IMPACT OF
cohort mix on student experience and educational outcomes

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The student body in higher education institutions around the world is growing and becoming more diverse. At the same time, universities face increasing pressure to provide a high-quality learning experience and student services to remain competitive in the global higher education market.

Global socio-economic and political factors, along with decreasing government funding and increasing costs and pricing, have created heightened research focus on student experiences, outcomes and characteristics. This research is viewed as a strategic response to explore ways to provide enhanced support to the student population to maintain productivity and quality assurance in a volatile, global higher education market.

In addition to the growth in student numbers, both international and domestic student cohorts have undergone profound profile changes. The domestic student cohort comprises an increasing number of those from regional areas, lower socio-economic and diverse ethnic minority backgrounds. With the international student numbers continuously indicating an upward trend, the COVID-19 disruption notwithstanding, there is a rising number of international students from diverse geographical and cultural backgrounds.

These changes have added a new dimension to the complexity of the higher education experiences, making the impact of cohort mix a feature that needs to be taken into consideration in our explorations into higher education student characteristics, experiences and outcomes. Taking cohort mix as a point of departure, this research digest aims to explore how the diverse character of the student population affects the experience of the individual.

In this research digest we use the term 'cohort' to refer to a group of students who study together in the same course, and we use the term 'cohort mix' to describe the socio-demographic characteristics of those students at the course level. Here we are particularly interested in how the mix of domestic and international students

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in a cohort impacts the experience of domestic and international students. Of course, many forms of cohort diversity can impact student experience and outcomes in numerous ways. For example, studying in an overwhelmingly male or female cohort will impact male and female students differently. Here when we refer to cohort mix, we are primarily interested in the impact of the mix of international and domestic students, but much of the analysis presented here is also relevant to future study of other forms of diversity within student cohorts.

Looking at the research into student experience in higher education settings, this research digest reviews the ways in which student characteristics, experiences and outcomes have been studied in higher education research and explores how cohort mix can be incorporated into strengthening and enhancing the current understanding of students' overall higher education experiences. The digest reviews the research literature on student experiences, characteristics and outcomes and highlights overall research trends and directions for future research. A central part of the review focuses on previous studies on student experience, elucidating insights into key aspects and research methods used to study student experience. In its analysis of the impact of cohort mix, the digest points towards new approaches that can be used to incorporate cohort mix into the analysis of higher education experience.

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Student experience

Higher education researchers and scholars have long maintained that the student experience is a decisive variable in understanding the nature and success of students' higher education journey. The construct of student experience has been viewed and studied from a number of perspectives focusing on teaching and learning, student success, marketisation, and quality assurance.

Over the years, research has yielded valuable insights into understanding attributes and influencing factors of the student experience and measuring student experience within the student life-cycle, starting from the decision making stage in selecting a university through university admission and academic phases to graduation and post-graduation experience (Arambewela & Maringe, 2012; Tight, 2012). Presenting a comprehensive analysis of recent research in higher education, Tight (2012) classifies student experience research into six subthemes, which are: access to higher education, the on-course experience, successes and non-completion, the postgraduate experience, experiences of different student groups, and transition from higher education to work (Tight, 2012, p. 83).

The experiences of international students have become an important focus in recent years, especially with the revenue and the diversity international students bring to the higher education sector. As highly invested stakeholders in the international education landscape, international students have become a vital part of the student body in Australia as well as in other parts of the world. Widely researched areas of international student experience include learning and academic success of international students (Barron et al., 2010; Burns, 1991; Ghosh & Wang, 2003; Hellstén & Prescott, 2004; Lebcir et al., 2008; McNamara & Harris, 1997; Ren & Hagedorn, 2012; Samuelowicz, 1987; Weerakkody & Jerez, 2018), campus experiences and integration, social, cultural

and psychological adaptation (Altbach & Knight, 2007; Barker et al., 1991; Bochner & Wicks, 1972; Mori, 2000), student finances and accommodation (Barron et al., 2010; Bexley et al., 2013; Hellstén & Prescott, 2004) and language-related difficulties in foreign classrooms environments (Barron et al., 2010; Zhang & Zhou, 2010).

