

What do teachers think about their Aboriginal students' motivation and engagement?

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ARTICLE INFO

Keywords:

Aboriginal education
First Nations education
Collaborative partnerships

ABSTRACT

The current study examined the ways teachers in Australia think about their Aboriginal students' motivation and engagement. In collaboration with the Blak Caucus – a group of Aboriginal education experts and leaders – we investigated the extent to which there were different profiles of teachers and the implications of these profiles for other teaching beliefs. With data from Australian teachers ($N = 505$) corroborated with the experience and expertise of the Blak Caucus, we found evidence of four profiles (Positive, Deficit, Complacent, and Mixed profiles) that were associated with different teaching beliefs. Alongside teaching implications, this article contributes an approach to the integration of quantitative analyses and the expertise of Aboriginal community leaders.

1. Introduction

The current study investigates teachers' perceptions of their Aboriginal¹ students' motivation and engagement in the classroom. Although there has been research involving students and teachers reporting on their motivation and engagement, there is little research on how teachers perceive these constructs in their Aboriginal students. Teachers' perceptions of their students can have significant implications for students' learning (Johnston et al., 2019; Papageorge et al., 2020), and this is especially the case for student populations that are often subject to deficit discourses (Dandy et al., 2015; Johnston et al., 2019; Riley & Ungerleider, 2012). When teachers hold more positive perceptions of their students, students tend to have more positive learning outcomes (Lazarides & Watt, 2014; Papageorge et al., 2020; Rubie-Davies et al., 2006). Understanding the nature of teachers' beliefs about Aboriginal students' motivation and engagement helps us to better understand how they might approach teaching in their classrooms and associations with other teaching constructs (e.g., relationships with Aboriginal students).

Harnessing a latent profile analysis (LPA) that was corroborated with a group of Aboriginal education experts and leaders (the Blak² Caucus, described below), the study investigates the potential for different profiles of teachers when it comes to their perceptions of Aboriginal students' motivation and engagement. The study also investigates the extent to which there are differences between the profiles in terms of demographic variables (e.g., career stage, school location) and other teaching beliefs (e.g., relationships with Aboriginal students). Thus, the study seeks to provide an initial look into the ways teachers think about their Aboriginal students' motivation and engagement and associations with other teaching variables.

Alongside investigating substantive research questions about teachers' perceptions of Aboriginal students, the study presents one approach to prioritizing the voices of Aboriginal education experts and leaders in quantitative designs. In *Contemporary Educational Psychology's* recent special issue "Methodological and theoretical guidance: Moving educational psychology towards anti-racist bodies of knowledge" (López & DeCuir-Gunby, 2025), researchers highlight the importance of anti-racist research in educational psychology, particularly through the

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¹ In this study, we primarily use the term Aboriginal to refer to the first Peoples, Countries, and Communities of Australia. On some occasions, we also use the terms Aboriginal and Torres Strait Islander or name a specific Aboriginal Country or language. We acknowledge that Aboriginal Countries and cultures are not a monolith and that other terms may be more appropriate or preferred in other contexts.

² For readers outside of the Australian context, Blak is a term coined by Aboriginal artist Destiny Deacon to articulate an Indigenous-defined identity distinct from colonial constructions of "Blackness." Within Aboriginal politics, Blak operates as a reclamation of language and power — a proud, assertive expression of Indigenous sovereignty, resilience, and cultural presence in a colonised Australian context.

centering of BIPOC voices in educational psychology research (e.g., Aguilar et al., 2025; Kumar, 2025; Lopez & Cuasialpud-Canchala, 2025). In the current study, we present one such approach via a collaboration with the Blak Caucus.

The Blak Caucus are a group of Aboriginal education experts and leaders who have significant experience in working with schools and school systems, leading Community-driven change, and advocating for the rights of Aboriginal students in their local Communities. The Blak Caucus worked with other researchers on the project to corroborate the profiles generated in the LPA as well as discuss potential research directions for investigating demographic and belief differences among the profiles. Together, the study investigates an important question about teachers' perceptions of Aboriginal students' motivation and engagement using an approach that centers the experiences and expertise of Aboriginal education leaders.

1.1. Motivation and engagement: adaptive and maladaptive constructs

Motivation and engagement are two psychological constructs that are studied extensively in educational contexts. Motivation typically refers to students' drive and desire to learn while engagement refers to the behaviors that stem from this drive (Martin et al., 2017). Both constructs have been conceptualized in many ways in different theoretical frameworks, including, for example, expectancy-value theory (Eccles & Wigfield, 2023; Wigfield & Eccles, 2000; Wigfield and Allan, 1994), wherein motivation is conceptualized into expectations of success (e.g., self-efficacy, self-concept) and valuing of that success; self-determination theory which describes different sources of motivation varying in terms of their external to internal components (Deci & Ryan, 2017; Ryan & Deci, 2000, 2017); and social-cognitive theory that describes students' development of self-efficacy (Bandura, 1997). Major engagement frameworks tend to emphasize cognitive, behavioral, and emotional components of engagement (Fredricks et al., 2004); and research has begun to consider agentic engagement – or the role that students themselves play in creating learning environments that meet their goals and aspirations (Reeve, 2013). Taken together, motivation and engagement are major areas of educational research and that have significant links with students' academic outcomes (e.g., Martin, 2009). However, much of the motivation and engagement literature tends to consider these constructs separately, despite evidence of their interconnection (Martin et al., 2017).

One theoretical approach to conceptualizing these constructs stems from the Motivation and Engagement Wheel (MEW; Martin, 2007). This framework groups different manifestations of these constructs into adaptive and maladaptive forms. Developed by Martin (2007; see also Liem & Martin, 2012; Martin, 2009), the MEW proposes that adaptive motivation refers to students' positive beliefs about learning, including self-efficacy, valuing, and mastery orientations to schoolwork. Adaptive engagement encompasses positive behaviors, exemplified by students' planning their schoolwork, managing their time, and persisting through difficult or challenging coursework. In contrast, maladaptive motivation is conceptualized as negative beliefs about school, including feelings of anxiety, being pre-occupied about avoiding failure, and uncertainty in the level of control one has over their academic outcomes. Maladaptive engagement encompasses negative behaviors in learning, including self-handicapping or disengagement. Adaptive motivation and engagement constructs have been found to be positively associated with several academic outcomes (e.g., academic achievement, participation, enjoyment) whereas maladaptive constructs tend to be negatively associated with such outcomes (Martin, 2009).

It is possible for adaptive and maladaptive constructs to coexist at the same time (e.g., Yu et al., 2019), as these motivation and engagement constructs are not conceptualized to be on a continuum with the maladaptive constructs on one end and the adaptive constructs on the other. Rather, it is possible for students to hold both adaptive and maladaptive constructs simultaneously. Researchers have found evidence of different

combinations (or profiles) of adaptive and maladaptive beliefs, with some students demonstrating high adaptive beliefs and low maladaptive beliefs, others demonstrating a mixture of high adaptive and maladaptive beliefs, and others demonstrating relatively average levels on all constructs (Yu et al., 2019; Yu et al., 2022). In research examining teachers' self-reports of workplace motivation and engagement, there is also evidence of different adaptive and maladaptive combinations, similar to the student studies (Collie & Martin, 2017). Importantly, these distinct motivation and engagement profiles are associated with various outcomes, such as well-being (Collie & Martin, 2017). Although there is initial evidence that students and teachers can hold different combinations of these constructs about themselves, researchers have yet to examine teachers' perceptions of their Aboriginal students' motivation and engagement and the implications of these perceptions for students' educational development (Lewthwaite et al., 2017).

1.2. Importance of teacher perceptions

Understanding teachers' perceptions of Aboriginal students' motivation and engagement is particularly important. Overall, teachers' perceptions of their students matter (Johnston et al., 2019; Papageorge et al., 2020) as they can play a significant role in students' learning outcomes (Johnston et al., 2019) and in teachers' approaches to teaching (Rubie-Davies, 2007). For example, higher expectations of students' learning have been positively associated with higher academic achievement (Rubie-Davies et al., 2006), more adaptive motivational beliefs in students (Lazarides & Watt, 2014), and increased likelihood of completing tertiary education (Papageorge et al., 2020). This is because teachers' perceptions of their students influence the ways in which they treat their students (Johnston et al., 2019; Rubie-Davies, 2007). Thus, it is also possible that the ways in which teachers think about their students' motivation and engagement are associated with other outcomes, such as their relationships with their students or approaches to classroom teaching.

