



New possibilities for engaging school teachers in widening participation: professional development to support student aspirations

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Abstract

Access to higher education remains elusive for many young people despite substantial investment in outreach interventions, most of which target students in underrepresented equity groups. This paper explores an alternative approach to widening participation in Australia that focuses on teacher professional development to support student aspirations. We examine school teachers' responses to a course designed to develop their conceptual understanding of aspirations and provide a framework for developing aspirations-related initiatives with their students and colleagues. The course pilot was evaluated drawing on surveys ($N=49$) and interviews ($N=21$). Teachers reported that they gained the following: (1) access to robust evidence of factors affecting aspirations; (2) relevant theoretical perspectives to conceptualise aspirations in new ways; and (3) insights on practical strategies with which they might nurture student pathways to higher education. To support widening participation in higher education, we argue that the scope of current outreach initiatives offered by universities must broaden to capitalise on the untapped potential of teachers.

Keywords Student aspirations · Teacher professional development · Widening participation · Equity

Introduction

In recent decades, achieving more equitable access to university has become a key concern of many Western governments. Following the second world war in the United Kingdom (Mavelli, 2014), and during the mid-1960s in the United States

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(Younger et al., 2019) and the mid-1970s in Australia (Gale & Tranter, 2011), governments began to introduce policies designed to encourage participation in higher education by those from historically underrepresented groups, thus broadening the traditional focus on the social elite. As part of the shift towards mass higher education (Trow, 2007), the number of students participating in higher education subsequently increased, due in part to reforms designed to ‘widen participation’. In Australia, enrolment numbers doubled between 1989 and 2014 (Department of Education & Training, 2015) but have levelled off in recent years (Department of Education Skills & Employment, 2022). In the UK, enrolment has increased to record levels despite a slight stutter after sector reforms in 2012 (UK Parliament, 2022). Notably, these figures include an overall increase in the number of students from disadvantaged and marginalised backgrounds attending university, although long-standing enrolment patterns persist according to socioeconomic status, race, ethnicity, disability status, and geographic location (Fray et al., 2020; Koshy, 2020; Pickering, 2021).

While equity has been an enduring policy focus, the extent to which the sector is meeting its social justice commitments remains questionable (Burke, 2012; Harvey et al., 2016). Framed by an increasingly neoliberal higher education sector, the widening participation agenda has largely been driven by economic imperatives rather than social justice motives, ultimately casting students from underrepresented equity groups as underutilised human capital (Gale & Tranter, 2011). As a case in point, widening participation policies are frequently grounded in a deficit logic, based on the assumption that individuals from disadvantaged backgrounds lack aspiration for higher education (Burke, 2012; McMahon et al., 2016; Prodonovich et al., 2014). As a result, the prevailing approach to addressing equity of access relies on ‘raising aspirations’. Higher education policy in the UK positions individuals from socially disadvantaged backgrounds as having a ‘poverty of aspiration’ (Mendick et al., 2018). In Australia, a similar premise emerged in policy whereby people from low socioeconomic circumstances were believed to have little or no aspiration to participate in higher education (Bradley et al., 2008).

This narrative has persisted in policy despite multiple studies demonstrating that many young people from disadvantaged backgrounds *do* consider higher education as part of their post-school futures (Bok, 2010; Gore et al., 2017b; Mendick et al., 2018; Naylor & James, 2016). The real problem, then, is not so much a *lack* of aspiration as it is the relegation of structural inequalities from the purview of policy, together with the perpetuation of exclusionary practices and the continued misrecognition of how inequalities can be addressed (Burke, 2012; Southgate & Bennett, 2014). In this way, the portrayal of aspiration in policy and practice remains somewhat contentious, often treated as little more than an array of futures from which an individual simply picks and chooses (Prodonovich et al., 2014). By contrast, many alternative readings of aspiration have been offered (for example, Appadurai, 2004; Bok, 2010; Burke, 2012), which shed light on how the complex process of aspiring occurs within existing social systems and structures (Archer et al., 2013; Rondini, 2016).

Raising aspirations through early intervention and school outreach initiatives remains at the core of higher education equity policy, regardless of evidence that

barriers to university enrolment are structural and systemic, rather than individual. Within this context, a key premise of the pilot study reported in this paper is that a much broader approach to widening participation needs to embed a commitment to social justice. Specifically, we turn our attention to the potential of professional development (PD) for school teachers and career advisors to foster a more robust, structurally informed understanding of aspirations which can help disrupt the prolonged emphasis on ‘raising aspirations’ as the solution to widening participation.

We begin by briefly considering the role of teachers in widening participation. Next, we outline the development and evaluation of a PD course designed to strengthen teachers’ capacities to understand their students’ social–cultural contexts, the historic barriers they face in accessing university and, ultimately, how to nurture meaningful post-school pathways. We argue that the positive findings from this study provide an important foundation for new possibilities in widening participation, helping to facilitate institutional change rather than continue to place blame and responsibility on young people and their families.

The overlooked role of teachers in widening participation

Traditionally, the involvement of teachers in widening participation initiatives has been limited to accompanying their students on university visits, distributing pre-written modules provided by universities, or inviting university students and other role models into the classroom to provide structured career advice (Bennett et al., 2015). Teachers are rarely viewed within the widening participation agenda as mentors, role models, or agents of change themselves, positions that tend to be filled by university staff and students (Bennett et al., 2015). Arguably, this approach aligns with the dominant view of widening participation as a set of activities designed to ‘correct’ perceived deficiencies in students from disadvantaged backgrounds (Burke, 2012; Southgate & Bennett, 2014). It not only obscures a genuine focus on social justice but also fails to recognise the very people who are most likely to have a deep understanding of their students and the communities where they live, and by extension, teachers’ role in equity and social justice work (Fleming & Grace, 2014).