Taken together, two distinct lenses have been applied to study student experiences over the years – one examining the subjective experience of students and the other examining how institutions' practices affect the student experience. The former approach typically focuses on how various aspects of students' subjective experience affects academic outcomes and performance, learning experiences and academic relationships (Campbell & Li, 2008; Hellstén & Prescott, 2004; Kim, 2007; Ning & Downing, 2010; Tight, 2012). The latter approach, focusing on institutions, typically considers the impact that various services have on the student experience, paying particular attention to the importance of quality and adequacy of resources, financial aid, and support services (Arambewela et al., 2006; Arambewela & Maringe, 2012; Baird &

Gordon, 2009; Clemes et al., 2008; Pasura, 2018; Paswan & Ganesh, 2009).

Student experience research within the Australian context is marked by large-scale institutional and national level surveys that have been designed to empirically study varying properties of the student experience, collecting data on features such as student perceptions about the first-year experience, course work and graduate-level research, and post-graduation pathways (Table 01).

While the studies discussed above, without a doubt, broaden our current understanding of the general student experience, it is equally important to examine the extent to which current student experience research has been able to capture the impact and influence of the culturally diverse character of student cohorts within university campuses. Most of the current studies fail to capture how students' higher education experiences are shaped by the presence of students that share different cultural values and who have had different previous educational experiences.

Table 1: Surveys on the student experience in Australia

ASPECT OF THE STUDENT EXPERIENCE	SURVEY/STUDY	RESEARCHERS
Student experience in first year	The First-Year Experience Questionnaire (FYEQ)	(McInnis, James & McNaught, 1995; McInnis, James & Hartley, 2000; Krause, Hartley, James & McInnis, 2005; James, Krause & Jennings, 2010)
Student engagement	The Australasian Survey of Student Engagement (AUSSE)	(Coates, 2008; Coates, 2010)
Student finances	The Australian University Student Finances Survey	(Bexly et al., 2013)
Research experience (Graduate level)	Postgraduate Research Experience Questionnaire (PREQ)	(Edwards, Coates, Guthrie, Radloff & Tilbrook, 2010)
Student engagement (Graduate level)	The Post-graduate Survey of Student Engagement (POSSE)	(Daniel, 2011)
Student experience (Graduate level)	The Course Experience Questionnaire (CEQ)	(Scott, 2008)
Student outcomes (Graduate level)	The Graduate Destinations Survey (GDS)	(GCA, 2010)
Student experience and outcomes (Alumni)	Graduate Pathways Survey (GPS)	(Coates & Edwards, 2009)

Although very little is found in the literature on the impact of cohort mix on student experience, it is important to note that there is an emerging body of literature that is starting to recognise the importance of studying the impact of cohort mix in shaping the overall higher education experience (Ammigan & Jones, 2018; Ammigan & Langton, 2018).

A necessary first step in understanding the impact of cohort mix on the student experience starts with revisiting our understanding of student characteristics as student characteristics have been a focal variable in grasping variations in both students' experiences and retention. Early studies on student characteristics tend to view failure or success in higher education primarily to be a responsibility of the student, as early research was posited on the idea that student retention was linked to student characteristics only. However, as Tinto states, student retention has come a long way since early studies, and both student characteristics and external sociological and economic variables have now been recognised as impacting retention in higher education (Tinto, 2006). Such variables of student demographic characteristics are gender, race, ethnicity, and marital status and non-demographic characteristics, including pre-college grade point average, financial circumstances, socioeconomic status and educational background of parents (Cochran et al., 2014; Ishitani & DesJardins, 2002).

Early models, as well as recent research, also identify that along with pre-college entry characteristics, students' academic ability and educational goals and aspirations, social and academic integration, parental influence, and peer support are also influential variables in student success and retention (Astin, 1984; Ishitani & DesJardins, 2002; Nora, 2001; Pascarella & Chapman, 1983; Tinto, 1975, 1998, 1999). In the same vein, studies on international student success recognise student characteristics such as academic ability, language competence, and academic goals and attitudes towards learning as additional characteristics that influence international student success (Baumann & Hamin, 2011; Lee, 2008; Li et al., 2010; Ren & Hagedorn, 2012; Stoynoff, 1997).

