Taking the Pulse of Australian Students in 2022: ei Pulse data, Technical paper

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Executive summary

Ei Pulse is a student wellbeing tool developed by Educator Impact (ei) and used to track and support student wellbeing in real time, providing a weekly check-in with students and enabling them to ask for help when they need it. As part of developing ei Pulse, ei approached ARACY to operationalise the Nest, Australia's wellbeing framework for children and young people.

Ei Pulse gathers data on the wellbeing of students based on the methodology from ARACY's Common Approach®. The Common Approach® is a method of speaking with children, young people and their families about wellbeing using the six domains of the Nest.

Ei Pulse was launched in March 2020 in New South Wales (NSW), and since then the number of students using the tool has increased from approximately 500 to more than 44,000 in August 2022, when it was being used in approximately 120 schools in all Australian jurisdictions, except the Northern Territory.

Methodology

Ei Pulse is now used with students enrolled in upper primary and high school – Years 3 to 12 – therefore, respondents are aged between 7 and 18 years, with the majority aged over 12 years of age. Once a week, via ei Pulse, students are asked 'How are you feeling today?'. After that 'big question' the students are then asked five evidence-based wellbeing questions drawn from a bank of approximately 130 questions covering topics across the six Nest domains. Students are asked different questions each time they check in and the average check-in time to complete the process is one minute.

Pulse supports students to reach out for help across any element of their wellbeing, in a low friction, low-risk way. When a student flags that they need help, ei Pulse connects them with a trusted staff member of their choice: a support officer, pastoral care teacher, or classroom teacher they nominate by name.

Data in the report

Data from the first year (March 2020-March 2021) of collection are available in a previous report (Barker, Thurbon, & Goodhue, 2021). Data in the current report are drawn from a collection period spanning 18 months from March 2021 to August 2022, and in some cases trends are compared across the entire collection period, since March 2020 (almost 2.5 years of data).

Across the entire collection period, at its peak approximately 172,000 check-ins were recorded in March 2022, just following the commencement of the 2022 school year. This figure does not equate to respondents (students) themselves, rather, it refers to the number of responses received that month in each state or territory. For example, if five students used ei Pulse twice each, that would equate to 10 check-ins.

Given that not all Australian jurisdictions are currently involved, and the number of schools participating is limited, ei Pulse data are not representative of all Australian students or schools.

Key Findings

In the 18-month collection period of the ei Pulse wellbeing check-in tool, the data presents a picture of approximately 84,000 students across Australia, who checked in over 1.6 million times, resulting in 3 million data points. Across all check-ins 0.3% resulted in a student reaching out for help, those requests coming from 2,568 individual students (3.0%). In a school where 1,000 students check in each week, this translates to about 3 students reaching out for help each week, and about 30 distinct students reaching out in the past 18-months.

On average, 6% of students reported feeling 'negative' each week, 23% felt 'in the middle' and 71% felt 'positive' or 'great.' In comparison to the previous collection period, these results show a relative increase in positive responses to the Big Question (how are you feeling today?), with an increase of 5.5 percentage points. This increase appears to be at the expense of neutral check-ins, which declined by 4.3 percentage points, while similar proportions of students reported 'feeling negative' or reached out for help.

In line with previous findings, the data highlights significant variation from week to week, with more than 39% of students in any given week choosing a different answer to their previous week's check-in.

Data from the targeted wellbeing questions illustrate that most young people again felt positive about their access to food and necessities (material basics), and feeling valued. However, once again the findings also highlight some areas for concern. Of course, some are not surprising given that students (and their families and communities) were experiencing a global pandemic and the associated lockdowns and periods of remote learning across another year.

An issue that remains a concern is the incidence of students who report being worried or nervous. Overall:

- Two in 5 students said they worry a lot about mistakes that they make (39.1%)

- Almost 3 in 10 students said they worry a lot about things at school (28.7%)

- Almost 3 in 10 students said they felt nervous often (27.4%).

- Almost 3 in 10 students said they often feel upset about things (27.4%).

Slightly less pronounced than previously, but still of concern is that one in five students:

- Often feel everything is an effort (21.9%)

- Feel that they do things wrong a lot (21.2%)

- Often feel disappointed after completing a task because they knew they could have done better (20.7%).

Finally, in the past 18 months, ei Pulse results also indicated that approximately one in five students:

- Think doing their best will never be enough (19.0%)

- Are less likely to think about something worrying in a different way that helps them feel better (18.3%)

- Did not eat breakfast often (19.4%)

- Are not confident in their ability to achieve their study/work goals after school (16.4%).

Ei Pulse also tells us that approximately one in four students felt negative or neutral about areas such as friendship intimacy and connectedness to classmates and teachers, which are highly important aspects of student wellbeing.

The previous report concluded with a proposal of comparative analyses of the impacts of lockdowns on student wellbeing, and in this report, we have included a section on this (refer Section 4. Wellbeing and COVID-19). While the analysis is inconclusive, the gradual fall in negative responses observed may be evidence that the effect of the prolonged mental toll of living through the pandemic might be weakening, or that at the very least it is not currently a factor dominating student wellbeing in the schools conducting ei Pulse.

The latest ei Pulse findings serve to remind us of the opportunities provided when schools check-in with their students on a regular basis, enabling students to build their wellbeing literacy while also allowing schools to monitor trends in data and adjust policies and strategies for continuous improvement.

ARACY supports the expansion of the ei Pulse app and the Common Approach® in the Australian school system as a means of supporting the wellbeing of children and young people.

1. Introduction

Launched in March 2020, Educator Impact (ei) Pulse is a student wellbeing check in tool used to track and support student wellbeingin real time, providing a weekly check-in with students and enabling them to ask for help when they need it. EI is a New South Wales-based business established in 2014 to serve the education sector.

ARACY puts knowledge to work to enable better decision making for the wellbeing of children and young people. ARACY believes all children and young people in Australia should have every opportunity to thrive.

In developing Pulse, ei partnered with ARACY to operationalise [the Nest](#) (Goodhue, Dakin, & Noble, 2021), Australia's wellbeing framework for children and young people. The Nest was developed over a two-year process involving close to 4,000 children, young people and experts across Australia. The Nest defines six interlocking areas of wellbeing which must be considered and supported for a child to thrive. The six domains of the Nest are defined by children and young people as:

- being **Valued, Loved and Safe,**

- having their basic **Material Needs** met,

- being **Healthy** (physically, mentally and emotionally),

- being engaged and supported in their **Learning**,

- **Participating** in family, community and decision-making, and

- having a **Positive Sense of** their **Identity and Culture**.

Ei Pulse gathers data on the wellbeing of students based on the methodology from ARACY's Common Approach®. [The Common Approach](#)® uses the Nest framework and is best practice for having quality conversations with children, young people and their families about all aspects of wellbeing.

1.1 The Common Approach

The Wellbeing Wheel (overleaf) is one of the resources that supports people to use the Common Approach®. Each segment of the wheel represents a Nest domain and contains examples of wellbeing considerations including a separate focus on the different levels of child, family and community. The Common Approach® is a prevention-focused and flexible way of working to help everyone have quality conversations with young people and their families about all aspects of their wellbeing. Having a Common Approach® conversation means being child-centred, strengths-based, holistic and collaborative. It provides shared language and a capacity-building focus. The Common Approach® enables us to get to the heart of issues sooner, and to see the full picture more quickly, so that we can work with the young person, their family and other practitioners to achieve better outcomes sooner.