These beliefs are especially relevant when considering the ways teachers think about various student populations. In Australia, Aboriginal students often face significant experiences of racism and negative stereotypes in school (Dandy et al., 2015; Moodie et al., 2019), sometimes stemming from the teachers in their classrooms (Moodie et al., 2019). For example, researchers have noted that teachers tend to have significantly lower academic expectations for Aboriginal students than peers from other cultural or ethnic backgrounds (Dandy et al., 2015; Johnston et al., 2019; Riley & Pidgeon, 2019). Teachers themselves acknowledge these lower expectations, perhaps stemming from stereotypical deficit thinking, training in initial teacher education, or a lack of intercultural competency (Riley & Pidgeon, 2019).

Deficit thinking in particular may be linked to assumptions that Aboriginal students are not academically motivated or engaged. Regarding motivation, research suggests some teachers believe that education is not as valued or as prioritized for Aboriginal students, families, or communities, despite empirical evidence finding otherwise (Guenther et al., 2019; McInerney et al., 2012). For engagement, previous work has shown that some teachers believe Aboriginal students are more likely to be disengaged in school (Riley & Pidgeon, 2019). In contrast, one early study found that Aboriginal students were satisfied with many aspects of school – except for the attitudes of their teachers towards them (Godfrey et al., 2001). Similar patterns are often present for many Indigenous populations who are subjected to the effects of colonization around the world (Riley & Ungerleider, 2012; Rubie-Davies et al., 2006) as well as other ethnic minority groups in predominantly white countries (McKown & Weinstein, 2008; Papageorge et al., 2020).

These experiences can have a profound impact on students' interest in learning and continuing education (Papageorge et al., 2020) and students' beliefs about their own academic abilities (Moodie et al., 2019). As there is existing evidence that teachers in Australia hold different expectations and perceptions of Aboriginal students (Riley &

Pidgeon, 2019), further research is an important component of improving educational outcomes for Aboriginal students in Australia (Lewthwaite et al., 2017). Thus, in the current study, we investigate the potential for different profiles of teachers' perceptions of their Aboriginal students' motivation and engagement as well as the associations between these profiles and other teaching beliefs (e.g., relationships with Aboriginal students). We conduct this research in collaboration with a group of Aboriginal education experts and leaders known as the Blak Caucus.

1.3. The Blak Caucus

The Blak Caucus is a group of Aboriginal education experts and leaders who work with teachers around schools in New South Wales (NSW; Australia's most populous state) to develop more inclusive curriculum and pedagogy and to facilitate more genuine connections between schools and their local Aboriginal Communities. Members of the Blak Caucus are significant leaders in their local Communities, hold invaluable expertise in the history, culture and customs of their Communities, and have significant experience working with schools, teachers, and school systems. Moreover, Blak Caucus members are active participants of their local Aboriginal Education Consultative Group (AECG), with many holding leadership positions. The AECG are the peak advisory body in NSW that advocate for the educational rights of Aboriginal people through Community consultation and aspirations. Together, Blak Caucus members hold significant expertise in schools and school systems while actively leading Community-driven change for Aboriginal students in NSW.

The Blak Caucus is one of the cornerstones of the Culturally Nourishing Schooling (CNS) project, a whole-of-school reform project aimed at lifting the learning outcomes and school experiences of Aboriginal and Torres Strait Islander students in Australia. It seeks to explore what strategies develop and support genuine cultural inclusion and improvement of educational outcomes for Aboriginal and Torres Strait Islander students in schools. The project is conducted at eight schools across urban, regional, and remote parts of NSW. These schools live within many Countries, Communities, and Nations, including: Cadigal of the Eora Nation; Wiradjuri, the meeting place of the Wiradjuri, Gamilaroi, and Wailwan peoples; Barkindji and Ngiyampaa peoples living on Wiradjuri Country; Wodi Wodi of the Dharawal Nation; Nganduwal and Minyungbal of the Bundjalung Nation; and the Saltwater Aboriginal people of Coastal Sydney, the descendants of whom make up the La Perouse Aboriginal Community. Involving teachers, Aboriginal Communities, school leaders, students, and families, the project is guided by four overarching aims: to nourish the cultural identities of Aboriginal and Torres Strait Islander students, empower teachers to develop culturally responsive pedagogic practices, facilitate micro-treaty making and engagement between schools and local Aboriginal communities, and lead transformative whole-of-school change. The Blak Caucus plays a significant role within the CNS project and in their respective schools and Communities.

The importance of doing research in Aboriginal education with, by, and for Aboriginal peoples cannot be understated. Quantitative studies that harness LPAs typically explore potential profile differences through suggestions and results from previous research studies or through conceptual and theoretical considerations. Motivation research has historically been focused on white students and Western conceptualizations of motivation and engagement (Kumar, 2025; López & DeCuir-Gunby, 2025; Matthews & López, 2020; Usher, 2018). The Blak Caucus have decades of leadership in working with Australian teachers and Aboriginal students. They provide significant insight and expertise into the ways in which teachers often interact with and perceive Aboriginal students in their classroom that go beyond existing theoretical considerations. Based on their professional and personal lives, the Blak Caucus' partnership in this project provides insights into the data analysis beyond the other researchers' capabilities. This was considered a

purposeful methodological element to counter existing approaches where researchers with little personal experience in these matters are left to interpret data relevant to Aboriginal students' experiences at school (see [Supplementary Online Material](#) for background information on the authorship team). Although there are similar research techniques (e.g., Delphi methods, where researchers consult expert panels to help make decisions in the research process), they have yet to be integrated into quantitative analyses in this way (see also López & Cuasialpud-Canchala, 2025). Thus, we include the insights of the Blak Caucus to explore the ways in which teachers' perceptions may be associated with other beliefs about and approaches to teaching Aboriginal students.

1.4. Aims of the present investigation

The aim of the current investigation is to investigate teachers' perceptions of their Aboriginal students' motivation and engagement and the associations of these perceptions with other teaching beliefs. More specifically, we wanted to understand:

- Are there different profiles of teachers when it comes to their perceptions of Aboriginal students' adaptive motivation, adaptive engagement, maladaptive motivation, and maladaptive engagement?
- To what extent are the profiles associated with other teaching variables, such as teachers' demographic background factors (e.g., teaching experience) or other substantial teaching beliefs (e.g., relationships with Aboriginal students)?

Alongside the overarching research aims, we sought to actively incorporate the expertise and experiences of Aboriginal education experts into the quantitative analyses. As educational psychology continues to call for research that prioritizes the voices of Aboriginal education experts (López & Cuasialpud-Canchala, 2025), we believe the current study presents one such approach through the collaboration with the Blak Caucus.

2. Methods

2.1. Survey participants and procedure

Teachers ($N = 505$) from across the Australian continent participated in an online survey. The demographics of the participants were similar to the general teaching population (Australian Bureau of Statistics, 2024). There were more female (78.6%) than male teachers (21.0%) and two teachers did not identify with either of these genders (0.4%). Most participants did not identify as Aboriginal or Torres Strait Islander (95.2%), though 3.0% identified as Aboriginal, 0.4% identified as Torres Strait Islander, and 1.4% identified as both. Most participants reported primarily speaking English at home (96.0%). Other languages included: Aboriginal languages, a Torres Strait Islander language, Cantonese, Vietnamese, Arabic, Greek, Spanish, German, Italian, and Mandarin. On average, participants were 37 years of age ($SD = 11.5$ years). The majority of the sample held a Bachelor's degree (52.5%), followed by a postgraduate qualification (39.6%), with few participants reporting a high school qualification or a teaching diploma (7.9%). More than half of the participants had more than 5 years of teaching experience (65.7%) and most had been employed at their current school for more than one year (78.6%). Participants taught in a variety of contexts, including: single-sex (8.9%) and co-educational schools (91.1%); public (70.1%), private (15.6%), and catholic (13.7%) schools; primary (44.0%) and secondary (58.6%) schools; and in metropolitan (55.4%), regional (33.9%), and remote contexts (2.8%). Location data from the participant sample is demonstrated in Fig. 1.