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Interestingly, despite the increasing diversity in the current higher education environment (Arkoudis & Baik, 2014; Glass & Westmont, 2014), research that delves into exploring unique student characteristics in mixed-cohort classrooms is scarce. Any education environment is a microcosm of society, and as such, the social values and cultural heritage of the participants in the learning environment are never too far from the education environment and always remain an integral part of any educational experience. In a mixed-cohort learning environment, diverse student characteristics, accompanied by the culturally and socially varied influences they bring to the classroom all act in tandem in shaping students' higher education experience. International students and domestic students are two heterogeneous student groups, diverse in many aspects, who are sharing the same learning environment. As such, a useful lens that can be adopted to take a second look at the student characteristics is by way of understanding the ways differences in student characteristics impact the teaching–learning experience.
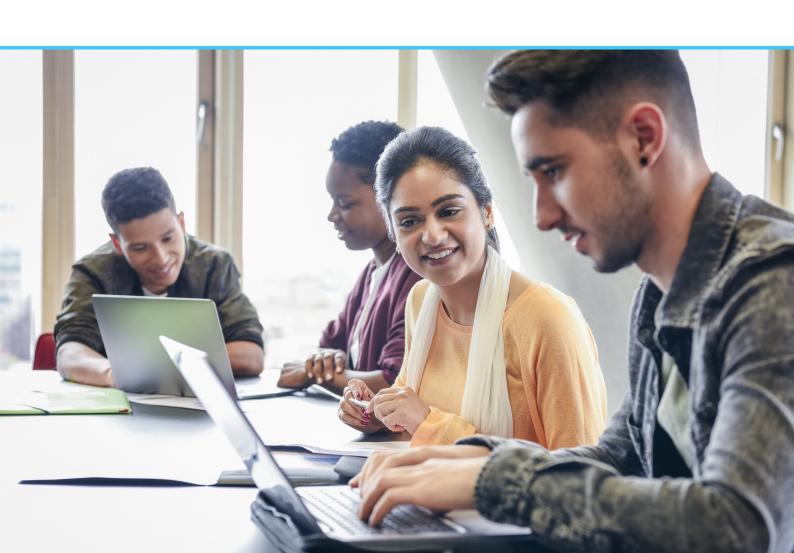
Although in current research international students have been studied as one homogenous group, it is essential to recognise the variances in student characteristics within different international student groups. In popular international student destinations like Australia, the international student cohort is highly diverse with students coming from Asia, South Asia, South America and the Middle East, influenced by varying cultural and religious backgrounds such as Confucianism, Buddhism, Hinduism, and Islam. Similarly,

among domestic students, there are distinctions in student characteristics between students coming from regional areas, from migrant family upbringings and different ethnic and cultural backgrounds. Differences in students' sociocultural upbringing are embedded within the manner students perceive education, and the attitudes, motivations and expectations they bring to the classroom.

To elaborate, the expectations of university-level students, irrespective of the cohort they belong to, are highly influenced by external influencers such as sociocultural upbringing. International students whose previous learning experiences emanate from teacher-centred classrooms may find the student-centred classrooms settings in Western countries uncomfortably informal. In the same way, domestic students may find international students' lack of participation in classroom discussion as having a negative impact on their own learning experience. Such differences within and among student cohorts, therefore, need to be taken into account in order to get a holistic understanding of any aspect of the higher education experience.

From a research perspective, further explorations need to be made into understanding how variations in student characteristics correspond to different student expectations and explore methods to facilitate educational experiences that correspond to students' expectations. As a next step, there is space for new research to divert its focus towards understanding ways to manage different educational experiences in line with the variations of student expectations.

Similar to the ways student expectations change depending on student characteristics, there are other features such as motivations and attitudes that change depending on student characteristics. These are vital facets that impact the overall higher education experience and outcomes, and our current research trends must be adjusted to explore how students' internal characteristics vary between student cohorts and in what forms the said changes impact the overall student experience.

Student engagement

Student engagement comprises an essential aspect of the student experience, having a profound impact on students' higher education endeavour.

Situated within the broad gamut of the student experience, engagement research explores the varying aspects of student engagement, which include the importance of student engagement in achieving successful academic outcomes; student retention; satisfaction and course completion; and institutional strategies implemented to enhance student experience (Coates, 2008b; K. Krause & Coates, 2008; Kuh, 2003; Zhao et al., 2005).

Previous research discusses, at length, styles and typologies of student engagement, such as social and academic engagement (Coates, 2007), and proposes varying frameworks to analyse and assess student engagement within higher education (Coates, 2008a; K. Krause & Coates, 2008; NSSE, 2005). Such frameworks stipulate a structural means for exploring student engagement and experience while also setting the foundation for eliciting comprehensive interpretations about student engagement. In a study on student engagement, Coates (2007) identifies nine variables as pivotal in understating and examining student engagement of campus-based early year students, which are: constructive teaching, supportive learning environments, teacher approachability, student and staff interaction, academic challenge, active learning, collaborative work, beyond-class collaboration, and complementary activities (Coates, 2007).