Although ‘aspiration’ can provide an important lens through which to understand how young people imagine and construct their future selves (Appadurai, 2004; Archer et al., 2013; Bok, 2010), surprisingly little analytical attention has been paid to the role teachers play in this complex process (Fray et al., 2020; Van den Broeck et al., 2020). This omission is significant given the importance of teacher expectations in shaping students’ sense of belonging (Australian Council for Educational Research, 2018) and their academic achievement (Rubie-Davies & Peterson, 2011), as well as the widely acknowledged role of schooling in social reproduction (see, for example, Bourdieu, 2010).

While teachers are only one factor among the multitude of influences on young people’s post-school decisions (Bronfenbrenner, 1977), they have the potential to transform students’ understandings of themselves and their place in the world (Burke & Whitty, 2018). In relation to higher education, teachers’ beliefs and practices have been shown to affect students’ “imaginings of university

participation” (McMahon et al., 2016, p. 1110), while schools demonstrably play a broader role in instilling particular cultures around post-school pathways (Van Houtte et al., 2013).

Career conversations between teachers and young people can help students to “construct meaning about themselves and their future career” (Mittendorf et al., 2011, p. 516). Even informal conversations can tap into a plethora of resources teachers hold as trusted adults who have pursued their own careers and observed the career paths of others (Hooley et al., 2015). For example, one British study found that many teachers who recognise the structural inequality faced by disadvantaged families consequently strive to provide their students with insight into different kinds of opportunities outside their local community and to model a strong work ethic (Holloway & Pimlott-Wilson, 2011). Such evidence indicates that teachers have a more culturally situated understanding of how their students’ aspirations are formed than is possible for most university staff and students involved in widening participation initiatives (Archer et al., 2013).

However, teachers can negatively impact student imaginings about their post-school futures unless they have a critical consciousness about their students and their own positionality (Thompson et al., 2016). Students’ imaginings can be influenced by teachers questioning their academic ability and, more generally, by poor teacher–student relationships which lead to disengagement (McMahon et al., 2016). Prior research, for example, has found that some teachers can hold deeply ingrained deficit views about students and families living in poverty and disadvantage which are hard to shift (Cox et al., 2012; Harwood et al., 2017; Rank et al., 2003).

The role of teachers must also be considered within the context of the broader career guidance ecosystem in schools. In Australia, where the pilot study reported in this paper was conducted, there is growing recognition that school-based career development varies in quality and often does not meet the needs of young people, whether they aspire to university or not (Groves et al., 2021; Keele et al., 2020; Rice et al., 2015). Given limited time to work closely with large numbers of students, the suggestion that teachers and career advisors should work together to embed career education in daily classroom activities has gained support (Groves et al., 2021; Yates & Bruce, 2017). To equip young people to be lifelong learners, armed with the tools they need to find meaningful careers and a broad range of values, skills, and knowledge (Shergold et al., 2020), all teachers—not just career advisors—have an important role to play.

Harwood et al. (2017) argue that “developing a knowledge of, or coming to know, the experience of disadvantage is the first step in creating learning environments that are responsive to, and accommodate the needs of, disadvantaged students” (p. 3). If this is the case, our prior research involving a survey of 513 Australian school teachers suggests there is a long way to go before such learning environments are the norm. We found that many teachers hold misconceptions about the impact of structural inequalities on student aspirations, especially in relation to socioeconomic status, gender, race, and Indigeneity (Gore et al., 2019a). The survey also revealed that teachers recognise they play a role in aspiration formation, but want help to understand their role and how aspirations intersect with demographic factors (Gore et al., 2019a). Our PD course was designed to address these needs.

The study

In 2017, we were commissioned by the Federal Department of Education, Skills, and Employment, as part of its *Higher Education Participation and Partnerships Program* (HEPPP), to create an innovative professional learning course designed to build teachers' understanding of aspiration formation and their capacities to support students' post-school futures.¹ We were well positioned to carry out this work given our significant program of research (2012-present) on the educational and occupational aspirations of Australian school students. Involving more than 12,000 surveys and 1000 interviews and focus groups with students, their parents/carers, and teachers, this earlier suite of studies examined how aspirations are formed and evolve over time (see, for example, Gore et al., 2015, 2017a, 2019b).

The commissioned project involved three key phases: (1) a national survey to ascertain teachers' perceptions of their role in aspiration formation; (2) the creation of a PD course using a co-design process with teachers; and (3) a pilot study to test the course with teachers, followed by the collection of survey and interview data to inform wider implementation. In this paper, we focus on reporting on the outcomes of the pilot study. For context, we first provide a brief description of the co-design process and an overview of course content.

The co-design process

A government requirement of the PD course was that it be freely accessible to all teachers across schooling sectors (government, Catholic, and independent) throughout Australia. To ensure the course was applicable to all teachers and aligned with relevant accreditation standards across jurisdictions, we used a co-design process with a group of eight practising teachers, selected to represent different states and sectors.