Fig 1. The Common Approach® Detailed Child Wellbeing Wheel (ARACY)
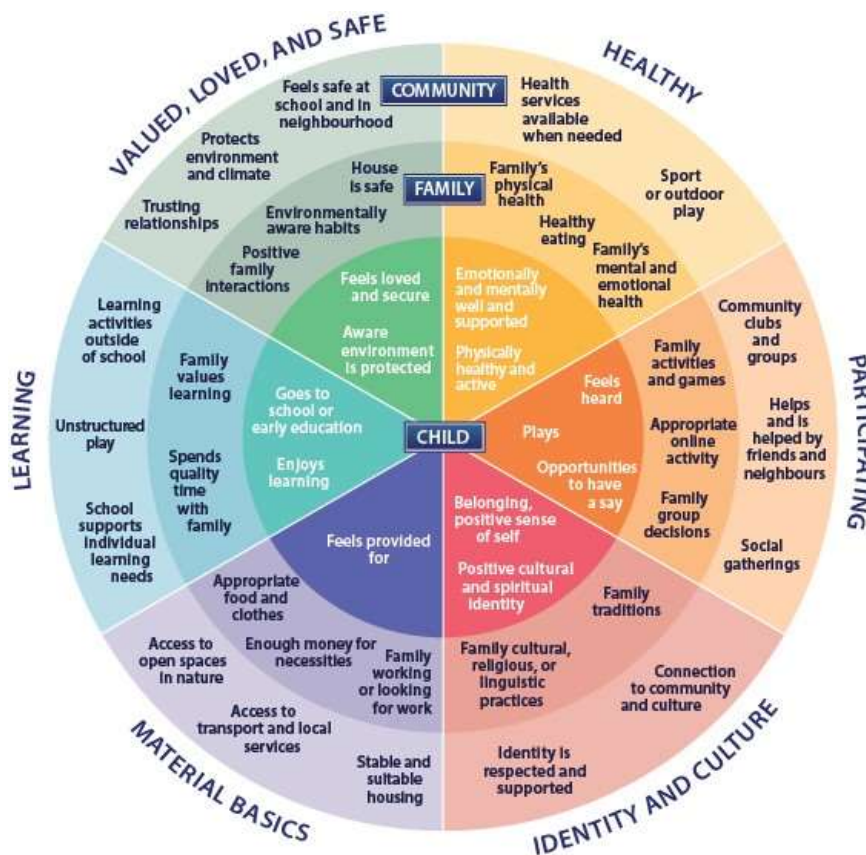
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The items used within ei Pulse were developed from the bank of Common Approach® questions across the six domains of the Nest. These questions have been created and refined by ARACY over a 7-year process involving hundreds of educators, practitioners and leaders. The Common Approach® questions have been adapted in structure to ensure functionality within an app context, while preserving the holistic nature of the questions.

Schools that adopt ei Pulse are also encouraged to receive Common Approach® training to help ensure students experience seamless wellbeing support from staff.

1.2   Launching Pulse

The earliest adopters of ei Pulse were independent and Catholic schools in the non-government sector, and there is a growing number of government schools now adopting the tool.

2. Methodology

The ei Pulse tool was originally designed for young people aged 10 years and over, and data in the previous report was focused on students in that age group. However, since 2022, students aged 7 years and over are included in the sample. A modified version of the tool is used for younger students aged 7-11 years. (See section 2.3 for further information).

Once a week, students are invited to "check in" using the tool. Students are firstly asked how they are feeling, followed by a further five targeted wellbeing questions. The check-in process usually takes around one minute.

Students are asked how they are feeling (left) and five questions about their experience (right)
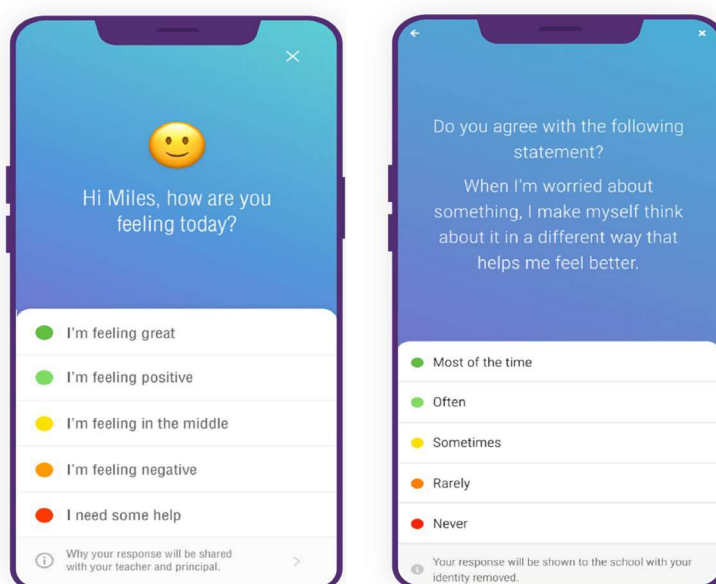
2.1 Authority, privacy, and confidentiality

School leaders adopt ei Pulse to help them better understand their students and their school. They enter a commercial relationship with EI to gain access to the platform. The primary use of the collected data is for schools to improve the wellbeing of their students by taking actions based on that data. The EI privacy policy states that data collected using the platform will also be used for research purposes, after the data has been anonymised and aggregated. Data for this report were provided to ARACY under this privacy policy.

Each week, students are invited to check in using ei Pulse. Check-ins are voluntary, and students may check in at any time. Typically, engagement rates (i.e., a check-in) exceed 75% of the students enrolled in ei Pulse. At many schools that engagement rate exceeds 90%.

Ei Pulse is integrated with a school's IT infrastructure and requires a student name, email address and class identifier for the student. These data help to make the app easier to use, by sending students reminders and allowing them to reach out when they need help.

Ei Pulse also collects information from individual students about wellbeing. These data are used to help schools provide students with needed support.

Most of the data collected are provided to the school in an aggregated and anonymised format. Importantly, when students answer a question, the student sees how that answer will be shared with the school. For example:

- *Your response will be shared with your teacher and principal* (shown above, left)

- *Your response will be shown to the school with your identity removed* (shown above, right).

The answer to the first question, 'How are you feeling today?' is identifiable by the school. The responses to the following, more specific wellbeing questions within each check-in, are only available to the school at a cohort level.

While ei Pulse is a measurement tool rather than a psychological or wellbeing intervention in and of itself, it is important to consider the impact such measurement can have on young people. There has been significant research in this area. There is no evidence to suggest asking questions about difficult or emotionally challenging circumstances, or about personal feelings, is dangerous for young people. Indeed, Australian clinical recommendations make it clear that discussing feelings and behaviours regarding mental health states and suicide is the preferred approach (Ross, Kelly, & Jorm, 2014).