Studies on student engagement research are characterised by large-scale state and national-level surveys designed to yield insights into student experience and development, particularly in Australia, UK and North America.

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student experience and development, particularly in Australia, UK and North America. There are two noteworthy large-scale studies dedicated to understanding student engagement – the National Survey of Student Engagement (NSSE) in the USA and the Australasian Survey of Student Engagement (AUSSE). The NSSE is based on a robust framework of student engagement with particular relevance to higher education policy and practices in the United States. Utilising the NSSE framework, as well as previous scholarly work as its foundation, the AUSEE survey explored student engagement within six engagement scales; academic challenge, active learning, student-staff interactions, enriching educational experiences, supportive learning environment, and work-integrated learning (Coates, 2010b).

These previous studies have found that patterns of engagement and the attitude towards engagement vary vastly between domestic and international student cohorts, although the impact of cohort mix on student engagement has received little to no attention in extant research. Whether it is related to the learning experience, learning environment or extra-curricular engagement, students' sociocultural orientation and individual circumstances play an important role in determining the extent to which students are engaged within the higher education environment. Therefore, building on identifying varying aspects of student engagement, and going beyond common generalisations and categorisations, student engagement needs to be studied with different student cohorts. In particular, engagement concerning student-staff interaction, which has been identified as an important aspect of student engagement, can have two different meanings to domestic and international student groups. For example, numerous studies have recognised that the education systems in Confucian and South Asian cultures have been built on and operate based on respect for teachers, and the best practices of teaching and learning revolve around maintaining a respectable distance from the teacher (Marginson, 2011; R. A. Smith & Khawaja, 2011).

For the majority of Asian international students, successful student-staff interaction could mean maintaining a certain distance with the lecturers in classroom discussions and overall interaction

within the learning environment, as their previous experience and cultural influencers dictate it as a form of displaying respect towards teachers. Domestic students, on the other hand, may feel engaged in discussion and interaction with the staff as a successful and expected outcome of their higher education experience. Therefore, when exploring student engagement in higher education settings, there is ample space for future research to explore the different meanings engagement may have for different student cohorts. Similarly, at the level of practice, when designing student engagement activities such variances need to be taken into account to facilitate engagement activities that are meaningful to diverse student cohorts. In essence, at the heart of future research, there needs to be a requisite to go beyond mere recognition of diversity and focus on different ways the diversity can manifest itself within varying aspects of the higher education experience.

Students' sociocultural orientation and individual circumstances play an important role in determining the extent to which students are engaged within the higher education environment.

In a similar vein, when it comes to student engagement beyond the classroom, the level of importance paid to beyond-class collaboration and engagement can vary significantly between domestic and international student cohorts. The amount of time and effort dedicated to such extra-curricular activities is dependent on students' circumstances that may facilitate or inhibit their participation. For instance, the time available for international and domestic students to participate in non-academic engagement activities within the university is subjective to students' personal obligations such as commitments to work and family. International students are expected to study full-time as part of their visa conditions and may find the time outside regular classroom hours as a window to engage in part-time work. For some international students, such part-time work may

be a principal source of income essential to pay their tuition fees. In such contexts, the level of importance international students place on extra-curricular activities can be low compared to the importance they place on meeting their financial needs. Correspondingly, within domestic student cohorts, the student profile has undergone many changes with more students from older age groups and ethnically identified subgroups entering the higher education classroom.

Overall, although it is evident that research that delves into understanding the influence of diversity within student groups on student engagement is of critical importance, the impact of student mix has not been a focus in extant student engagement research. Further explorations into the effects of cohort mix on student engagement can help derive insights that can then be used to better adjust the current mechanisms in place to improve student engagement. Based on the new insights, a second wave of research can be designed to explore best practices to facilitate enhanced student engagement within the university environment.

First-year student experience

Research into the first-year experience in higher education institutions gives yet another lens to explore student experience.

Extant research on the first-year student experience identifies themes such as the seminal role played by the first-year experience in student retention, performance and academic success (K. Krause & Coates, 2008; Long et al., 2006; Nelson & Clarke, 2014; Tinto, 1999).