Participants were recruited via an independent data collection company (Qualtrics) to participate in the survey. The only criterion for inclusion was that participants were current teachers in Australia who



Fig. 1. Visual representation of participants in this study.

taught in Years 3–12. If they agreed to participate in the study, they were compensated for their time.

2.2. Measures

We asked teachers to report on a variety of demographic information as well as substantive items relevant to their beliefs about their Aboriginal students’ motivation and engagement, their experiences in teaching Aboriginal curriculum and perspectives, and interactions with Aboriginal students. Participants responded to all substantive constructs on a Likert-style response format from 1 (Strongly Disagree) to 5 (Strongly Agree). All descriptive and reliability statistics are reported in Table 1. Reliability for all constructs was assessed using McDonald’s Omega (McNeish, 2018).

2.2.1. Aboriginal students’ motivation and engagement

We measured these beliefs using an adapted version of the Motivation and Engagement Scale for teachers (Martin, 2010). Initially developed to assess students’ motivation and engagement (Martin, 2007), the scale has been successfully adapted for teachers (Collie & Martin, 2017). In this study, the scale was adapted to assess teachers’ perceptions of their Aboriginal students’ motivation and engagement.

Adaptive motivation (3 items) refers to positive beliefs about learning, including self-efficacy, valuing, and mastery orientation (e.g., “My Aboriginal and Torres Strait Islander students are focused on learning and improving more than competing and being the best”). *Adaptive engagement* (3 items) refers to positive behaviors related to students’ learning, such as task management, persistence, and planning (e.g., “My Aboriginal and Torres Strait Islander students use their study time well and try to study under conditions that bring out their best”). *Maladaptive motivation* (3 items) describes negative learning beliefs, including thoughts of anxiety, avoiding failure, and uncertain control (e.g., “My Aboriginal and Torres Strait Islander students mainly do their

Table 1
Descriptive statistics for substantive constructs.

	M	SD	Skew	Kurtosis	Omega	$ \lambda $
<i>Motivation and engagement</i>						
Adaptive Motivation	3.90	0.75	-0.81	0.80	0.70	0.44–0.89
Adaptive Engagement	3.15	0.91	-0.06	-0.42	0.84	0.75–0.83
Maladaptive Motivation	3.23	0.75	0.17	0.02	0.63	0.41–0.70
Maladaptive Engagement	3.41	0.91	-0.40	-0.09	0.71	0.69–0.80
Valuing of teaching Aboriginal perspectives	4.28	0.72	-1.33	2.15	0.85	0.68–0.85
<i>CRT practices</i>						
Understanding Community	3.51	0.87	-0.53	0.15	0.81	0.74–0.79
Curriculum Work	3.65	0.82	-0.52	0.21	0.85	0.74–0.88
Reflexive Discussions	3.46	0.99	-0.39	-0.46	0.89	0.78–0.91
Collaborative Teaching Practices	3.41	1.00	-0.45	-0.40	0.91	0.82–0.92
Learning Through Cultural Mentorship	3.14	1.09	-0.31	-0.51	0.92	0.88–0.91
<i>Relationships with Aboriginal students</i>						
Satisfaction	4.29	0.69	-1.09	1.26	0.89	0.72–0.84
Instrumental Help	3.63	0.76	-0.34	0.03	0.85	0.61–0.80
Lack of Connection	3.12	0.83	-0.27	-0.15	0.79	0.51–0.73

schoolwork to avoid failure or disapproval from parents or the teacher/s”). *Maladaptive engagement* (2 items) refers to negative learning

behaviors such as disengagement and self-handicapping in the classroom (“My Aboriginal and Torres Strait Islander students often feel like giving up in school or schoolwork”). These motivation and engagement constructs were modelled as error-adjusted mean scores in the LPA (see Data Analysis section, below).

2.2.2. Valuing of teaching Aboriginal perspectives

Participants responded to four items from the Motivation and Engagement Scale – Work (Martin, 2010). An example item from the scale is ‘Learning about Aboriginal and Torres Strait Islander perspectives is as important as learning about other aspects of history and society.’ This was modelled as a manifest mean score in the SEM (see Data Analysis section, below).

2.2.3. Culturally responsive teaching beliefs

For CRT practices, participants responded to items from the recently developed CRT scale (Bostwick et al., 2025). This scale focuses on five subcategories of CRT that are especially important in the Australian context (Bostwick et al., 2025). These included: understanding Community (3 items; ‘I have a good understanding of the history of the local Aboriginal and Torres Strait Islander community’), curriculum work (3 items; ‘I look for opportunities to design and deliver curriculum activities based on local Aboriginal and Torres Strait Islander history and perspectives’), reflexive discussions (3 items; ‘I read and discuss with my colleagues how history and racism impact Aboriginal and Torres Strait Islander students’ school experience’), collaborative teaching practices (3 items; ‘I work closely with colleagues to critically reflect on how I teach Aboriginal and Torres Strait Islander perspectives, and the learning outcomes the students work towards achieving’), and learning through Cultural Mentorship (3 items; ‘The school’s Cultural Mentor (or similar) has helped me to know more about the history of the local Aboriginal and Torres Strait Islander community’). CRT practices all demonstrated strong reliability (see Table 2) and were modelled as five manifest mean scores in the SEM.

2.2.4. Relationships with Aboriginal students

Teachers responded to items adapted from Ang’s (2005) framework assessing three areas of teachers’ perceived relationships with students: satisfaction (5 items; ‘I would describe my relationship with Aboriginal and Torres Strait Islander students in my class as positive’), instrumental help (5 items, ‘If an Aboriginal and Torres Strait Islander student in my class needs help, they are likely to come to me’), and lack of connection (5 items, ‘I don’t always understand the issues or challenges facing Aboriginal and Torres Strait Islander students in my class’).

2.2.5. Demographic information

Demographic variables included personal and professional background information. Personal information included participants’ gender identity (male = 0, female = 1) and Aboriginal and Torres Strait Islander identity (no = 0, yes = 1). Professional information included teaching qualification (non-postgraduate = 0, postgraduate = 1), the percentage of Aboriginal students in their classroom, teaching experience (more than five years = 0, less than five years = 1), and previous relevant professional development. Participants indicated if they had previously engaged in professional development focused on teaching Aboriginal or

Torres Strait Islander students, teaching Aboriginal or Torres Strait Islander perspectives, or engaging with Aboriginal Communities (all coded: no = 0, yes = 1). Participants could have completed this professional development at any point in their career, including as pre-service teachers. Finally, participants reported their school postcode which was recoded in line with categories from the Australian Bureau of Statistics classifications for *major city, regional, and remote locations* (ABS, 2024). If a postcode was classified in more than two categories, the more remote classification was used. For example, if a postcode was classified as both a major city and regional, it was coded as regional in our analyses. Dummy coded variables were used to represent these data, with the major city category used as the reference group.

2.3. Data analysis

Given the incorporation of the perspective of the Blak Caucus into the study design, we describe the data analyses for the current study in three phases for clarity. Phase One focuses on the LPA analyses of teachers’ perceptions of their Aboriginal students’ motivation and engagement. Phase Two focuses on insights from the Blak Caucus on the profiles generated in Phase One. Phase Three focuses on the subsequent SEM used to investigate associations between profile membership and teachers’ background factors and other teaching beliefs.

2.3.1. Phase one

In Phase One, we used confirmatory factor analysis (CFA) and LPA to examine the data. Analyses were conducted in *Mplus* (Muthén & Muthén, 2017) and the *Mplus* default, full information maximum likelihood, was used to handle missing data. CFA was used to examine the latent measurement structure of the four motivation and engagement constructs. If the factor structure was appropriate, an LPA was conducted with error-adjusted mean scores of the constructs. These error-adjusted mean scores were calculated by accounting for the reliability and variance of the measures.

The LPA consisted of a series of models that estimated the mean levels of each construct for an increasing number of profile groups (k) to determine the number of different profiles in the sample. These profiles represent different groups of teachers in terms of the ways they think about their Aboriginal students’ motivation and engagement. This series of models helps us to determine how many different profiles exist in the data and what those profiles look like.

