of disconnect in the early stages of their studies in Australia, including feeling anxious about what the SCM would be like. A recent guide to designing learning for intensive modes of study suggests that it is important to "prepare students to learn" in these non-traditional forms of study (Samarawickrema et al., 2022, p. 10). The present research underscores the importance of this for international students specifically, given the cultures of education they are more experienced with, and are likely to expect (Sinha et al., 2018).

Interviewees also emphasised challenges with forming social connections in a shorter delivery model. Social support and integration are recognised as highly important for the adjustment, wellbeing, and success of international cohorts (Andrade, 2006; Arthur, 2017; Pappa et al., 2020), as is a greater sense of belonging to the university (Beatty et al., 2020). This study further highlights the value that international students place on this aspect of their experience, while underscoring the difficulties they can face in an immersive block model when social experiences are not integrated into the curriculum from the very beginning.

Implications for Practice

A number of implications for practice can be derived from this research. It is evident that immersive block models founded in a focused, active, and guided pedagogy can be an effective way of significantly improving academic achievement among international student cohorts in Australian HE. Various measures appear important for realising this potential, however.

International students may benefit from the development of pre-arrival and orientation experiences designed to better align pre-existing cultural expectations and the realities of an immersive block model. Pre-arrival and pre-commencement sessions and resources could be designed to socialise core ideas about the pace, structure, and expectations of an immersive block model, and to facilitate opportunities for forming peer-to-peer networks before a student arrives in Australia or commences in an EMI context. This could be followed by a pre-term orientation program that explains typical assessment schedules and "pressure points", strategies for managing time effectively and building social networks, and the importance of a timely break for rejuvenation at the end of a term. Testimonials from former and current students may assist with communicating these important messages.

During a term, academics and student support services can take additional actions to strengthen students' social connections and belonging. Incorporating "icebreaker" activities in the first week of classes, however brief, could help students make initial connections with classmates and form a foundation for longer-term communication and relationships. Facilitating the formation of study groups and offering regular social events could then help students to maintain these connections and feel part of the university community.

This study also emphasises the importance of teachers enacting a supportive and respectful stance towards international students. Teachers who encouraged dialogue, responded kindly,

and were willing to answer questions outside of class time were highly valued by students and appeared to make a notable difference to their persistence and success, as well as their sense of belonging.

Finally, this research highlights the importance of assessment design in immersive block models. Student sentiments suggest that curriculum design teams should, at both whole-of-course and unit levels, aim to design assessment schemes that are scaffolded and manageable, and which facilitate early and constructive feedback. Together, these strategies may lessen students' anxiety, heighten their satisfaction with their learning experiences, and better support their academic success.

Limitations and Future Research

Although this exploratory research provides a basis for broadly understanding international students' experiences in an immersive block model, further insight into specific cohorts is needed to expand understandings and to reach saturation in line with grounded theory methodologies (Charmaz, 2006). In particular, the qualitative strand of this research did not include students from science and engineering, health, education, or law. Future research could expand the study sample to these other disciplines – particularly to the less satisfied groups in science and engineering – and to students who failed or withdrew from units in the SCM. Further studies or a longer data time series may indicate whether contrasting results represent actual distinctions between the fit of immersive blocks for those disciplines or, as suggested by the experience of immersive block learning at other institutions, transition issues in those specific disciplines.

A future focus on students studying offshore may also be warranted, given that the data collected for this study do not enable much insight into offshore student experiences, nor the particular needs and challenges of specific student cohorts from regions such as China and the Pacific. Future studies could also seek to control for potential biases affecting the quantitative satisfaction data, such as perceptions and prejudices that are unrelated to teaching effectiveness (Gatwiri et al., 2021; Lakeman et al., 2022).

International students' SWLB is another area of research that could be explored in more depth beyond the initial exploratory findings presented here, especially among students who are working 20 hours per week or more while studying full-time in an immersive block model. This may be especially salient given previous research emphasising that a balance between work and study is critical for a sense of SWLB (Vokić et al., 2021), and that from July 2023, student visa holders in Australia are permitted to work up to 48 hours per fortnight (Department of Home Affairs, 2023).

Finally, this study was conducted at a particularly complex time in international education, when many factors related to COVID-19 may have affected the data. Although some speculations were offered in the discussion, it is ultimately not possible to disentangle the many and varied influences on the data, including border restrictions, campus closures, forced online learning, and the integration of active learning pedagogy and immersive block scheduling. Further research, particularly involving qualitative data that may enable richer insights into some of these contributing factors, is required to build upon the findings presented here.

Conclusions

This exploratory mixed methods study has revealed that both onshore international students and international students in EMI contexts were significantly more academically successful in a 6-week immersive block model than a traditional academic model. However, impacts varied across disciplines and may not translate into higher satisfaction, as measured through end-of-unit feedback surveys.

Interview data provide insights into some of the perceived benefits and challenges that may underpin these results. Students in business courses reported that the faster completion of individual units and the more focused study experience of the immersive block model heightened their motivation and improved their time management skills, which in turn resulted in greater confidence and better academic results. Participants also reported being able to maintain a healthy SWLB in the immersive block model, balancing work, leisure, and study. Challenges included not knowing what to expect in the shorter model, forming social connections with classmates, and the fast turnover between assessments. Based on these findings, we speculate that workload, assessment design, and the potential need for both staff and students to adjust to the teaching and learning approach of the SCM, are potential reasons for the less positive outcomes observed in science and engineering.

A range of practice implications can be derived from this study. Immersive blocks present here as an effective way of bolstering the academic success of international students in HE, but it is important for institutions to prepare international students well for the pace and time management demands of studying in an immersive block model. Initiatives to establish and sustain social connections between international students and their peers should also take priority, along with supportive and respectful teaching approaches, and careful attention to the timing, volume, and scaffolding of assessment tasks. At a critical time in international education, these measures have much potential for further improving the success, satisfaction, and overall study experiences of international students in HE.

Conflict of Interest

The authors disclose that they have no actual or perceived conflicts of interest. The authors disclose that they have not received any funding for this manuscript beyond resourcing for academic time at their respective university. The authors have produced this manuscript without artificial intelligence support.

Author Contributions

Project Administration (EG), Conceptualisation (TR, JZ, EG), Data Curation (JM, JZ, EG), Formal Analysis (JM, JZ, EG), Investigation (JM, JZ), Methodology (JM, JZ, EG), Writing (EG, JZ, TR), Supervision (EG), Review and Editing (EW, TR, JZ, JM, EG).

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