The experience of commencing students is pertinent to the overall success of the higher education experience because as the preliminary stage, what students experience in the first year helps set the foundation for their overall higher education experience. As a result of the expansion and diversification of the higher education market, particularly with the increasing number of international students in the undergraduate level, in Australia, several large-scale studies have been commissioned to understand the varying aspects of the first-year experience (James et al., 2010; K.-L. Krause et al., 2005; McInnis et al., 1995). The first-year experience studies were conducted at five-yearly intervals since 1994, and the fifth and the most recent study of the first-year experience was conducted in 2014 and takes special significance as it was the first student experience study to survey the post-Bradley review student cohort. The findings of the study indicate a generally very positive outlook in first-year students and highlight that most students had a clearer sense of purpose and identity, and that they were satisfied with their university experience.

The findings also reveal that compared to the students surveyed in the past four surveys, student cohort in the 2014 survey shows less classroom and social engagement with the university community (Baik et al., 2015).

The nature of most institutional and national level surveys is such that they are designed to produce generalisable insights that can be used across institutions. In doing so, such studies have become of limited use in generating a deeper understanding of the differences in student experiences between domestic and international student cohorts. However, although the analysis and insights provided by extant large-scale research are modest at best in understanding the impact of cohort mix, the availability of data on different student cohorts is an indication of the possibility of using existing data to conduct more focused analyses to yield specific insights into the first-year experience of different student cohorts.

Evidently, there is a notable field of research yet to be surveyed related to the mixed-cohort first-year experience that has direct links to both international student recruitment and strategy to increase domestic student enrolment. As mentioned above, given the importance first-year experience has in deciding the direction of the remainder of the higher education experience as well as post-graduation outcomes, a thorough understanding of the impact of cohort mix on first-year experience can be used to provide innovative mechanisms to facilitate a successful first-year experience to all student groups.

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Student satisfaction and quality assurance

Research into the correlation between student satisfaction and quality of the services provided to students has yielded a host of valuable insights into both enhancing student experience and meeting and maintaining quality assurance standards.

Student satisfaction is a quintessential reflection of the quality of the services provided by universities. Due to the importance of maintaining a high-quality international profile and reputation in the global higher education market, increased attention has been paid to enhancing the quality of higher education, including areas such as accreditation, performance indicators and general quality assurance measurements.

Student satisfaction, achieved by the delivery of high-quality services is one of the assured ways to both enhance the student experience and gain a competitive advantage in the international education market (Tsinidou et al., 2010). Insights into student satisfaction and student views on the quality of services offered by higher education institutes are gathered predominantly through surveys and questionnaires administered to student groups.

Two groups of instruments can be identified in terms of studying student satisfaction on the quality of services provided by higher education. The instruments aimed at understanding the teaching aspect of the student experience include Classroom Environment Scale (CES, My Classroom Inventory (MCI) and Individualised Classroom Environment Questionnaire (ICEQ). Going beyond the teaching-learning process, instruments that measure the overall student experience include service quality measures such as SERQUAL and SERVPERF, which take into account both quality of services and the quality of service experience (Abdullah, 2006; Tsinidou et al., 2010; Yeo, 2009). The student satisfaction measurements mentioned above flow from the need for practical approaches to use student satisfaction indicators to develop performance indicators and quality assurance mechanisms (Abdullah, 2006; Tsinidou et al., 2010).

The research to date fails to comprehensively explore the ways in which cohort mix can impact overall student satisfaction. In a context where international and domestic student cohorts have different expectations of higher education and experience higher education differently as a result of the differences in their social, cultural and previous educational backgrounds, a generalised exploration into student satisfaction may not deliver the most accurate understanding of student satisfaction. More information on the impact of cohort mix on student satisfaction can help adjust and sharpen current instruments that are being used to survey student satisfaction. For example, as discussed above, domestic and international students come with varying expectations when it comes to the university learning experience.

Within the university classroom, there is space for further research to be conducted to understand the ways student satisfaction within the classroom can be enhanced to benefit both domestic and international student groups. Classroom-level empirical studies can pay specific attention to study student satisfaction within a set of identified student characteristics and expectations, deriving insights related to specific student cohorts. Such knowledge can then be used as a baseline in the designing of large-scale institutional or national level surveys, that can generate cohort-specific insights into student satisfaction, ultimately leading to the facilitation of more streamlined services to both student cohorts.