Two criteria were examined when determining how many different profiles were present in the data, including fit indices and qualitative differences in profiles. First, model fit was examined through Akaike Information Criteria (AIC), Bayesian Information Criteria (BIC), and sample size adjusted BIC (SSA-BIC), with lower values indicating better fitting models. We examined changes in these scores using elbow plots to determine where there were minimal changes in these scores as the number of profiles increased. For example, although increasing the number of profiles may lead to better fit indices (i.e., lower AIC, BIC, SSA-BIC), this decrease may be relatively minimal and not warrant a more complex (i.e., increased number of profile) solution. Second, we examined the profiles for qualitative differences. We wanted to make sure, for example, that the profiles in the solution represented true differences across groups rather than having two separate profiles that were only marginally conceptually different from one another.

2.3.2. Phase two

Phase Two focused on consultation with the Blak Caucus. We presented the profiles generated in the LPA to the Blak Caucus. In the presentation, the first author explained that its purpose was to get feedback on some initial data analysis of this study (phase one data analysis) and to try to generate additional research impressions to be explored in the data (phase three data analysis). The Blak Caucus were assured there were no wrong answers and that the research team would do their best to explore any research impressions that were generated in

Table 2
Entropy, AIC, BIC, and SSA-BIC for increasing profile numbers.

# of Profiles	Entropy	AIC	BIC	SSA-BIC
1	1.000	5331.30	5390.44	5346.00
2	0.880	5264.71	5344.98	5284.67
3	0.876	5213.98	5315.37	5239.19
4	0.838	5163.72	5286.23	5194.18
5	0.859	5154.27	5297.90	5189.98
6	0.870	5125.17	5289.93	5166.14

the discussion. They were also told that some research impressions may not be testable within the data at hand, given that data collection had already taken place, but that the Blak Caucus should feel free to discuss any and all ideas that came to mind. Some initial prompts for the discussion with the Blak Caucus included: To what extent do the profiles resonate with you? Do you think certain teachers are more or less likely to be in each profile? What labels would you give each profile? What do you think are the implications of these different profiles for thinking about teacher and student outcomes? To prevent the first author from inadvertently guiding the research impressions, the first author had not explored any potential associations with profile membership prior to the discussion with the Blak Caucus.

2.3.3. Phase three

After the discussion with the Blak Caucus, we explored the research impressions with SEM. Using notes from our conversation in phase two, we identified variables available in the dataset to explore the research impressions (e.g., school location would be associated with profile membership).

We used the three-step approach to analyzing profile differences (Asparouhov & Muthén, 2014). We saved the posterior probabilities and most likely profile membership from the LPA. We then used these specifications in a model that included all demographic factors (i.e., gender, teaching experience, educational qualification, Aboriginal or Torres Strait Islander descent, percentage of Aboriginal students, professional development experience) as well as all teacher belief variables (i.e., valuing of teaching Aboriginal perspectives, CRT belief variables, and teacher-student relationships variables). Thus, we were able to determine if certain demographic factors were associated with profile membership and if profile membership was associated with other teacher belief variables. Importantly, the relationship between profile membership and teacher belief variables accounted for the potential influence of demographic factors.

3. Results

3.1. Phase one

As shown in Table 1 descriptive statistics, all motivation and engagement constructs were approximately normally distributed. CFA

models demonstrated good psychometric properties, with all factor loadings >0.40. Although reliabilities were acceptable, we accounted for any unreliability in the measures by using error-adjusted mean scores for the LPAs. In these LPAs, we examined the extent to which there were different profiles of teachers in relation to the ways they thought about their Aboriginal students' motivation and engagement.

The elbow plots of the AIC and BIC suggested a four-profile solution (see Table 2). Profile 1 contained the largest group of participants (65%) and means for the four motivation and engagement constructs were all close to the sample averages. Profile 2 was characterized by a rather deficit view of Aboriginal students' motivation and engagement, with below average ratings for both adaptive constructs and higher than average agreement with the maladaptive engagement construct. This was the smallest group in the sample (9%). Profile 3 (11%) demonstrated an opposite pattern to Profile 2, with higher-than-average agreement for both adaptive constructs and disagreement for both maladaptive constructs. Profile 4 demonstrated a mix of adaptive and maladaptive beliefs (15%). Standardized means for the constructs by profile groups are presented in Fig. 2. We also tested profiles to determine if the means for each construct were significantly different across profiles (e.g., was the mean for adaptive motivation in Profile 1 significantly different to adaptive motivation in other profiles?). Given all but three comparisons were significantly different ($ps < 0.04$), for parsimony we report on the non-significant effects, as follows: Profile 3 was not significantly different to Profile 4 in adaptive motivation ($p = 0.96$); Profile 2 was not significantly different to Profile 1 in maladaptive motivation ($p = 0.71$); and, Profile 2 was not significantly different to Profile 4 in maladaptive engagement ($p = 0.55$). Having empirically identified the 4-profile solution, we moved to phase two of the study with the Blak Caucus.

3.2. Phase two

We presented the four-profile solution to the Blak Caucus. Five members attended the live online presentation and other members accessed the recorded presentation. The first author took notes of the conversation and asked clarifying questions where appropriate. The post-presentation discussion lasted about 20 min. The profiles resonated with the Blak Caucus, with members readily identifying teachers who they had previously worked with who might fit into each of the profiles

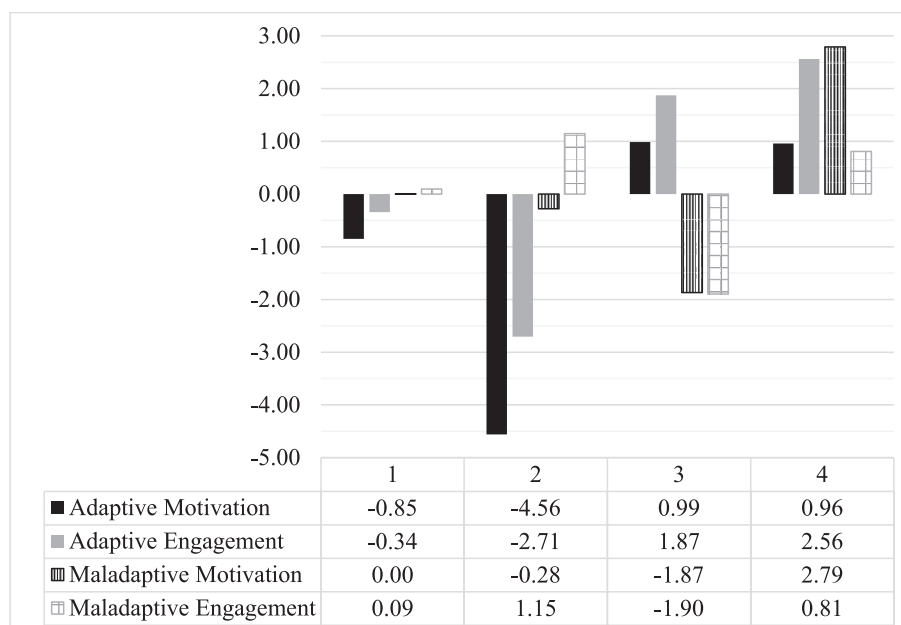


Fig. 2. Standardized four profile solution from the LPA.

presented. Together, the Blak Caucus discussed possible names for the profiles: Profile 1 emerged as the Complacent Profile, Profile 2 the Deficit Profile, Profile 3 the Positive Profile, and Profile 4 the Mixed Profile.

During the conversation, the Blak Caucus generated 5 auxiliary research impressions that could be explored within the data, three of which related to who belonged in each profile (demographic impressions) and two of which related to the implications of these profiles in other teaching outcomes (implication impressions). The research impressions were:

1. Complacent Profile (Profile 1) would most likely be located in a rural setting.
2. Complacent Profile (Profile 1) would most likely be older/ more experienced teachers.
3. Mixed Profile (Profile 4) would have participated in most professional development about Aboriginal education.
4. Positive and Mixed Profiles (Profiles 3 and 4) would most likely think that programs helping teachers to develop more inclusive curriculum are important, whereas the Complacent and Deficit Profiles (Profiles 1 and 2) would be least likely to see these types of programs as important.
5. Positive and Mixed Profiles (Profiles 3 and 4) would have the most positive relationships with Aboriginal students.