When students use ei Pulse to reach out for help, the individual student is identified to the person they are seeking help from, as well as the management chain ultimately responsible for ensuring each request is responded to.

Student voice and agency is emphasised through the use of ei Pulse. Student feedback has demonstrated the perceived value the app holds for young people. The following quotes from students exemplify this:

> *"One thing that has been really important to me is the one minute… the time I get to really think about how I really feel." (Senior Student, South Australia, 2020)*

> *"Pulse is an easy and quick way to get the teacher's attention – if you need help or someone to talk to. It is also a good way to let others know that we are grateful for them." (Senior Student, Victoria, 2022)*

Students are offered the opportunity to express their gratitude to someone after each check in. At the end of a check-in students may select any student or staff member enrolled at the school, and send them a message of gratitude. They can tag the message with one of four specific reasons (kindness, fairness, determination or humour) or simply "Just say thanks". Engagement with this feature is very strong, 2 out of 3 check-ins contain an optional "thank you", and students have been reported to check in multiple times to send gratitude to additional people.

The below graph represents gratitude data received from 73,025 students.

Fig 2: Gratitude responses by area of focus (Mar 2021 – Aug 2022)
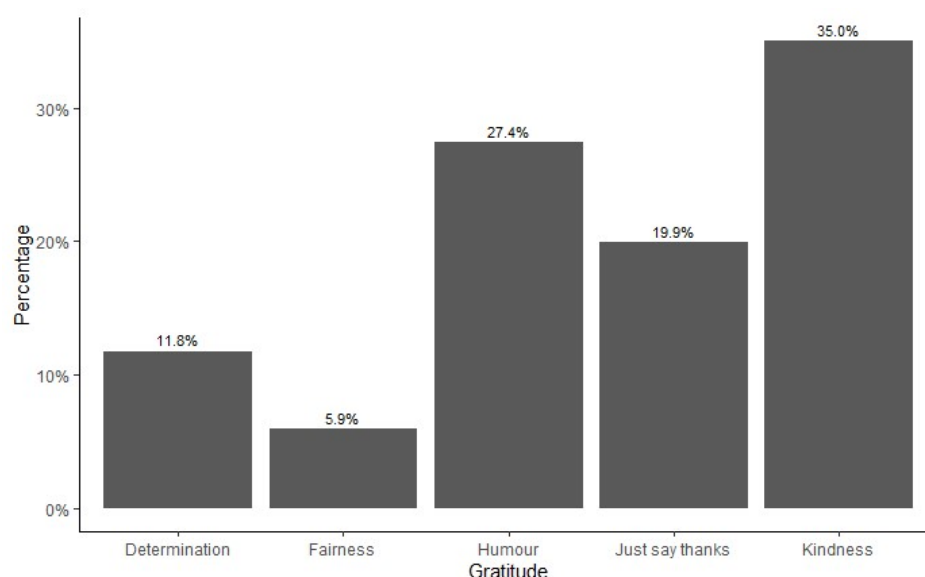
2.2   Pulse questions

Ei Pulse questions are themed around the six domains of the Nest (Level 1) and then organised into clusters (Level 2) within each domain. Clusters then have corresponding questions. In total, there is a bank of n=134 questions (Level 3). Questions are based on the Common Approach® and modified for use within the tool, specifically converting them into closed-form questions with an associated Likert scale. Each week, students are asked the 'big question' (How are you feeling today?), followed by aselection of five targeted wellbeing questions randomly selected from the question bank.

All responses to the questions are based on a 5-point Likert scale, with answers specific to the question. For example, respondents may specify their level of agreement to a statement or question in 5 points, such as (1) Strongly disagree; (2) Disagree; (3) Neither agree nor disagree; (4) Agree; (5) Strongly agree. The response categories to the wellbeing questions in

ei Pulse are always based on a 5-point scale, but alter depending on the nature of the question, e.g., level of agreement or frequency of an event.

Regardless of the question, the basis remains the same – the higher the agreement or frequency, the higher the response category. For the purposes of this report, we have aggregated responses in the lower/lowest and higher/highest response categories, creating a 3-point scale: Low; Medium; High.

2.3   Pulse Junior

ARACY has worked with Educator Impact to develop two versions of ei Pulse: Junior version (Years 3 to 7 inclusive) and High School version (for age 11 upwards, or Year 7 to Year 12). Junior version includes a subset of questions, and has a readability level of 6-8 years plus (or Grade 2 of school). At this stage the sample of students using Pulse Junior is not large enough to allow for separate analysis.

2.4   Reaching out for help

Through their use of ei Pulse, it is intended that students will become actively engaged in improving their wellbeing. The tool supports students to reach out for help across any element of their wellbeing, in a low friction, low-risk way. When a student flags they need help, ei Pulse connects them with a trusted staff member of their choice: a support officer, pastoral care teacher, or classroom teacher they nominate by name.

2.5   Data in this report

Data from the first year of collection are available in a previous report (Barker, Thurbon, & Goodhue, 2021). Data in the current report are drawn from a collection period spanning 18 months from March 2021 to August 2022, and in some cases trends are also compared across the entire collection period, from March 2020 to August 2022 (almost 2.5 years of data).

The number of 'users' (students) across the entire period of collection has increased from approximately 500 in March 2020 to more than 84,000 in August 2022, when the app was being used in approximately 120 schools in all Australian jurisdictions, except the Northern Territory.

The number of schools adopting ei Pulse across Australia continues to grow. By August 2022, the number of schools using the tool ranged from around 5-10 schools each in the Australian Capital Territory (ACT), South Australia (SA), Tasmania, and Western Australia (WA). In the remaining jurisdictions, ei Pulse was in 18 schools in Queensland, 31 schools in Victoria, and 45 schools in NSW.

ei Pulse is now used with students enrolled in upper primary and high school – Years 3 to 12 – therefore, respondents are aged between 7 and 18 years, with the majority aged over 12 years of age. Due to limited sample sizes in different jurisdictions, this report does not provide data analysis by age or year level. However, as the number of schools using ei Pulse increases, analysis

by year level will be considered.

Figure 3 shows the total number of student check-ins per month in Australia across the entire collection period (Mar 2020 to Aug 2022). Check-in figures do not equate to respondents (students), rather, the number of responses received in a given month. Responding to ei Pulse is voluntary, so although students will have the opportunity to check in with the app every week, they may choose not to complete it.

While engagement rates fluctuate between schools and over time, in a typical year around 9 out of 10 students check in at least once, and in a typical month around 7 out of 10 students check in at least once.

Across the entire collection period, at its peak, approximately 172,000 check-ins were recorded in March 2022, just following the commencement of the 2022 school year. Sharp falls in responses around December and January, as well as several smaller falls throughout the year, reflect school holidays when students are not prompted to check-in/data collection is paused.

The level of check-ins recorded in March 2022 (172,000) is around 2.5 times the peak level recorded in the first reporting period, when approximately 66,000 check-ins were recorded in November 2020 and March 2021 respectively. This is simply linked to an increase in the number of schools using ei Pulse, from approximately 70 schools to the current cohort of approximately 120 schools in all Australian jurisdictions, except the NT.