A participatory co-design approach was chosen to enable the teachers and researchers to meaningfully share expertise and make decisions that would enhance the responsiveness of end-users of the PD (Blomkamp, 2018). Informed by research and drawing on the multiple perspectives of participants to test and refine the content to be delivered and pedagogies employed, we engaged in “collaborative sense and meaning making” (Burke & Lumb, 2018, p. 17) over the course of six months. Key sessions included the following: exploring core issues relating to aspiration formation drawing on lived experience and relevant data; designing the nature and substance of learning activities; and working collaboratively to develop the structure of the course using mind mapping and rapid prototyping. While we did not involve young people in this co-design process, the PD course draws on a significant body of quantitative and qualitative data collected from students, parents, and teachers as part of our earlier research into student aspirations.

¹ The project commissioned by the federal government included a team of researchers from The University of Newcastle and La Trobe University.

Table 1 Course outline—aspirations: supporting students' futures

Unit #	Title	Content and conceptual work
Unit 1	Course overview	Brief introduction, including a guide to course navigation and course completion
Unit 2	Introduction to aspirations	Engaging with relevant theoretical concepts and language to help participants extend their understanding of 'aspirations'
Unit 3	Aspirations matter	Analysing the formation of students' educational and career aspirations, including how young people perceive university and vocational education
Unit 4	Factors that matter	Explicating key factors that influence aspiration formation, including academic achievement, Indigenous status, socioeconomic status, gender, geographic location, and first-in-family status
Unit 5	Relationships and connections that matter	Examining the multiple connections students draw on to inform their post-school aspirations, including parents/carers, other family members, peers, and broader community members
Unit 6	Schooling and teachers matter	Unpacking the fundamental role teachers and schooling play in relation to aspiration formation

Aspirations: supporting students' futures: course content and theory of learning

The iterative co-design process led to the creation of a course called *Aspirations: Supporting students' futures*.² As shown in Table 1, the course consists of six units. Unit 1 provides a 10-min overview to help participants navigate the course. Unit 2 explores how 'aspirations' have commonly been portrayed in dominant policy narratives and helps participants gain a deeper understanding of aspiration formation through engagement with various sociological and psychological theories as they pertain to their practice and school context. Here, participants learn that 'aspirations' can be used as a lens to think about how young people make sense of their future selves, in contrast to the individualised, pathologising view of aspirations often depicted in policy. Participants subsequently develop their understanding of this lens in Units 3–6.

Overall, the course is ten hours in duration. Each of the six units provides a suite of digital resources, including videos (incorporating student voice from our earlier research on student aspirations), interactive activities, data displays showing results from our own and others' previous research, and links to readings and further information. The interactive activities are primarily framed around reflective questions that help participants unpack and/or manipulate data and connect course content to their own school context and professional experience. All teachers enrol in the same course; however, at key junctures, there is the option for participants to choose

² <https://www.aspirations.edu.au/>

content specific to primary (Years 1–6), early secondary (Years 7–9), or senior secondary (Years 10–12) contexts. This structure was an intentional design decision stemming from the co-design process, aiming to ensure that all teachers have an understanding of how aspirations evolve over time and factors that play a role in aspiration formation at various points during schooling.

The course is self-paced, freely available, and delivered asynchronously online. A printable learning journal accompanies the course to help promote reflection and ongoing professional learning. The journal includes a language toolkit to underpin conceptual and practical understandings of ‘aspirations’, a personal action plan to encourage translation into practice, and explicit links to the Australian Professional Standards for Teachers (Australian Institute for Teaching & School Leadership, 2011) and the National School Improvement Tool (NSIT) (Australian Council for Educational Research, 2016) as key frameworks underpinning teachers’ work in Australia. The course is mapped against all nine domains of the NSIT to help teachers embed their professional learning within school improvement efforts if desired. Online discussion boards are also available at the end of each unit, designed to enable sharing of ideas among participants on the issues raised in the units.

The course design approaches teacher learning as akin to ‘knowledge-*of*-practice’, wherein teachers interrogate knowledge, generate local knowledge, and connect this knowledge to broader social-cultural issues (Cochran-Smith & Lytle, 1999). While the course provides an evidence-informed knowledge base for teachers to understand and support aspiration formation (what can be referred to as ‘knowledge-*for*-practice’), teachers are positioned as ‘knowers’ and ‘agents’ in their classrooms, schools, and within the broader educational system. In this approach, knowledge generation is itself understood as a transformative pedagogic act (Hargreaves, 1996) and the research is used as the framework to help construct and reconstruct knowledge, opening up a space for teachers to uncover, clarify, and even challenge their own assumptions (Cochran-Smith & Lytle, 1999).

Before commencing the pilot study, the course was accredited for 10 h of professional learning with the NSW Education Standards Authority (NESA)³ and the ACT Teacher Quality Institute (TQI), the only two states/territories offering a formal accreditation process for teacher PD in Australia. Teachers in all other states/territories are able to use the course to contribute to 10 h of self-identified PD, with a personalised certificate of completion available to all participants at the conclusion of the course to add to their professional learning portfolio.

The pilot study

Principals from schools in each Australian state and territory and across all schooling sectors were emailed information about the course, inviting their teachers to participate in the pilot study. In order to recruit a diverse array of participants, schools were randomly selected for contact based on the following criteria: jurisdiction, sector, and geographic location. In addition to university ethics approval, approvals

³ Due to recent changes to NESA’s accreditation of professional learning, the course can now be completed by teachers in NSW as part of their elective PD component.