3.3. Phase three

In line with the research impressions generated by the Blak Caucus, we explored potential associations between profile membership and other teacher factors using SEM. This included investigating the association between profile membership and the location of their school (see research impression #1 in phase 2 results), participants' teaching experience (see research impression #2), their previous professional development experiences (see research impression #3). It also included investigating associations with other teacher belief constructs via valuing of teaching Aboriginal perspectives (research impression #4), culturally responsive teaching practices (research impression #4), and relationships with Aboriginal students (research impression #5).

Full model results are presented in Tables 3–8. We used the Complacent Profile as the reference group for these analyses because it was the profile with the largest proportion of participants. However, we provide alternative parameter estimates in supplementary online material for transparency and for future research (see Tables S1–S3).

Table 3

Likelihood of profile membership by demographic (with the complacent profile as the reference group).

	Deficit profile				Positive profile				Mixed profile			
	b	SE	p	OR	b	SE	p	OR	b	SE	p	OR
Gender	0.48	0.44	0.283	1.61	-0.54	0.42	0.200	0.58	0.24	0.45	0.586	1.28
Teaching Experience	0.88	0.43	0.041	2.40	-0.82	0.40	0.039	0.44	0.81	0.40	0.044	2.25
Qualification	0.72	0.47	0.126	2.05	-0.29	0.34	0.393	0.75	0.02	0.41	0.961	1.02
Aboriginal or Torres Strait Islander Descent	-1.06	1.08	0.329	0.35	-25.12	0.00	—	0.00	0.48	0.84	0.572	1.61
Percentage of Aboriginal Students	0.00	0.02	0.912	1.00	-0.02	0.03	0.445	0.98	0.03	0.01	0.006	1.03
<i>Professional development</i>												
Teaching Aboriginal Students	0.29	0.60	0.633	1.34	0.00	0.53	0.995	1.00	-0.14	0.64	0.826	0.87
Teaching Aboriginal Perspectives	-0.18	0.60	0.768	0.84	-0.44	0.60	0.46	0.64	0.11	0.63	0.859	1.12
Engaging with Community	0.24	0.60	0.696	1.27	1.24	0.53	0.019	3.44	<0.01	0.45	0.997	1.00
<i>School location</i>												
Regional School	0.07	0.48	0.888	1.07	0.10	0.34	0.76	1.11	-0.26	0.42	0.536	0.77
Remote School	1.40	0.83	0.091	4.05	0.78	0.72	0.278	2.18	-23.76	0.00	—	0.00

Note. Estimates with other profiles as the reference group are provided in SOM.

Gender (0 = Female, 1 = Male); Teaching experience (0 = More than five years, 1 = Less than five years); Qualification (0 = no postgraduate qualification, 1 = postgraduate qualification); Aboriginal or Torres Strait Islander Descent (0 = No, 1 = Yes), Regional School (0 = City, 1 = Regional), Remote School (0 = City, 1 = Remote), Professional Development items (0 = No, 1 = Yes).

Table 3 provides the parameter estimates (e.g., regression path, odds ratio [OR]) between the demographic information and profile membership. Table 4 shows the breakdown of teacher demographics by profile membership. Tables 5–7 show the mean differences between profiles on teacher belief variables (e.g., teacher-student relationships). The model did present some estimation warnings, as a relatively small percentage of the participants identified as Aboriginal and/or Torres Strait Islander (4.8%) and a relatively small percentage taught in remote schools (3.0%). We did run another model without these two variables and results were nearly identical. Thus, we report on the full model results that include both variables for completeness.

3.4. Demographic variables: research impressions #1–3

First, we report the extent to which covariates predicted profile membership to understand teacher demographics that may be most likely to belong to different profile groups. For school location (see research impression #1), there were no teachers in remote settings who were in the Mixed profile and few in the Positive or Deficit profiles, making it difficult to make robust statistical comparisons between groups (see Table 3). Teachers in remote schools were somewhat more likely to be in the Deficit profile ($b = 1.40, p = 0.09, OR: 4.05$), though this was only marginally significant.

With regard to teaching experience (research impression #2), in comparison to the Complacent profile, early career teachers were less likely to be in the Positive profile ($b = -0.82, p = 0.04, OR = 0.44$) and more likely to be in the Deficit profile ($b = 0.88, p = 0.04, OR = 2.40$) and the Mixed profile ($b = 0.81, p = 0.04, OR = 2.25$). With regard to professional development (research impression #3), there were no significant differences between the Complacent profile and the other profiles in their professional development related to teaching Aboriginal students ($ps > 0.63$) nor in their professional development in teaching Aboriginal perspectives ($ps > 0.46$). However, teachers who completed professional development related to engagement with Aboriginal communities were more likely to be in the Positive profile ($b = 1.24, p = 0.02, OR = 3.44$).

Overall, there was some support for the Blak Caucus' research impressions relating to teaching experience (research impression #2) as teachers with more experience were more likely to be in the Complacent profile than the Deficit or Mixed profiles (though less likely to be in the Positive profile). All details of these analyses are presented in Tables 3 and 4. This includes associations with other demographic variables included in the analyses for completeness (e.g., gender identity,

Table 4
Participant Demographics within each Profile by percentage.

	Complacent (Profile 1)	Deficit (Profile 2)	Positive (Profile 3)	Mixed (Profile 4)	Total
<i>Gender identity</i>					
Male	20.0%	23.4%	14.9%	33.3%	21.1%
Female	80.0%	76.6%	85.1%	66.7%	78.9%
<i>Early career teacher (five years or less)</i>					
Yes	31.3% ^a	48.9% ^a	24.3% ^a	51.7% ^a	34.3%
No	68.7%	51.1%	75.7%	48.3%	65.7%
<i>Educational qualification</i>					
Postgraduate	40.8%	48.9%	35.1%	31.0%	39.6%
Non-post grad	59.2%	51.1%	64.9%	69.0%	60.4%
<i>Aboriginal or Torres Strait Islander descent</i>					
Yes	3.7%	0.0%	0.0%	20.7%	4.8%
No	96.3%	100.0%	100.0%	79.3%	95.2%
<i>Percentage of aboriginal students</i>					
Mean %	7.0% ^a	8.5%	5.1%	14.4% ^a	7.7%
<i>Professional development – teaching aboriginal students</i>					
Yes	66.9%	63.8%	71.6%	48.3%	65.1%
No	33.1%	36.2%	28.4%	51.7%	34.9%
<i>Professional development – teaching aboriginal perspectives</i>					
Yes	62.3%	57.4%	66.2%	48.3%	60.8%
No	37.7%	42.6%	33.8%	51.7%	39.2%
<i>Professional development – engagement with aboriginal communities</i>					
Yes	60.4% ^a	59.6%	70.3% ^a	46.6%	60.2%
No	39.6%	40.4%	29.7%	53.4%	39.8%
<i>School location</i>					
Remote	2.4% ^b	11.6% ^b	2.9%	0.0%	3.0%
Regional	36.5%	39.5%	37.1%	35.7%	36.8%
Major City	61.1%	48.8%	60.0%	64.3%	60.2%

Note. The Complacent Profile is used as the reference group in these analyses. Indicators of significance (i.e., a, b) suggest that there is a significant difference between the profile and the reference group, not among all profiles. For analyses with other Profiles used as the reference group, see [Supplementary Online Material](#).

^a $p < 0.05$.

^b $p < 0.10$.

Table 5
Valuing of teaching aboriginal perspectives: means across profiles.

Profile	Valuing		
1. Complacent	4.06		
2. Deficit	3.44		
3. Positive	4.36		
4. Mixed	4.37		
<i>Tests of mean differences</i>			
	Difference	SE	p
1–4	–0.31*	0.10	0.001
1–3	–0.30	0.11	0.006
1–2	0.62	0.23	0.006
2–4	–0.93*	0.22	0.001
2–3	–0.92*	0.23	0.001
3–4	0.01	0.13	0.914

Note. There may be small inconsistencies in the difference between profiles due to rounding error.

*Significant difference after Bonferroni correction

Table 6
Culturally responsive teaching beliefs: means across profiles.