By jurisdiction, NSW and Victoria recorded the highest total number of check-ins (599,563 and 484,294, respectively) reflecting the higher number of schools using ei Pulse in those states, followed by Queensland (237,395).

Final notes on the data used in this report

* Given the emerging nature of ei Pulse in Australia, the data are not representative of the student populations in different jurisdictions.

* A key limitation of the data is in making comparisons between jurisdictions. This is particularly the case with the ACT, Tasmania and Western Australia, where the number of participating schools are relatively small.

* Where comparisons are made, we have applied statistical significance tests to 95% confidence levels and limited reporting on individual items to those with more than 250 data points.

3. Year two of Pulse results

What do ei Pulse results tell us about the national picture of student wellbeing throughout the most recent 18-month collection period from March 2021 to August 2022?

In this period, the data presents a picture of approximately 84,000 students across Australia, who checked in over 1.6 million times, resulting in 3 million data points. Across all check-ins, 0.3% resulted in a student reaching out for help, those requests coming from 2,568 individual students (3.0%). In a school of 1,000 students this translates to about 3 students reaching out for help each week, in the same sized school equates about 30 distinct students having reached out in the past 18-months.

Again, an overall trend from check-ins illustrates more than two-thirds of students (71.2%) feeling positive in any given week.

3.1 The Big Question – how are you feeling today?

The first question asked of students responding to ei Pulse is "How are you feeling today?". The response categories are: I'm feeling great; I'm feeling positive; I'm feeling in the middle; I'm feeling negative; I need some help. Students reaching out for help can opt for support from their preferred educator.

> *"We know that students will reach out when they feel sad enough and safe enough at the same time – and that time can be fleeting. Pulse lets students reach out for help to a specific, trusted teacher, at the time they are ready."* (Educator Impact website)

On reaching out for help, the app responds with a message, confirming an educator will contact the student: "Hey [name], sorry to hear you're not feeling great, but that's why we're here. We'll let [educator name] know you're asking for help." This allows the student to confirm that a message will be sent to a specific educator ('send message'), or they would prefer to reach out to a different educator ('change teacher'). The student can then choose from a list of other educators to have a message sent to. Once the message is sent, the app informs the student they will receive a notification when the teacher sees the message.

In aggregate, across the recent collection period (March 2021 to August 2022) students checked-in as follows. These results are illustrated in Figure 4.

- Positive ("I'm feeling positive"/ "I'm feeling great") 1,150,606 times (71.2%)

- Neutral ("I'm feeling in the middle") 366,406 times (22.7%)

- Negative ("I'm feeling negative") 93,717 times (5.8%)

- Reached out 4,441 times (0.3%)

Fig 3: The Big Question (how students were feeling) across all schools (Mar 2021 - Aug 2022)
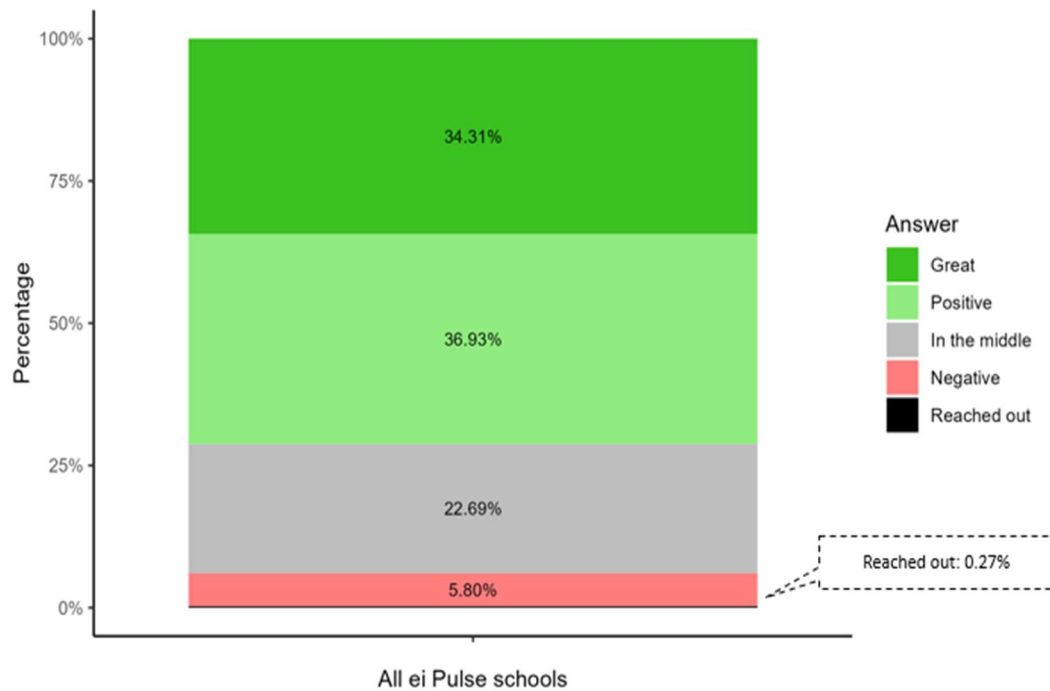
In comparison to the previous collection period, these results show a relative increase in positive responses to the Big Question (how are you feeling today?), with an increase of 5.5 percentage points. This was largely due to fewer students checking in as neutral. Neutral responses declined by 4.3 percentage points, while similar proportions of students reported 'feeling negative' or reached out for help.

Figure 4 shows the results for the Big Question (how are you feeling today?) by jurisdiction for the collection period March 2021 to August 2022. The figures are also provided in Table 2. Echoing the previous collection's results, students in the ACT were most likely to report feeling negative compared with other jurisdictions (7.0%), however this proportion was less pronounced than previously (10.5%). In line with the overall trend for this collection period, ACT students also reported higher levels of positivity, with two-thirds reporting feeling great or positive at check-in (65.8%). These results were almost 10 percentage points (9.3) higher than previously recorded in the first collection period (56.5%).