Student success and retention

Student outcomes are a key reflection of the quality as well as the productivity of higher education.

One of the widely discussed topics in student outcomes is student success, an aspect that has been explored in relation to student engagement, performance and completion. Scholarly work on student success identifies both traditional measures used to study student success such as standardised test scores, college grades, post-graduation employment outcomes as well as novel aspects that go beyond the achievement of academic goals and attrition rates such as student satisfaction and personal development (Pascarella et al., 2004; Pike & Kuh, 2005; Strauss & Volkwein, 2002; Young-Jones et al., 2013).

While it has been established that student background, characteristics, and pre-college experiences significantly impact student outcomes and success in general, the role played by the institutions themselves in enhancing the student experience is of equal importance. Research identifies that measures such as codes of practice, guidelines, and policy instruments are all instrumental in ensuring student success and the quality of higher education services provided to students (Hall, 2012; Jarvis, 2014; Shah & Sid Nair, 2013; Weerakkody & Jerez, 2018 At a policy level, there are specific measures and quality assurance frameworks designed

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and implemented to ensure the academic success of both international and domestic student success.Such state and institutional measures, market regulation mechanisms and support structures include the Australian Qualifications Framework (AQF), the National Report Card on Higher Education (USA), the Quality Code for Higher Education (UK), the Course Experience Questionnaire, the Graduate Destination Survey (Australia), and the Canadian Degree Qualifications Framework (Jarvis, 2014; Smithee, 2012; Weerakkody & Jerez, 2018).

Measuring and monitoring learning outcomes and knowledge attributes is another essential aspect that has been widely discussed in student outcome research. Previous research makes a distinction between disciplinary-specific knowledge attributes and generic graduate attributes. Although the traditional belief was that subject-specific knowledge outcomes are more important, there is an agreement in recent literature that both knowledge and generic outcomes are equally important (Smith & Bath, 2006). Previous studies also identified that practices of development and measurement of outcomes vary depending on student characteristics, the discipline and national and institutional goals for graduate outcomes (Barrie, 2006; Coates, 2010a; Smith & Bath, 2006).

As discussed in previous sections of this digest, an array of features such as student characteristics, personal circumstances, expectations, and motivations that differ vastly between domestic and international students may impact the student experiences and outcomes differently. Evidently, there is an imperative need for future research to focus on understanding the intricate relationships between different aspects of students' higher education experience. In the current body of research on students' sociocultural interaction, the focus of the majority of studies has been on the social interaction of international students, with only a few studies recognising the lack of interest in domestic students in making meaningful relationships with international students (Bird & Holmes, 2005; Volet & Ang, 2012). The lack of interest in interacting with international students can adversely impact the success of both student groups. The domestic student cohort may feel uncomfortable in the presence of international students, and international students may perceive domestic students' unwillingness as a form of hostility or rejection of their presence in a foreign education environment. All of these perceptions can equally impact student success in the classroom.

The current explorations into student success, retention and quality assurance mechanisms were not explicitly designed to comprehensively consider the impact of the cohort mix. While there is an established body of literature that states that a sense of belonging, fostered by students' academic and social interactions, plays an important role in determining students' persistence and success, we do not know how students' sense of belonging in the classroom is affected by having student groups belonging to diverse social and cultural backgrounds (Glass & Westmont, 2014; Hausmann et al., 2007; Osterman, 2000; Tran & Pham, 2016). Going beyond the generalised research into what facilitates student success and retention, future research needs to direct its attention towards understanding how cohort-specific characteristics and inter-cohort relationships and interactions impact student success and retention. For example, one possible direction for student success research is in exploring ways to strengthen inter-cohort student relationships. Further research into introducing global curriculum aspects to the teaching–learning process or exploring ways teacher training programs can be adjusted to better facilitate inter-cohort communication, leading to better student outcomes are examples of some novel ways to conduct student success research.

Directions for future research

This research digest examined how research on student experience in higher education considered the impact of cohort mix. This research digest reviewed and synthesised key research that has contributed to our current understanding of student characteristics, experiences and outcomes and explored the extent to which they considered the impact of international and domestic cohort mix. A broad insight derived from existing research is that student experiences, characteristics and outcomes are inherently interconnected (Arkoudis et al., 2019; Hong et al., 2020; Horstmanshof & Zimitat, 2007; Jones, 2018; Ning & Downing, 2010). This review did not identify any research on how the degree of cultural diversity in a student's cohort influences their experiences and outcomes in higher education.