Profile	Understanding community			Curriculum work			Reflexive discussions			Collaborative teaching practices			Learning through cultural mentorship		
	Difference	SE	p	Difference	SE	p	Difference	SE	p	Difference	SE	p	Difference	SE	p
1. Complacent	3.25			3.26			3.22			3.16			2.88		
2. Deficit	2.93			2.83			2.85			2.79			2.32		
3. Positive	3.46			3.59			3.56			3.43			2.68		
4. Mixed	3.93			4.08			4.19			4.12			4.14		
<i>Tests of Mean Differences</i>															
1–4	–0.69*	0.12	0.001	–0.81*	0.10	0.001	–0.97*	0.12	0.001	–0.96*	0.14	0.001	–1.26*	0.12	0.001
1–3	–0.22	0.15	0.137	–0.33	0.15	0.027	–0.35	0.19	0.068	–0.27	0.17	0.106	0.21	0.21	0.320
1–2	0.31	0.20	0.113	0.43	0.18	0.019	0.37	0.25	0.135	0.37	0.24	0.123	0.56	0.28	0.044
2–4	–1.00*	0.21	0.001	–1.24*	0.19	0.001	–1.34*	0.24	0.001	–1.33*	0.24	0.001	–1.81*	0.27	0.001
2–3	–0.53	0.22	0.016	–0.76*	0.21	0.001	–0.71	0.27	0.008	–0.64	0.25	0.01	–0.35	0.30	0.24
3–4	–0.47	0.17	0.006	–0.48	0.16	0.002	–0.62*	0.19	0.001	–0.69*	0.19	0.001	–1.46*	0.20	0.001

*Significant difference after Bonferroni correction.

Table 7
Teacher-student relationships: means across profiles.

Profile	Satisfaction	Instrumental help	Lack of connection
1. Complacent	4.05	3.41	3.37
2. Deficit	3.60	2.82	3.64
3. Positive	4.65	4.09	2.68
4. Mixed	4.37	4.27	4.06

Tests of Mean Differences									
	Difference	SE	<i>p</i>	Difference	SE	<i>p</i>	Difference	SE	<i>p</i>
1-4	-0.32	0.10	0.001	-0.86*	0.09	0<.001	-0.69*	0.17	0<.001
1-3	-0.60*	0.08	0<.001	-0.68*	0.13	0<.001	0.69*	0.14	0<.001
1-2	0.45	0.19	0.021	0.59*	0.18	0.001	-0.27	0.15	0.072
2-4	-0.77*	0.20	0<.001	-1.45*	0.18	0<.001	-0.42	0.22	0.053
2-3	-1.05*	0.19	0<.001	-1.28*	0.19	0<.001	0.96*	0.18	0<.001
3-4	0.28	0.10	0.004	-0.18	0.13	0.170	-1.38*	0.21	0<.001

*Significant difference after Bonferroni correction

educational qualification, percentage of Aboriginal students in their classrooms, Aboriginal or Torres Strait Islander identity). Alternative parameterization is provided in Tables S1–S3.

3.5. Teaching beliefs: research impressions #4–5

After accounting for the influence of covariates on profile membership and the outcome variables, there were significant mean differences between profiles in relation to their other teaching beliefs (research impressions #4–5), including their valuing of teaching Aboriginal perspectives in the curriculum (1 construct), their culturally responsive teaching beliefs (5 constructs), and their perceptions of relationships with Aboriginal students (3 constructs). We tested for mean differences between all groups for all nine variables, resulting in 54 contrasts. Thus, we used a Bonferroni correction in interpreting results of these contrasts ($p < 0.001$, i.e., $0.05/54$). Details of these findings are presented in Tables 5–7.

In valuing of teaching Aboriginal perspectives (research impression #4), the Complacent profile was significantly lower than the Mixed profile ($Mdiff = -0.31, p = 0.001$) and the Deficit profile was significantly lower than both the Mixed ($Mdiff = -0.97, p < 0.001$) and Positive profiles ($Mdiff = -0.92, p < 0.001$). There was no significant difference between the Positive and Mixed profiles ($p = 0.91$) and there was no interpretable difference between the Complacent and Deficit profiles ($p = 0.006$). For full results, see Table 5 and Fig. 3.

In relation to CRT beliefs (research impression #4), the Mixed profile tended to demonstrate the highest CRT beliefs (see Table 6, Fig. 4). The Mixed profile was significantly higher on all CRT beliefs than both the Complacent ($ps < 0.001$) and Deficit profiles ($ps < 0.001$) for all variables. The Positive profile reported a significantly higher mean for Curriculum Work than the Deficit profile ($Mdiff = -0.76, p < 0.001$). The Mixed profile demonstrated significantly higher beliefs in Reflexive Discussions ($Mdiff = -0.62, p = 0.001$), Collaborative Teaching Practices ($Mdiff = -0.69, p < 0.001$), and Learning through Cultural Mentorship ($Mdiff = -1.46, p < 0.001$) than the Positive profile. There were no interpretable differences between the Deficit and Complacent profiles on any variable ($ps > 0.04$).

For teachers' perceptions of their relationships with Aboriginal students (research impression #5), teachers in the Positive and Mixed profiles tended to demonstrate the most positive outcomes. The Mixed profile demonstrated higher satisfaction ($Mdiff = -0.77, p < 0.001$) and instrumental help ($Mdiff = -1.45, p < 0.001$) than the Deficit Profile. The Mixed profile also demonstrated higher satisfaction ($Mdiff = -0.32, p = 0.001$), higher instrumental help ($Mdiff = -0.86, p < 0.001$), and less lack of connection ($Mdiff = -0.69, p < 0.001$) than the Complacent Profile. The Positive profile was significantly higher than the Complacent and Deficit profiles on satisfaction ($Mdiff = -0.60, p < 0.001$; $Mdiff = -1.05, p < 0.001$) and instrumental help ($Mdiff = -0.68, p < 0.001$; $Mdiff = -1.28, p < 0.001$), and was significantly lower on lack of connection ($Mdiff = 0.69, p < 0.001$; $Mdiff = 0.96, p < 0.001$). The

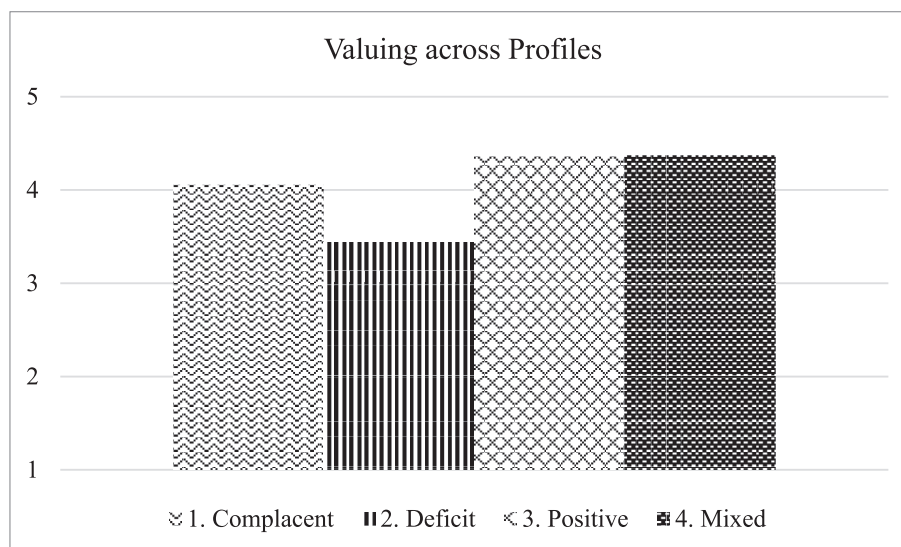


Fig. 3. Means plot of valuing teaching Aboriginal perspectives in the classroom.