Fig 4: The Big Question (how students were feeling) by jurisdiction (Mar 2021 - Aug 2022)
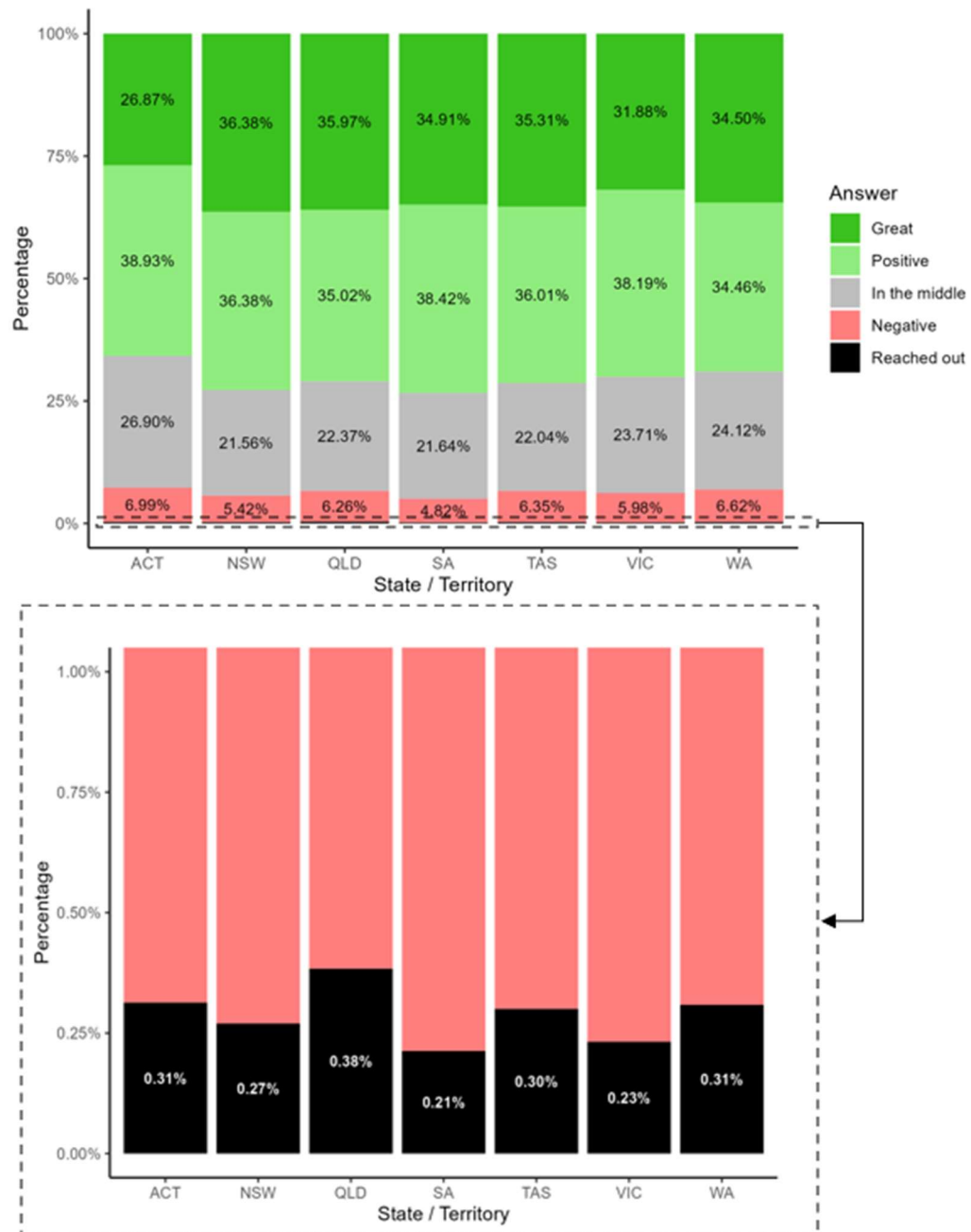
Table 1: The Big Question (how students were feeling) by jurisdiction (Mar 2021-Aug 2022)

S/T	Reached out		Negative		Neutral		Positive or Great		Total
	n	%	n	%	n	%	n	%	n
ACT	243	0.3%	5,422	7.0%	20,859	26.9%	51,023	65.8%	77,547
NSW	1,619	0.3%	32,480	5.4%	129,261	21.6%	436,203	72.8%	599,563
Qld	911	0.4%	14,861	6.3%	53,109	22.4%	168,514	71.0%	237,395
SA	266	0.2%	6,023	4.8%	27,053	21.6%	91,691	73.3%	125,033
Tas	108	0.3%	2,282	6.3%	7,926	22.0%	25,649	71.3%	35,965
Vic	1,123	0.2%	28,984	6.0%	114,842	23.7%	339,345	70.1%	484,294
WA	171	0.3%	3,665	6.6%	13,356	24.1%	38,181	69.0%	55,373
Total	4,441	0.3%	93,717	5.8%	366,406	22.7%	1,150,606	71.2%	1,615,170

It is also worth noting that students in Victoria – despite facing more instances of lockdowns and periods of remote learning than other jurisdictions – again reported more positively than students elsewhere, with one in 15 students feeling negative (6.0%, similar to previously), and students (0.2%) reaching out for help.

In line with the overall trend for this collection period, Victorian students reported higher levels of positivity than previously, with 7 in 10 reporting feeling great or positive at check-in (70.1%) compared with 66.0% in the previous collection's results. This increase in positivity, however, was less pronounced than students in other jurisdictions, such as the ACT (mentioned above, 9.3 percentage points higher than previously), SA (7.6), NSW (5.5) and Queensland (5.2).

Students in NSW and SA schools reported the highest levels of positivity at check-in, at 72.8% and 73.3% respectively, the only jurisdictions with levels above the overall rate for positivity (71.2%).

A note about Reaching Out

Of particular interest are the proportions of students who reported feeling negative or who reached out for help. Overall, 93,717 (5.8%) students reported 'feeling negative' when they checked-in, and students reached out for help 4,441 times (0.3%). In the 18 months to August 2022 ei Pulse enabled 2,568 individual students to connect with help. The difference between this figure and the overall number of times students reached out for help (n=4,441) indicates students who reached out for help more than once. These findings are on par with results noted in the first report.

Ei regularly debriefs with schools about their experience with students who reached out for help. At almost every school, during the first month using ei Pulse at least one student who is a "surprise" to the school reaches out for assistance through the app. That is, the school had not been formally intervening regarding the student's wellbeing, nor had the student previously triggered any red flags. Schools have identified three properties of ei Pulse that maymake students more likely to use the app to initiate a wellbeing conversation, where they otherwise might not:

- Ei Pulse is very different to existing pathways for obtaining support and is seen as a lower stakes option (e.g., approaching the school counsellor is highly visible and crisis helplines are anonymous but an unknown quantity; both have a certain stigma attached).
- It is possible to flag the need for a wellbeing conversation without having to have that conversation immediately (i.e., the time-lag is seen as valuable to some students).
- Feeling both "sad enough and safe enough" to initiate a wellbeing conversation does not always coincide with access to the pathways or people the student wishes to proceed with (e.g., students might wait until their trusted teacher is on playground duty), whereas an app is more universally accessible.

Put simply, schools feel that ei Pulse provides students with a low-stakes and convenient way to initiate a wellbeing conversation with a trusted adult.
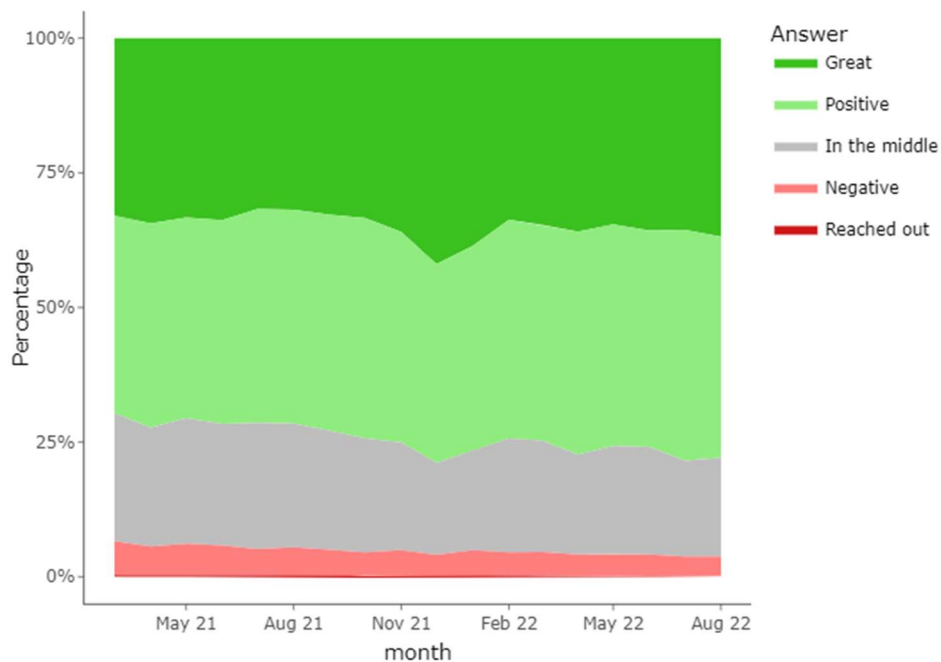
3.2   The Big Question over time