Table 2 Location, school sector, and school type of survey participants

	Participants (<i>N</i> = 49)	%
NSW	13	26.5
ACT	26	53.1
VIC	5	10.2
TAS	1	2.0
SA	3	6.1
WA	1	2.0
NT	0	0.0
QLD	0	0.0
Government	37	75.5
Catholic	4	8.2
Independent	8	16.3
Primary	9	18.4
Secondary	28	57.1
Central or K/P-12 school	6	12.2
Other	6	12.2

were obtained from each relevant government jurisdiction or Catholic diocese before approaching schools.

Upon receipt of school consent, the link to the course was provided to the school contact (either the principal or their nominated representative) for distribution to interested teaching staff, along with a link to an online survey for participants to complete at the end of the course to provide insights about their course experience. Teachers provided their consent at the start of the survey, which took on average 10–15 min to complete. The survey (Appendix 1) included basic demographic details (individual and teaching-related information), Likert-scale questions on course useability, acceptability, and perceived impact, and open-ended questions to record qualitative comments about the usefulness of the course to practice and school planning.

In 2018, 63 participants (including teachers, principals, and career advisors) completed the online course during the pilot study period, with the survey completed by 49 participants (see Table 2 for demographic details). There was an over-representation of participants from government schools compared to the proportion of government schools in Australia and an under-representation of participants from Catholic schools. For context, in 2020, government schools held the greatest share of student enrolments in Australia (65.6%), followed by Catholic schools (19.4%) and independent schools (15.0%) (Australian Bureau of Statistics, 2020). Survey results, therefore, should be interpreted with this information in mind, and we note that additional research may be required to fully capture the views of teachers in non-government schools.

At the end of the survey, participants were asked to indicate their interest in taking part in an optional phone interview to elaborate their views. All participants who opted into this component were interviewed, resulting in a sub-sample

of 21 participants (7 males, 14 females). The interviewees primarily worked as principals, head teachers, classroom teachers, or school-based career advisors, with 13 being from government schools, seven from independent schools, and two from Catholic schools. Most interview participants worked in secondary schools ($n=9$), with the remainder in primary schools ($n=7$) or central or K/P-12 schools ($n=5$).

The average school ICSEA (Index of Community Socio-Educational Advantage, publicly available on *MySchool*) was 1010 ($SD=92$), which is comparable to the mean ICSEA of all Australian schools of 1000 ($SD=100$). Each school community—both government and non-government—enrolled students from at least one equity target group. There was a relatively high proportion of Indigenous Australian students (69% at one government school and 17% at one independent school) or students from Language Backgrounds Other Than English (70% at one government school and 38% at one Catholic school), and there was a spread of schools across inner regional, outer regional, and remote areas.

Interviews were conducted by telephone by an academic staff member or trained research assistant, with interviews lasting 30–45 min. The interview schedule (Appendix 2) was comprised of questions focused on: course useability, acceptability, perceived impact on beliefs and practice, and relevance to school processes and planning. To ensure anonymity, all names utilised in the reporting of the findings are pseudonyms.

Due to the relatively small sample, the survey data were analysed using descriptive statistics. Owing to restrictions from each relevant state/territory Department of Education, we were unable to make any analytical comparisons across educational jurisdictions, instead focusing on the overall participant sample to draw conclusions. The interview data were analysed using Creswell's (2014) six steps for qualitative analysis, namely: (1) digitally recording and transcribing the interviews verbatim; (2) gaining a general sense of the data by reading all interviews; (3) coding the data using NVivo software to generate descriptive first-level 'nodes'; (4) interpreting codes to distil overarching themes through a process of combining and reducing 'nodes'; (5) deciding on the best way to represent the key themes; and (6) interpreting the significance of the themes. Trustworthiness was increased through the use of audit trails, member checking, and triangulation (Nowell et al., 2017), with triangulation occurring both in terms of having a wide selection of informants from different schooling sectors and jurisdictions, as well as in relation to the integration of the interview analysis with the survey results. We also employed a continuous process of reflection and discussion among all authors to ensure consistency and consensus throughout the data analysis.

In the analysis that follows, we present key insights from the pilot study using extracts from the interviews that are representative of the sample. We also provide a summary of the relevant survey results at the beginning of each section. Where quotes are provided, we include participant pseudonym, role, and school sector. The presentation of results is structured into three overarching themes which distil the perceived feasibility, acceptability, and impact of the course: 'access to research on student aspirations', 'new theoretical tools and concepts', and 'strategies to nurture student aspirations'.

Results

Access to research on student aspirations

Overwhelmingly, teachers were positive about the *Aspirations: Supporting students' futures* PD course. Of those who completed the survey, 95.9% found the content useful, with 46.9% indicating 'strongly agree', 38.8% 'agree', and 10.2% 'somewhat agree'. Similarly, 93.8% believed the course would provide valuable PD for teachers at their school, with 40.8% indicating 'strongly agree', 36.7% 'agree', and 16.3% 'somewhat agree'.