Student experience

Student experiences are intrinsically connected to student characteristics, and together they determine student outcomes. The cultural diversity of the contemporary education environment adds an additional dimension to the already complex web of higher education experiences, simultaneously making it an important aspect of today's higher education landscape. An increased focus on cohort mix in synthesising student experiences, characteristics and outcomes in future designs, models and frameworks on higher education experience can yield more holistic insights into the understanding of variables in the higher education experience. The integration of critical variables needs to be done by recognising the differences and similarities between domestic and international student cohorts. In essence, critical variables such as student characteristics, experiences and outcomes are intricately intertwined and vastly impacted by the ubiquities of diverse student groups within the learning environment. In a policy environment that puts increasing pressure on higher education institutions to explore innovative ways to engage and retain students, cohort-based understanding of student experiences, characteristic and outcomes has the potential to generate a substantial impact on the service quality and productivity of higher education.

Mixed-cohort environments

Given the aforementioned complex nature of capturing an accurate account of students' higher education experience in mixed-cohort environments, explorations need to made into using research methods such as predictive modelling to understand the behaviour of multiple variables within and between diverse student groups. For example, demographic data such as ethnicity, SES and details on cultural background gathered during student enrolment can be used in combination with student opinions on experience, engagement to understand and predict how different student groups perceive higher education experience.

There is some evidence of universities conducting research into varying aspects of cohort-mix as demonstrated by internal research explorations done by the University of Sydney. It may be that other universities are doing similar cohort-mix related analyses internally, using existing student data. Given that much uncertainty still exists about the influence of cohort-mix on student experiences, institutional level research into the impact of cohort mix conducted using existing data appears as a more convenient and feasible starting point.

Insights from such initial university-level explorations into cohort mix can then be extended into practice level, where there is room for research to develop new design architectures that match cohort-specific student characteristics against their expectations and use that knowledge to direct students towards specific services such as guidance counselling.

Student perceptions and expectations

Research that is longitudinal in nature can further help understand how student perceptions and expectations in culturally diverse settings change in different stages of the academic program and how such changes behave within domestic and international student groups. For example, concepts such as 'success' may have different meanings for different groups, and success goals may change during the degree program as students get more insights into their possible future opportunities when they mature over the years.

Explorations of this nature can be done at a program or academic department level within universities. At department or academic program levels, gathering longitudinal data by the cohort or reanalysing the available data to understand variances among cohorts is one way to derive preliminary insights into the impact of cohort mix on the student experience. Collaborative institutional studies of a similar nature can enrich the data samples, helping derive more generalisable insights into the ways the domestic and international student proportions impact students' higher education experience.

From an institutional perspective, monitoring the changes between student cohorts within programs or academic departments can help university administrators provide better services to all student groups. At a theoretical level, insights derived from such longitudinal and collaborative studies can help researchers theorise and conceptualise mixed-cohort higher educational experiences based on a more accurate understanding of how student experiences unfold over time.

Impact of student mix

Alongside new theorisations and conceptual reimaginations of the impact of student mix, there is room to use research on students' experience of cohort mix to answer important questions on the ways in which varying proportions of international students in higher education settings might impact on the overall higher education experience.

The available data gathered from long standing national and institutional surveys and research studies can be utilised to provide data-driven answers to such questions. Existing data can be analysed again to determine how variances in student perceptions, experiences and expectations in culturally-diverse learning environments impact student outcomes and how that understanding can be used to make higher education experiences meaningful for both domestic and international student cohorts. Future research of this nature may have the potential to make the higher education experience more rewarding and successful to both international and domestic student cohorts while promoting a values system that celebrates the importance of student diversity in learning environments.

Recognition of culturally diverse higher education environments

Moving forward, the recognition of the culturally-diverse nature of higher education environments needs to be a cornerstone in higher education research as the internationalised, diverse classroom is the norm rather than the exception in the higher education environment of many countries today.

Therefore, a natural progression of existing research is to explore the experiences of diverse student groups who are increasingly becoming an integral part of the higher education student population. Such research may help shed a better light on the vulnerabilities and strengths within and among domestic and international student groups that will eventually help effectively and accordingly adjust academic and non-academic services provided to both student groups.

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