Tracking changes in responses to the Big Question over time can be misleading given changes in the composition of the sample (i.e., increases in the number of schools across jurisdictions) since commencement of ei Pulse in March 2020. For example, if schools in the initial cohort had lower than average wellbeing, then a number of schools with higher-than-average scores entered the sample, we might see perceive a positive trend in responses to the Big Questions despite no change in actual student experience.

Therefore, to make a rough measure of changes over time, it is important to follow the check-in data of students who were ei Pulse users in March 2021 over time. There is no guarantee this cohort is in any way representative, in fact it may be less representative than the total sample (for example this cohort includes fewer than 5 schools in WA, while 9 more began using Pulse after that and therefore were not counted). However, it is a measure of changes over time, at least for these particular students.

Figure 5 shows the overall trend in this cohort is positive, with 'negative' and 'neutral' responses shrinking and the positive categories growing. Please note, the increase in 'Great' responses in December 2021 - January 2022 is due to a small sample size with the summer holidays sitting across those months.

Fig 5: The Big Question by cohort over time (Mar 2021 – Aug 2022)

Patterns in student responses to The Big Question over time

Interestingly, the data highlighted significant variation from week to week, with more than 39% of students in any given week choosing a different answer to their previous week's check in. Figure 6 illustrates that many students respond with either all positive or all negative answers (or only check-in once). However, relatively few students are always responding negatively and most feel comfortable giving a range of positive and negative responses.

Fig 6: The Big Question by frequency of response type (Mar 2021 – Aug 2022)
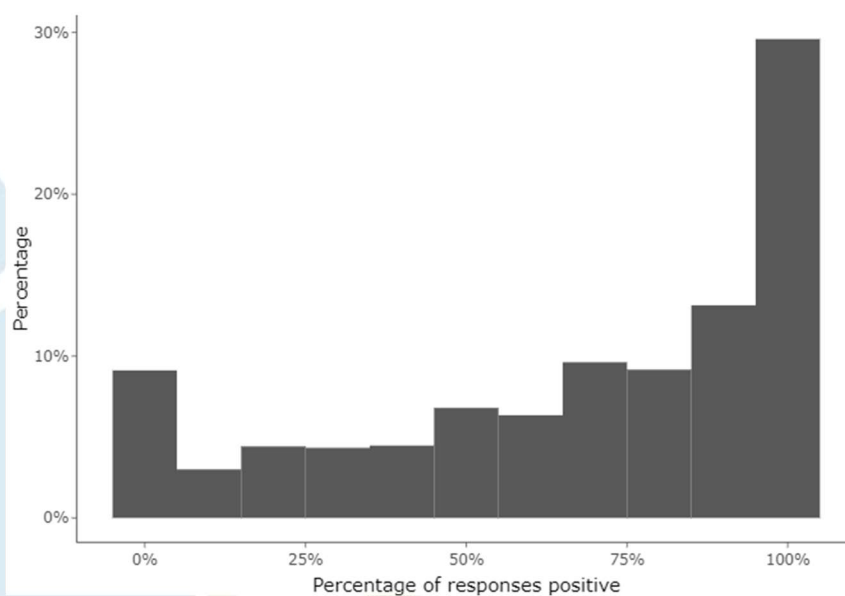
3.3   Findings by the Nest domains

The charts in the following section illustrate the trends across ei Pulse, at a national level and by the six Nest domains.

At a national level, questions clustered under the *Healthy* domain received the most negative responses, that is, the average of the aggregated lower and lowest responses for these questions was 8.8% negative (almost 1 in 10), and 72.1% positive (the average of the aggregatedhigher and highest responses for these questions).

This contrasts with *Material Basics* which received the most positive responses – 87.9% positive and fewest 3.8% negative responses.

Fig 7: Comparison of positive responses across the Nest domains (Mar 2021 – Aug 2022)

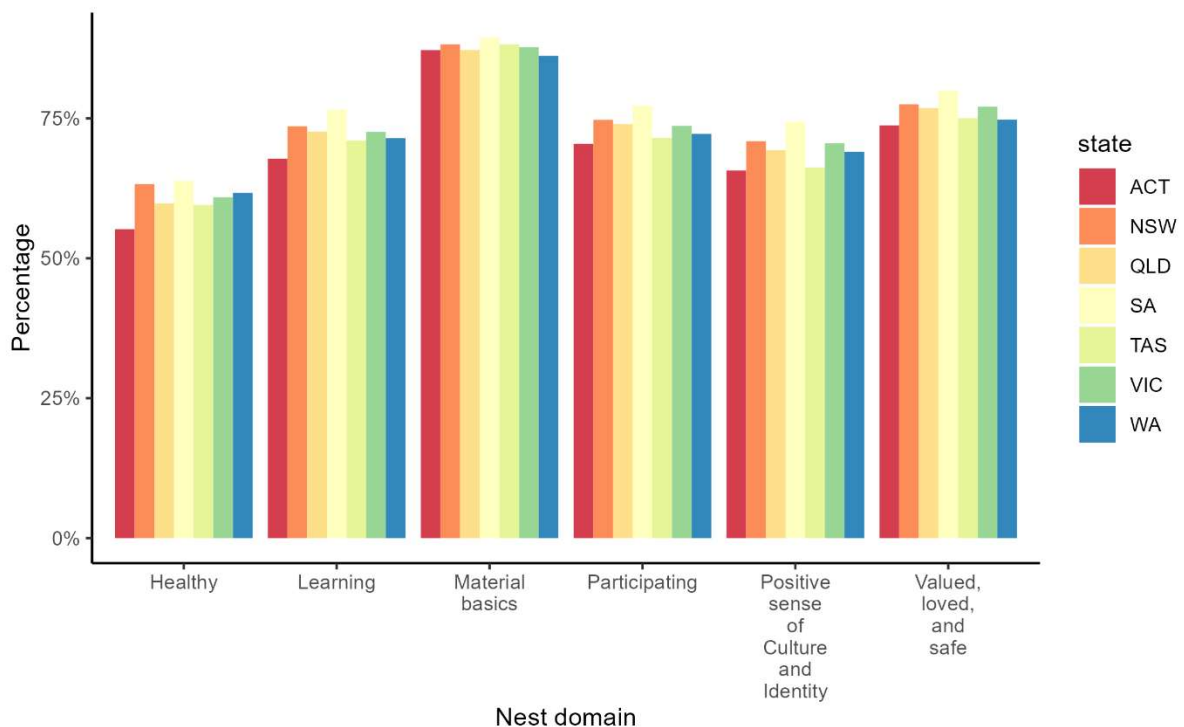Figure 8 illustrates that across the entire collection period since March 2020, the positive responses to *Material Basics* fluctuated from month to month between 85% and 96%. Conversely, while the positive responses to *Healthy* attracted the lowest overall average of positive responses across the whole collection period, this increased from 50% at the commencement of collection (March 2020) to 63% by August 2022.