Both the survey and interview data highlighted the importance of providing teachers with access to contemporary empirical research to enhance their understanding of student aspirations. For example, most teachers who completed the survey either 'strongly agreed' (46.9%) or 'agreed' (34.7%) that they gained new knowledge about aspiration formation. More than three-quarters of participants (79.6%) also reported that they had revised some of their beliefs about student aspirations as a consequence of that new knowledge. Due to the course being grounded in empirical data, participants felt that they could draw on it as an authoritative resource when trying to implement change:

[It was good] having something to back me up without using my own assumptions and intuition ... Some of the assumptions that I had weren't actually completely accurate. But still, broadly speaking, I think that's how I would use this information... I think that I need to work with the maths teachers to rejig their thinking about how they talk to kids. You can't just be, "Oh you guys are good at maths and you are non-maths people. That's fine, you go off and you do creative stuff". (Robert, career advisor, independent secondary school)

By Robert's own admission, he previously relied on *intuition* and *assumptions* about his students' post-school aspirations. He hints at subtle processes of misrecognition (Burke, 2012) which framed and limited his thinking, something he continues to see among his colleagues within the broader school community. Robert reports now feeling that he has a rigorous evidence base from which to enact real school change as well as heightened concern about implicit messages communicated to students that narrowly label them and potentially constrain how they see themselves and what they imagine for their futures.

Teachers who were already conscious of avoiding stereotypes in their teaching reported that the course not only prompted reflection, but also validated their practice:

I teach science and say especially with Year 7s and Year 8s, if we're learning about space, I will make a point—not an overt point—but like, when we're learning about astronauts, we'll learn about female astronauts or highlight the role of women in the space industry. So, I feel like I'm conscious of the gender bias when it comes to students and careers that they'd see themselves doing. (Jake, teacher, independent secondary school)

Others reported that access to the empirical evidence on aspiration formation changed their practice. Connor, a special education teacher who coordinates vocational education, described how he planned to have conversations with his students *“a lot earlier and [doing] a lot more checking in...about ‘where do you see yourself?’ and doing that on a more regular basis.”* The importance of these kinds of conversation appeared again and again, particularly in relation to the need to begin much earlier in students’ schooling:

I thought, “Maybe we need to get to them earlier and have a stronger transition plan, from earlier on”. I think it’s just demystifying [higher education] and it’s to show them that it’s really not that hard. But yeah, I think [we need to] really get to them maybe even as young as Year 5. (Kellie, school leader, K/P-12 government school)

While formal career education traditionally occurs in the later years of secondary school (Groves et al., 2021), Kellie and others saw the potential to nurture students’ understandings of possible post-school pathways much earlier. Primary or middle school was often thought to be a good point at which to begin exposing students to information about post-school options and pathways, not to push them towards choosing a particular pathway but to help illuminate unfamiliar spaces such as higher education.

In sum, teachers’ responses to questions in the survey and their elaborations during the interviews demonstrate the power of access to robust empirical research on aspirations in shifting their knowledge and beliefs in productive ways.

New theoretical tools and concepts

For many teachers, the theoretical perspectives, conceptual tools, and information offered in the course were long overdue and too often overlooked as a core part of their preparation for teaching. Most participants (93.9%) reported that the theories introduced in the course were useful in understanding students’ aspirations, with 34.7% indicating ‘strongly agree’, 55.1% ‘agree’, and 4.1% ‘somewhat agree’. Shawna, for example, spoke about how the course affirmed some of her beliefs, now having the required information to substantiate her thoughts:

It reaffirmed a lot of the thoughts and a lot of the thought processes that I’ve had, and having the additional literature behind that was good. I think it’s probably a course that a lot of teachers fundamentally agree with but haven’t had the information about. (Shawna, teacher, K/P-12 government school)

While teachers learn about equity as part of their initial teacher education course, several teachers commented that the PD course was their first real encounter with the notion of ‘aspiration’, making explicit ideas they had not previously engaged with:

I felt like a lot of it was stuff that I should sort of know, but I never really thought about, which was good, because then it brought out things that make

sense, but you just don't think about. (Linda, teacher, independent primary school)

A key aim of the course was introducing teachers to key theoretical concepts that could help disrupt the deficit constructions of aspiration formation commonly found in policy narratives. Concepts unpacked throughout the course include 'map and tour knowledge' (Gale & Parker, 2013, 2014), 'hot and cold knowledge' (Ball & Vincent, 1998), the 'capacity to aspire' (Appadurai, 2004; Bok, 2010), and circumscription and compromise (Gottfredson, 1981), all of which helped to expose structural inequalities and provided a new lens for thinking about—and talking about—aspirations:

It gave me a lot of language to use that I don't necessarily use [already], like students having 'navigational capacities' and 'archives of experience' and the idea of 'peer social capital', that sort of thing. That was very powerful actually, so learning a lot of the language was really, really good. (Margaret, teacher, independent K/P-12 school)

The power of such conceptual language was particularly evident in Kerrienne's account of a recent interaction with a colleague. She was able to mobilise her new understanding of gender equity in collegial conversation:

I had one discussion with another female staff member who is taking a group of girls out on a Luna Park excursion, for Physics at Luna Park. She couldn't understand why it had to be girls and why we were always running these particular targeted programs for girls. It was really good timing. It was only about two days after I'd finished the course that I had that conversation with her about why it was so important. (Kerrienne, career advisor, government secondary school)

As a result of this new conceptual understanding, a common thread running through the interviews was a new appreciation of how to engage students in conversation about their aspirations in meaningful ways. Some teachers, like Jake, acknowledged previously feeling hesitant or ill-equipped to facilitate this kind of talk:

I think not all teachers necessarily feel comfortable in having conversations around aspirations or necessarily know the importance of supporting students in having conversations and, you know, pointing them in the right direction. (Jake, teacher, independent secondary school)

Other teachers spoke of their plans to draw on and share the new terminology with colleagues and students:

I think a lot of the terminology that I've learnt, I want to start to use with the girls, you know, and the staff, because I think—not that it puts a label on it—but it puts an idea onto it, so that way, you know, we can explain to the girls the different mechanisms behind careers. (Connor, teacher, K/P-12 independent girls' school)

Connor's plan is a clear example of the perceived utility of the theoretical tools and concepts introduced in the course. Having an understanding of the *mechanisms* underpinning career development and how students construct ideas about particular career trajectories not only builds an awareness of the complexity of aspiration formation (Archer et al., 2013; Gore et al., 2015) but, even more so, one he can connect to his local context. Indeed, many teachers reported that the theoretical framing of the course built their confidence to express their understanding of aspirations in more concrete, tangible ways, enhancing their understanding of the way aspiration formation is connected to structural and systemic issues.