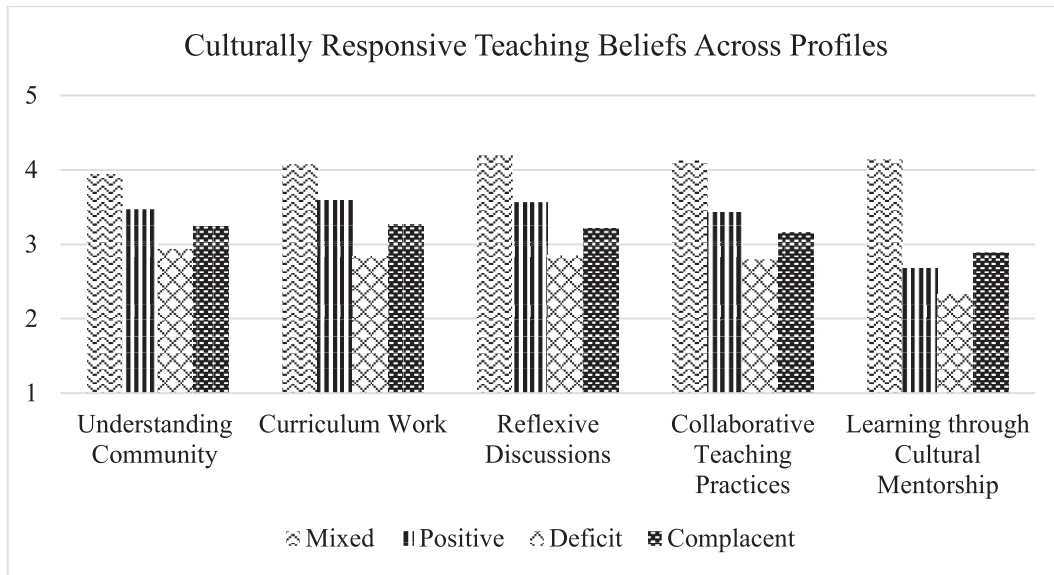


Fig. 4. Means plot of culturally responsive teaching belief variables.

Positive profile also reported less lack of connection with their Aboriginal students than the Mixed profile ($M_{diff} = -1.38, p < 0.001$). The Complacent profile reported significantly higher means for instrumental help than the Deficit profile ($M_{diff} = 0.53, p = 0.001$). For full results, see Table 7 and Fig. 5.

Overall, there was support for the Blak Caucus’ research impressions for associations with other teaching beliefs. Namely, the Positive and Mixed profiles tended to report higher levels of valuing teaching Aboriginal perspectives and CRT beliefs, with the Complacent and Deficit profiles reporting similarly lower levels of these beliefs (research impression #4). In addition, the Positive and Mixed profiles tended to demonstrate more positive relationships with their Aboriginal students.

4. Discussion

The current study was an initial investigation into the ways teachers in Australia perceive their Aboriginal students’ motivation and engagement. Results of the LPA suggest four profiles of teachers when it comes to these perceptions. Importantly, the profiles generated in the LPA were corroborated with the Blak Caucus, who found that the profiles resonated with their professional expertise and personal

experiences. Further analyses based on research impressions generated by the Blak Caucus revealed significant differences in background (e.g., teaching experience) and other teaching beliefs (e.g., valuing of teaching Aboriginal perspectives). Below, we provide a more detailed discussion of what the latent profiles reflect as well as the potential implications of these profiles for teachers and teaching Aboriginal students.

4.1. Profiles of teachers

There were four profiles of teachers present in the current study – those with a relatively Positive outlook, a Deficit outlook, a Mixed outlook, and a rather Complacent outlook on their Aboriginal students’ motivation and engagement. Interestingly, this is similar to the limited previous LPA research where students and teachers were reporting on their own motivation and engagement variables (Collie & Martin, 2017; Yu et al., 2022). The present investigation furthers these previous findings by suggesting that similar profiles emerge when teachers report on their Aboriginal students.

Those in the Positive (11%) and Mixed profiles (15%) tended to agree with the adaptive components of Aboriginal students’ motivation and engagement. That is – that Aboriginal students have a desire to learn

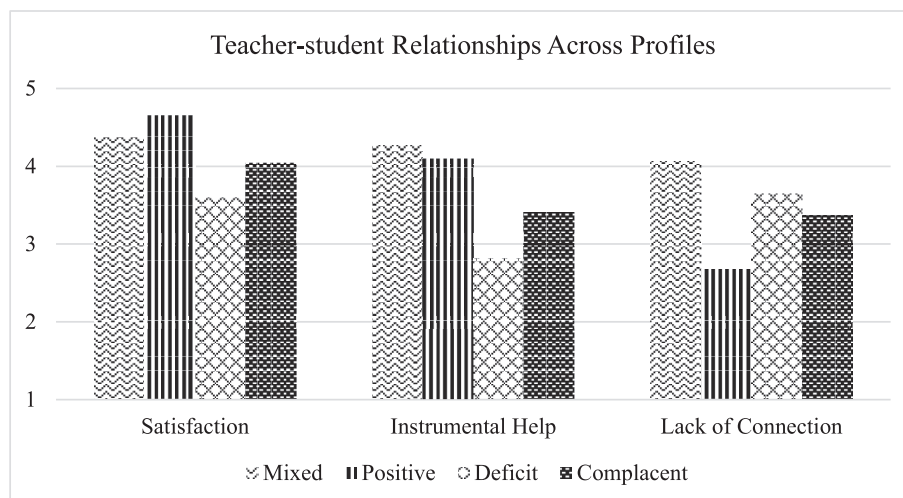


Fig. 5. Means plot of teacher-student relationships variables.

(as evidenced by high self-efficacy, valuing, and a mastery orientation) and engage in behaviors that facilitate this learning (i.e., planning, task management, and persistence through difficulty). Differences in these profiles emerged in the maladaptive constructs, with the Positive profile reporting that Aboriginal students did not reflect maladaptive motivation and engagement whereas the Mixed profile reported that Aboriginal students did reflect these maladaptive constructs alongside the adaptive ones. In the Deficit profile (9%), teachers perceived that Aboriginal students were low in the adaptive constructs, but that there were high rates of maladaptive engagement. The largest group was the Complacent profile (65%), where teachers did not strongly endorse any of the constructs.

Further research is needed into teachers' perceptions of Aboriginal students' motivation and engagement. Future work could investigate if similar profiles and distributions are replicated in another sample of teachers before providing concrete recommendations about what these profiles represent. Nevertheless, the generated profiles resonated with the professional expertise and personal experience of the Blak Caucus. As significant leaders in Aboriginal education, they have decades of experience in working with Australian teachers and with Aboriginal students in schools. Researchers have shown that some teachers hold different expectations and perceptions of Aboriginal students (Riley & Pidgeon, 2019), with particularly negative views about their motivation and engagement in the classroom (McInerney et al., 2012; Riley & Pidgeon, 2019). Further work on teachers' perceptions of these constructs would help to inform ways to improve Aboriginal students' educational experiences and learning at school.

4.2. Salient predictors of profiles

There were several background factors that were associated with profile membership. Teachers with higher proportions of Aboriginal students in their classrooms were more likely to be in the Mixed profile (see Table 3). Teachers who had completed professional development related to engaging with Aboriginal Communities were more likely to be in the Positive Profile. These findings are in line with previous studies showing that positive views about Aboriginal students emerge as teachers spend more time with them (Riley & Pidgeon, 2019). It is worth noting that although we had limited statistical power in comparing profile membership for teachers of Aboriginal and Torres Strait Islander descent and school location, the largest proportion of Aboriginal teachers were in the Mixed profile and rural teachers were somewhat more likely to be in the Deficit profile.

4.3. Differences in teaching beliefs

There were significant differences between the profiles in relation to other teaching beliefs. Overall, the Positive and Mixed profiles were similar and tended to demonstrate more positive teaching beliefs (i.e., valuing of teaching Aboriginal perspectives, some CRT beliefs, teacher-student relationships). The similarity in teaching beliefs between the Positive and Mixed profiles suggests the importance of adaptive beliefs about Aboriginal students' motivation and engagement for other teaching approaches. Both of these profiles demonstrated strong agreement with adaptive motivation (e.g., valuing of learning, mastery orientation) and engagement (e.g., task management, persistence) of Aboriginal students. It is likely that when teachers perceive Aboriginal students as having adaptive forms of motivation and engagement, they also tend to report stronger interpersonal relationships and endorse more CRT beliefs, despite differences in their perceptions of maladaptive constructs. Interestingly, however, a notable difference between these profiles was that teachers in the Mixed profile were more willing to learn through Cultural Mentorship than those in the Positive profile. It may be that when teachers endorse both adaptive and maladaptive components of Aboriginal students' motivation and engagement, they are particularly interested in finding solutions for the maladaptive components (e.

g., self-handicapping, anxiety). Developing relationships with Cultural Mentors and learning through Cultural Mentorship has been shown to be an effective avenue to engaging Aboriginal students (Lowe et al., 2019).