Fig 8: The Nest domains by 'High' responses since 2020 (%) *
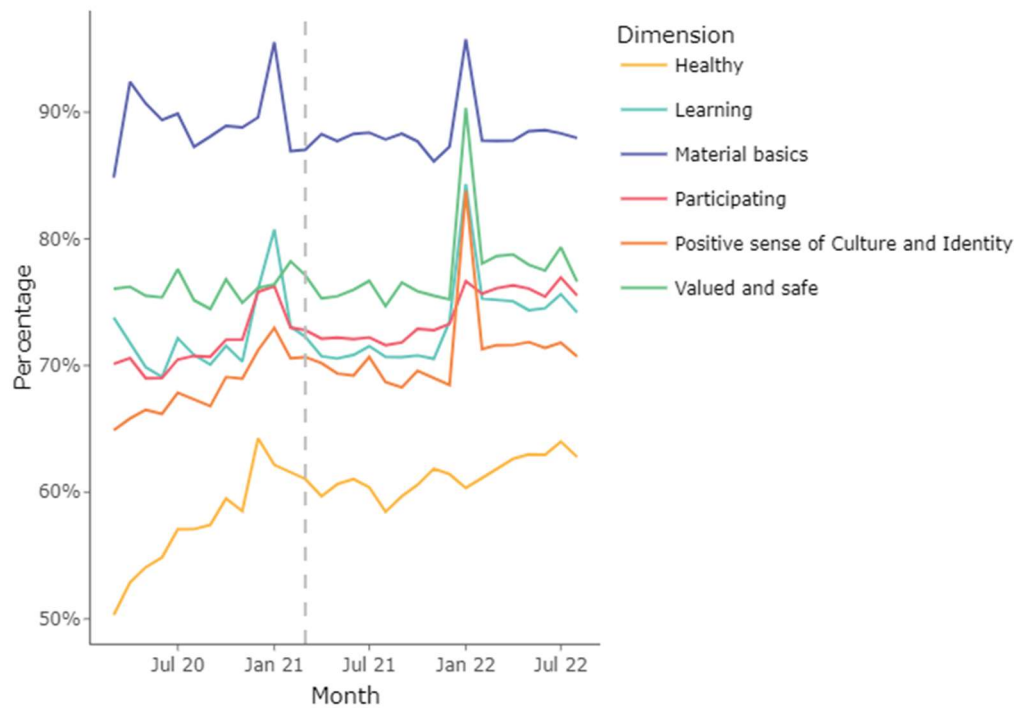
*The dashed grey line denotes the cutoff for the first collection period.

Again, despite the *Healthy* domain attracting the highest overall averages of negative responses across the entire collection period, negative responses are generally stable or falling slightly across all domains. In the case of *Healthy*, the pattern for this domain improved across the collection period, meaning there were more positive responses and fewer negative responses observed across the entire collection period (positive: from 50% to 63%; negative: from 21% to 14%). Figure 9 shows the pattern of negative responses over time.

Fig 9: The Nest domains by 'Low' responses since 2020 (%)*
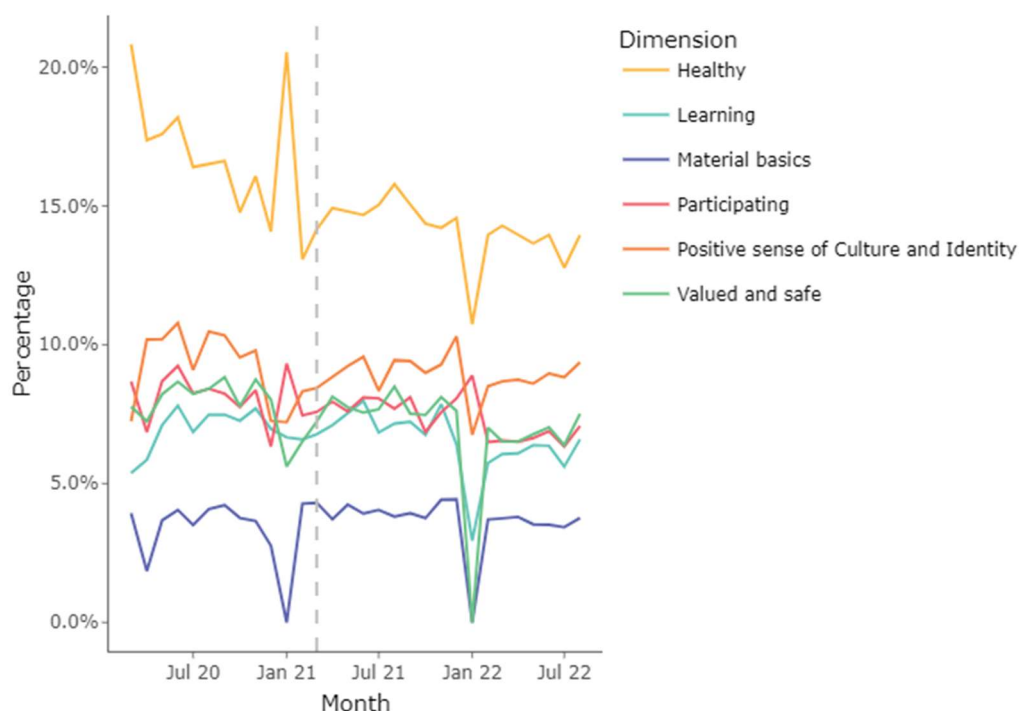
*The dashed grey line denotes the cutoff for the first collection period.

3.4   What are students feeling most concerned about?

Exploring the areas that attracted highest levels of negativity in the ei Pulse data allows us to understand the specific areas of concern for students. Overall, the top 10 clusters of questions which attracted the highest levels of negativity for students are listed in Table 2.

Table 2: Areas of most concern for students (%) (Mar 2021 – Aug 2022)

| Question cluster	Nest domain	Av. Low (%)	Av. High (%)	Total responses
Challenging Emotions	Healthy	**15.1**	51.3	178,561
Meeting Expectations	Positive Sense of Identity & Culture	**14.5**	51.6	35,052
Emotion Regulation	Healthy	**12.6**	52.7	23,262
Feelings about After School Study/ Work	Participating	**11.7**	55.7	11,643
Eats Breakfast	Material Basics	**11.4**	67.5	12,262
Home Environment	Healthy	**8.8**	62.2	6,499
Resilience	Participating	**8.7**	60.3	28,598
Organised Activities	Participating	**8.1**	68.8	13,456
Engagement (Flow)	Learning	**7.7**	57.7	34,549
Self-Image	Healthy	**7.3**	66.1	49,508

In the following sections we discuss some of these areas of concern.