Strategies to nurture student aspirations

A third key learning from the survey and interview data was teachers' capacity to identify and implement strategies to nurture and support student aspirations as a result of the course. In the survey, most participants (87.8%) told us they had an increased understanding of strategies they could now apply in their own school context, with 30.6% indicating 'strongly agree', 28.6% 'agree', and 28.6% 'somewhat agree'. Within the interviews, a common strategy identified by teachers was the need to be mindful of the different familial and cultural contexts of their students, "*it was kind of that reminder of [the need to be] looking at our demographics a bit more*" (Jessica). Several teachers elaborated how this might play out in the specificity of their school populations:

I work in a school where potentially a lot of our kids would be first in their families [to go to university]. If they were supported in the right way, so, you know, like reading about that and the fact that kids don't really have access to that 'hot knowledge' that we've had while we were growing up. Seeing it from that perspective was really good. We see it on a daily basis but reading about it and having it validated was quite interesting. (Riya, special education teacher, government K/P-12 school)

Our school is quite rural and a lot of the parents probably haven't gone to university. That kind of hit close to home where I realized that many of these kids at the school that I'm at are probably in that situation, where they might not consider it. (Linda, teacher, independent primary school)

Here we see Riya and Linda having their eyes opened to the ways in which rural-ity or first-in-family status might impact the aspiration formation of their students—two groups that remain significantly underrepresented in Australian higher education (Fray et al., 2020; Patfield et al., 2021). Importantly, the new knowledge unsettles their taken-for-granted assumptions about access to higher education.

Other teachers developed specific strategies to nurture aspirations within their classrooms and schools as a result of the course, including implementing 'aspirations' classes as a regularly scheduled lesson:

We'll start to timetable half an hour a week next year into the timetable called Aspirations and we will start just initially talking about their aspirations and

documenting that. I thought we could take photos of them and give them these speech bubbles about, you know, “When I grow up, I want to be...” and “I want to do...” and those types of things. We have had a link this year with [university name] but I’d really like to strengthen a link with a university. That would be the next step. So, after we’ve talked about it, we would start to investigate, “Well, if I want to be a doctor, what does that mean? How does that look?” And then get a link with a university. (Deanne, school leader, government primary school)

Deanne now has a clear aim of not only getting students to think about their post-school futures, but also how to get there.

For other participants, such as George, the course was a catalyst for influencing the strategic direction of the school, aiming to shift direction towards a holistic career ‘ecosystem’ (Shergold et al., 2020) within the school:

I plan to keep it in mind for our next school plan in particular because I think it needs to be a cohesive whole school approach. [...] I think the program is really focused on establishing ... high goals for students. And I think by helping them do that, we can really improve their effort and focus and motivation in the classroom. I don’t think I’m going to have any teacher tell me that having more motivated kids is a bad thing. So, I think that could be a great way of getting everyone on board for it. (George, school leader, government secondary school)

In a related manner, some participants described strategies for continuing PD with colleagues at their school. Leonie detailed plans for rolling out the course among school mentors, while Margaret, a teacher at a boarding school, saw the course as relevant to *all* staff at her school (mentors, psychologists, tutors), not just those with face-to-face teaching responsibilities:

Possibly even our counselling team would be interested in it as well, you know? We’ve got some psychologists as part of our team and people who act as counsellors to students. I would also let our head of boarding see it. We have about 100 students who board with us, and it’s probably quite useful for some of the boarding tutors to perhaps have done it, as well. I see it has wide application. (Margaret, teacher, independent K/P-12 school)

In sum, the focus in the PD course on conceptual and practical tools to understand and support the complex process of aspiration formation filled an identified need, supported school plans, and provided valuable opportunities for professional learning. It strengthened teacher convictions about the critical role they play as intermediary between students’ present and their post-school futures. Above all, it cemented the notion that everyday conversation provides a significant way to intervene in how young people imagine and work towards their post-school futures:

I think the biggest thing to come out of it was the importance of those conversations and it made me think about: How often do we talk about university? How do we talk about it? Which kids do we talk about it with, as well? (George, school leader, government secondary school)

Discussion

Increasing the representation of disadvantaged social groups in higher education remains a priority of many governments worldwide. While outreach interventions aimed at school students are often heralded as a key mechanism for fuelling inspiration for higher education and working towards parity of representation (Bennett et al., 2015; Naylor et al., 2013; Whitty et al., 2015), they have fallen well short of this goal. For example, in Australia, it was recently reported that the federal government has invested approximately \$1.5 billion in higher education equity programs over the past ten years (Howard et al., 2022). Yet overall participation targets have not been met and the share of undergraduate enrolments for several equity target groups actually decreased in 2019 (Koshy, 2020).