Unsurprisingly, the Deficit profile tended to demonstrate the most negative teaching beliefs, with relatively low scores on all teaching belief outcomes. Nearly all of their scores were significantly different from the Mixed or Positive profiles, providing further evidence of their relatively negative approach to teaching Aboriginal curriculum and students. It is clear from previous research that teachers in Australia do report different learning expectations for Aboriginal students (Riley & Pidgeon, 2019), including deficit narratives stemming from negative stereotypes and assumptions about the aspirations of Aboriginal students in education and the support they receive at home (Griffin & Trudgett, 2018; Riley & Pidgeon, 2019; Weuffen et al., 2023). From students' perspective, early studies of Aboriginal students' experiences at school demonstrated that students were largely satisfied with their schooling experiences, except that many of them reported racist attitudes from teachers (Godfrey et al., 2001). Findings in the current study further corroborate these claims, with nearly one in ten of our teachers reporting a Deficit view of Aboriginal students.

The largest proportion of teachers in the study were in the Complacent profile and there were important patterns in their teaching belief variables to consider. For all but one outcome, teachers in the Complacent profile were not significantly different from those in the Deficit profile. At the same time, though there were consistent, significant differences between the Complacent and the Mixed profiles, there were also some similarities between the Complacent and Positive profiles. Notably, when presented with the Complacent profile, members of the Blak Caucus felt this profile were likely to be inconsistent or silent in their support for Aboriginal education. This was highlighted in the types of research predictions they made about the profile in phase two of the study as well as the label given to the profile (the profile was initially presented to the Blak Caucus as 'Profile 1'). Researchers have noted that even when teachers say that they value cultural inclusion and sensitivity, they may remain unlikely to implement culturally inclusive curriculum (Kreamelmeyer et al., 2016), unlikely to implement structured change into their classrooms (Tualaulelei & Halse, 2023), and may take a 'color-blind' approach to teaching (Weuffen et al., 2023). This color-blind approach, in particular, may be associated with the Complacent profile – a hypothesis that could not be tested directly in the current study. With nearly two-thirds of the sample falling into the Complacent profile, it is important for future research to consider this pattern of thinking and the impact that it may have on Aboriginal students' experiences in the classroom.

4.4. Implications for teaching practice

We note again that further research is needed to investigate the extent to which similar profiles are found in other samples of Australian teachers, though the results of the present investigation do provide some implications for teaching practice. Results of the LPA suggest there are differences in the ways in which teachers think about their Aboriginal students' motivation and engagement – and that these differences are also associated with different teaching beliefs in their classrooms. Most notably, the Mixed profile tended to demonstrate the most desirable outcomes, especially with regard to significantly higher levels of Learning through Cultural Mentorship. Research into culturally responsive teaching has highlighted the significance of Cultural Mentors (or other Aboriginal and Torres Strait Islander educators, Community Elders) and learning through Cultural Mentorship in schools (Bishop et al., 2021; Bostwick et al., 2025; Chodkiewicz et al., 2008), as Cultural Mentors are expert knowledge holders with strong Community ties who can help teachers to develop more inclusive and culturally responsive curriculum. Although the National Aboriginal and Torres Strait Islander Education Policy outlines the necessity and benefit of employing Aboriginal people in Australian schools to improve curriculum and

teaching practice (Department of Employment Education and Training [DET], 1989), Aboriginal and Torres Strait Islander staff are often asked to focus on care duties and behavioral management of Aboriginal students, rather than on helping teachers to develop more inclusive curriculum (Armour & Miller, 2023). The results of the current investigation provide further evidence for the importance and value of cultural expertise and mentorship in teaching practices for schools across Australia.

Understanding how teachers think about their Aboriginal students can also provide important information for approaches to professional development. It may be, for example, that different approaches to professional development are warranted across different profile groups. Future research should consider how stable the profiles are over time (e.g., do teachers in the Deficit profile remain in the Deficit profile) and if professional development exercises could help to move teachers from one profile to another (e.g., are teachers in the Complacent profile more likely to shift to another profile than those in the Positive, Deficit, or Mixed profiles?). As teachers' beliefs about students can play a significant role in their teaching practice and in students' outcomes (Johnston et al., 2019; Papageorge et al., 2020), understanding different profiles of teachers' thinking is critical.

4.5. Implications for research

The study also presents significant contributions to Aboriginal educational research. The study demonstrated an approach that integrated Aboriginal Voices and quantitative analyses. Too often, research is done on or about Aboriginal peoples, rather than genuine partnerships between non-Aboriginal researchers and Aboriginal people, especially in quantitative projects (Lopez & Cuasialpud-Canchala, 2025). Members of the Blak Caucus have decades of experience in working with many different types of teachers and have witnessed the implications of different patterns of thinking on teaching practice. Not only did the Blak Caucus readily recognize the different patterns of thinking reflected in the LPA, but they generated several testable research impressions regarding the implications of these profiles. Most research impressions demonstrated significant differences between the profiles in the expected directions. The research thus was strengthened from the Blak Caucus partnership. Finding new ways to collaborate and include Aboriginal Voice in research will further strengthen research practice (see also, Kumar, 2025; López & DeCuir-Gunby, 2025).

4.6. Limitations and future directions

There were several limitations in the current investigation that should be considered when interpreting results. First, data collected for this study relied on teachers' self-reports of their perceptions of students and other teaching variables (e.g., relationships with students) at one point in time. Although the profiles evinced in these data reflect profiles found in previous work (Collie & Martin, 2017; Yu et al., 2022), future research may consider incorporating observational data or collecting teachers' perceptions at multiple points in the school year. Second, the wording for many items asks teachers to report on their perceptions of the Aboriginal students in their classroom as a whole. It is likely that teachers hold different perceptions of individual students, and these data may reflect different types of motivation and engagement profiles. Third, although the current study is primarily a quantitative study (with some qualitative input), more specific qualitative work with teachers would help researchers to better understand the nature and practices of teachers in different profiles.

5. Conclusion

The current study found evidence of four profiles of teachers with regards to how they perceive their Aboriginal students' motivation and engagement – the Positive, Mixed, Complacent, and Deficit profiles.

Following expert input from the Blak Caucus, we also found that these profiles were associated with significant differences in other teaching beliefs, such as their relationships with Aboriginal students and their beliefs about culturally responsive teaching. Such findings contribute to ongoing evidence of the associations between teachers' perceptions of their students and the ways in which they approach teaching in the classroom, helping us to better understand how teachers might develop more inclusive curriculum and pedagogical approaches. Moreover, such findings also demonstrate that research collaborations with Aboriginal education experts and leaders can significantly enhance research directions, interpretations of findings, and future recommendations. Moving forward, it is important that we continue to prioritize Aboriginal voices in Aboriginal education research.

Funding

Funding for this project was provided by the Paul Ramsay Foundation (grant number: 5031). Any opinions, findings, or conclusions expressed in this report are those of the author(s) and do not necessarily reflect the views of the Foundation. Funding was also provided by the National Indigenous Australians Agency (NIAA; grant number: 4-G4X6UIC).

CRediT authorship contribution statement

Keiko C.P. Bostwick: Writing – review & editing, Writing – original draft, Visualization, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **The Blak Caucus:** Writing – review & editing, Validation, Supervision, Methodology, Formal analysis, Conceptualization. **Andrew J. Martin:** Writing – review & editing, Supervision, Resources, Methodology, Funding acquisition, Conceptualization. **Kevin Lowe:** Writing – review & editing, Supervision, Project administration, Funding acquisition.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

This manuscript was reviewed and approved by members of the CNS Blak Caucus. Between 2021 and 2024 the Blak Caucus included the following members: Aunty Barbara Simms, Deb Coe, Aunty Deb Daley, Uncle Des Barton, Aunty Gayle Ardler, Uncle Hilton Donovan, Jada Macnamara-Phillips, Aunty Josie King, Aunty Judy Foster, Julie Welsh, Kimm Naden, Kirstin Morris, Lee-Ann Setter, Mahayla Phillips, Melissa Thorne, Minya Harris, Nathan McEwan, RONALDA COMBO, Shallan Foster, Suzi Tsanganis, and Aunty Tracey Kingi.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.cedpsych.2026.102445>.

Data availability

Data will be made available on request.

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