As we have argued in this paper, most outreach interventions fail to take advantage of teachers' existing relationships with students, including their capacity to support and nurture students' aspirations. To capitalise on these relationships, we developed an online PD course to provide teachers with theoretical concepts, language, robust research findings, and strategies with which to inform their knowledge of aspiration formation and, in turn, nurture their students' post-school futures in meaningful ways. Findings from the pilot study suggest that the course not only provided valuable professional learning but also was seen as highly applicable to teachers' diverse contexts.

The value of research and theory on aspirations

Equipping teachers with knowledge about how structural and systemic inequalities, rather than a lack of aspiration, might hold students back, is an important understanding to gain in any widening participation agenda. Certainly, it was a central premise in the design of our online PD course. Teachers who responded to our initial national survey readily admitted their limited understanding of aspirations, including some deep-seated stereotypes about the role of gender, socioeconomic status, race, and Indigeneity. As a result, our starting point in the course was to call into question assumptions and stereotypes about students by providing research evidence and conceptual tools that might challenge beliefs and practices.

By undertaking the professional learning, participants concluded that their role in supporting aspirations is a long overlooked, and yet core, part of teaching. Many valued the concrete theoretical framework for understanding student aspirations as an authoritative resource to assist in implementing change. As a result of connecting theory to their respective school contexts, they felt empowered to better support their students. In teacher PD scholarship, theory is not commonly reported as well-liked or effective, with more practical approaches and a focus on content and/or pedagogy normally preferred (DeMonte, 2013; Hunzicker, 2011). Our study, by contrast, demonstrates that relevant, accessible theoretical constructs can provide a practical scaffold for teachers. The conceptual basis of the course provided language for discussing aspirations and a framework for developing and implementing aspirations-related initiatives in a positive way with students and colleagues.

Recognising the role of all teachers in supporting aspirations

A “whole school approach” has been identified as a critical component of career development in Australian schools (Keele et al., 2020, p. 57). Appropriately trained teachers might ease the pressure of high student demand for career counselling services (Welde et al., 2015). Teachers know their students better and have more contact time than is possible either for university staff or students, who usually engage in short-term initiatives, or career advisors, who work with hundreds of students in a school. A US study in which students rated their teachers as better at career counselling than their high school career counsellors (Johnson & Rochkind, 2010) reinforces this point.

An increasing number of studies demonstrate that students are thinking about their educational and occupational futures much earlier than when career education typically occurs (around age 15) (Gore et al., 2017a; Whiston et al., 2011). Our previous body of research on aspirations highlights that if students receive advice too late, their choices for the future will be limited (Jaremus et al., 2020), with prospective first-in-family students often ruling out the idea of higher education from an early age (Patfield et al., 2021). Working with younger children whose expectations are still forming can provide scope for the development of a broader range of aspirations, with teachers playing a key role (Harrison & Waller, 2018). We argue, with an increasing group of scholars, that *all* teachers can play a role in supporting aspirations (Van den Broeck et al., 2020; Groves et al., 2021). Our research provides evidence of how this goal might be accomplished.

Following these positive results, the *Aspirations: Supporting students' futures* course has now been rolled out more broadly. Currently, the course has been accessed by more than 1,500 teachers from all Australian states and territories, as well as by educators working in other contexts (e.g., universities and early childhood settings) and other educational jurisdictions internationally.

Conclusion

Governments and universities continue to spend substantial funding each year on higher education outreach and interventions targeting school students. However, teachers have historically played a very limited and superficial role in these efforts. The pilot study reported on here clearly demonstrates that teachers can play a more substantial role in the widening participation agenda than simply accompanying students on university visits and facilitating career information programs. Their influence through everyday communications with students, both formal and informal, is powerful. Our PD course empowered participants with valuable conceptual, linguistic, and practical tools to support these conversations, fostering a more robust understanding of aspiration formation and the development of strategies to enact change in their classrooms and schools. Our data demonstrate that PD focused on student aspirations has significant potential to help teachers better understand the complexities associated with accessing higher education. Ultimately, PD such as this can enhance and enrich widening participation efforts, exalting the work of teachers who have long been undervalued in efforts to improve equitable access to higher education.

Appendix 1: Professional development in equity interventions for school teachers

Professional development in equity interventions for school teachers

1. I would like to participate in the survey and I give my consent for my responses to be used as outlined in the participant information statement
 - ☐ Yes
 - ☐ No

Demographic Information

* 2. Sex:

- ☐ Male
- ☐ Female
- ☐ Other (intersex/indeterminate/unspecified)

* 3. Do you identify as Aboriginal or Torres Strait Islander?

- ☐ Yes, Aboriginal and/or Torres Strait Islander
- ☐ No

* 4. Do you speak a language other than English at home?

- ☐ No, English only
- ☐ Yes (please specify)

* 5. Which of the following educational qualifications do you have? Select all that apply.

- ☐ TAFE certificate or diploma
- ☐ Accelerated teacher training qualification
- ☐ 2 or 3 year teaching qualification (e.g. DipEd, BEd)
- ☐ 4 year teaching qualification (e.g. BEd, BTeach or equivalent by accreditation)
- ☐ Bachelor's degree in another academic subject
- ☐ Postgraduate teaching qualification (e.g. PGCE, GradDipEd, MTeach)
- ☐ Postgraduate certificate or diploma in another academic subject
- ☐ Master's degree in education (e.g. MEd by coursework or research)
- ☐ Master's degree in another academic subject
- ☐ Doctorate in education (e.g. EdD, PhD)
- ☐ Doctorate in another academic subject
- ☐ Other training specific to my role

Your role at this school

6. In which school sector do you teach?

- ☐ Government
- ☐ Catholic
- ☐ Independent

7. At what type of school do you teach?

- ☐ Primary
- ☐ Secondary
- ☐ Central or K/P - 12 School
- ☐ Other (please specify)

8. In which state or territory do you teach?

- ☐ Western Australia
- ☐ Northern Territory
- ☐ Queensland
- ☐ New South Wales
- ☐ Victoria
- ☐ Tasmania
- ☐ Australian Capital Territory
- ☐ South Australia

* 9. What is your main role in the school?

- | | |
|--|---|
| <ul style="list-style-type: none"> <input type="radio"/> Teacher's Aide <input type="radio"/> Teacher Librarian <input type="radio"/> School Counsellor <input type="radio"/> Support Teacher <input type="radio"/> Aboriginal Education Assistant <input type="radio"/> Teacher <input type="radio"/> Other (please specify) | <ul style="list-style-type: none"> <input type="radio"/> Head Teacher <input type="radio"/> Deputy Principal <input type="radio"/> Assistant Principal <input type="radio"/> Principal <input type="radio"/> Stage Leader <input type="radio"/> Careers Adviser |
|--|---|

* 10. What is your major affiliation, specialisation or role in the school?

- ☐ Careers
- ☐ English
- ☐ Human Society and Its Environment
- ☐ Languages
- ☐ Mathematics
- ☐ Personal Development, Health and Physical Education
- ☐ Science
- ☐ Creative Arts
- ☐ Technology and Applied Studies
- ☐ Primary teacher (all KLAs)
- ☐ Executive and administration
- ☐ Welfare
- ☐ Special Education
- ☐ Library
- ☐ Other (please specify)

* 11. What is the basis of your employment at this school?

- ☐ Permanent
- ☐ Permanent part-time
- ☐ Temporary
- ☐ Casual
- ☐ Other (please specify)

* 12. Please indicate the Year level of students you teach (tick all that apply)

- ☐ F – 6
- ☐ 7 – 9
- ☐ 10 – 12
- ☐ Other (please specify)

* 13. How many years of experience have you had as an educator in schools?

- ☐ 0-2 years
- ☐ 3-5 years
- ☐ 6-10 years
- ☐ 11-15 years
- ☐ 16-20 years
- ☐ More than 20 years

14. In your professional experience, to what extent have you worked in schools with:

	Not at all	Very little	Somewhat	To a great extent
Aboriginal and/or Torres Strait Islander students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students from low-socioeconomic status (SES) backgrounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students from regional and/or remote areas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students with a language background other than English	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Students with a disability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Course Evaluation

* 15. Please indicate your level of agreement with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree
The course was easy to use	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course looks attractive	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The length (duration) of the course is appropriate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The content of the course is useful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The course has made me question my beliefs about students' aspirations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* 16. Please indicate your level of agreement with the following statements:

	Strongly disagree	Disagree	Somewhat disagree	Neither agree or disagree	Somewhat agree	Agree	Strongly agree
I have developed new knowledge of theories to help further build my understanding of the challenges students face in achieving their aspirations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have come away with new knowledge about students' aspirations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have come away with new strategies for helping students navigate pathways to university (skills)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have gained an increased understanding of methods to help students navigate pathways to university	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I plan to incorporate what I've learned into my teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The modules would provide valuable professional development for teachers in my school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My school would benefit from incorporating some strategies from the modules into our school plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. If you would like to elaborate on any of your answers, please do so here:

* 18. The professional learning courses are:

- ☐ Great
- ☐ Good
- ☐ Satisfactory
- ☐ Poor
- ☐ Other (please specify)

19. What do you like most about the course?

20. What could be added to the course to improve its usefulness?

* 21. Have you used the course in developing personal plans and strategies?

22. Have you used the modules in developing school plans and strategies? If so, please provide any related documentation e.g., web links, teaching plans, strategic plans

23. How else could the course be improved?

You have now reached the end of the survey.

24. We appreciate your feedback. Do you have any further comments about this survey, or do you have anything else you would like to say in relation to the professional learning course?

Thank you for your time today.

Please click 'Done' to complete the survey

Appendix 2: professional development in equity interventions for school teachers

Interview schedule.

1. To what extent would the modules be valuable professional development for teachers in your school?
2. To what extent do you feel that the modules are:
 - a) Easy to use? b) Well presented? c) Interesting d) Targeting the appropriate school level (primary, secondary, senior secondary)?
3. To what extent did you discuss the topics with other teachers
- a) At your school? b) Online? c) How useful were these discussions?
4. What are your thoughts on the length of the modules?
5. How might the modules be useful for formal professional development/learning requirements in your school?
- a) Are you required to do a specific number of hours for professional development/learning? b) Are the modules the right type and length to be considered professional development/learning at your school? (Prompt: for Department of Education or Catholic Education Office/Diocese purposes)
6. What do you like most about the modules?
7. What new strategies, if any, did you learn for helping students navigate pathways to university?
8. What new information did you learn that might change how you support students in their aspirations?
- a) Do you feel you have gained confidence in your ability to support students' aspirations for university? Why / why not?
9. How might you incorporate what you've learned into your teaching?
10. How useful are the modules in supporting development of professional/ school plans and strategies?
11. What could be added to or removed from the modules to improve their usefulness?
12. How else could the modules be improved?
13. Is there anything else that could enhance the professional learning that you gain from these modules (prompts: leadership, scaffold, support, resources)?
14. Any other feedback?

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Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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