Challenging Emotions

The 'challenging emotions' cluster includes questions related to self-worth, areas of worry, and frequency of emotions such as hopelessness and nervousness. While these are still rated among the most important for students, continuing the trend from the first collection period, rates are less pronounced for the recent collection period to August 2022.

Fig 10 illustrates these emotions by proportion of students. The most challenging emotion reported was "I worry a lot about mistakes that I make", with approximately 4 in 10 students (39.1%) reporting this, and just over a third (35.4%) reporting this was not a concern. These results echo those from the first collection period.

Fig 10: Challenging Emotions by Low/High responses (%) (Mar 2021 – Aug 2022)
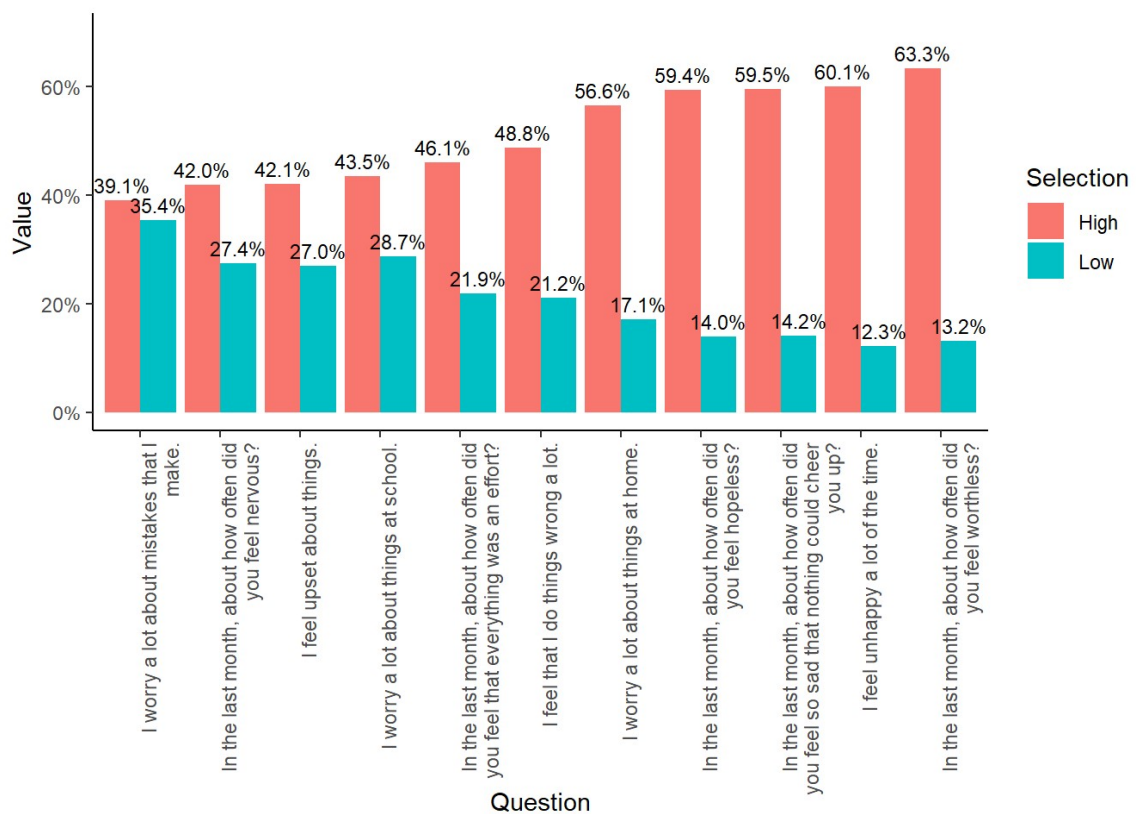
The next most challenging area reported was "I worry a lot about things at school", with 29% of students reporting this, however more students (43.5%) reported this was less of a concern for them. Just over 1 in 4 students (27%) said they often or always "feel upset about things", and a similar proportion (27.4%) said they always or often felt nervous.

Meeting expectations

The 'meeting expectations' cluster of questions refers to the perceptions of measuring up to personal standards and efforts.

Approximately 1 in 5 students (20.7%) reported feeling "disappointed after completing a task because I know I could have done better". Similarly, almost 1 in 5 students (19.0%) reported "doing my best never seems to be enough".

Emotion regulation

The question attracting highest responses within the 'emotion regulation' cluster pertains to the ability to reframe thinking. Around 1 in 5 students (18.3%) reported when feeling worried they were <u>not</u> able to "make myself think about it in a different way that helps me feel better".

Feelings about after school/study/work

Fewer than 1 in 5 students (16.3%) said they were not confident in their ability to achieve their study/work goals after school.

Eating Breakfast

There is one question in ei Pulse about frequency of eating breakfast. Answers are given on a scale of *Never*, *One or two days per week*, *Three or four days per week*, *Five or six days per week,* and *Every day*. Nearly 1 in 5 students (19.4%) ate breakfast fewer than 3 days per week. Just over a half of all students reported eating breakfast every day (52%).

3.5   What are students feeling most positive about?

The areas attracting higher levels of positivity in responses allows us to understand the areas of least concern for students. Overall, the clusters of questions which attracted the highest levels of positivity for students are listed in Table 3.

Table 3: Areas of least concern for students (%) (Mar 2021 – Aug 2022)

Question cluster	Nest domain	Av. Low (%)	Av. High (%)	Total responses
Have Enough Food	Material basics	0.8	**94.1**	**7,827**
Access to Necessities	Material basics	0.9	**93.3**	**94,664**
Valued	Valued and Safe	2.0	**92.5**	**3,190**
Home Environment	Material basics	2.6	**86.6**	**41,538**
Safety	Valued and Safe	2.9	**85.9**	**3,169**
Connectedness to Adults at Home	Participating	2.5	**85.9**	**53,258**
Home Climate	Valued and Safe	2.8	**85.0**	**65,568**
Bullying	Valued and Safe	2.7	**85.0**	**51,409**
General Health	Healthy	3.1	**84.1**	**3,162**
Health Problems	Healthy	3.0	**82.3**	**13,924**

It is encouraging to see that the areas of least concern for students include having enough food, access to necessities and feeling valued, although we know that these findings are not representative of Australian students or schools, and caution should be practiced when

interpreting these data.

The cluster of questions in Access to Necessities, and their corresponding average of 'high' responses, in the order of most positive, were as follows:

- My family uses safe and reliable transport (94.8%)

- Do you have the things you need for a healthy life (healthy food, hot and cold-water, heating/cooling, appropriate clothing)? (93.6%)

- I have the things I need for school (uniforms equipment etc) (93.6%)

- Do you have access to services that you need (medical treatment, doctor, dentist, shops)? (92.4%)

- My family has the money to buy the things we need (92.3%).

Beyond the list in Table 3, students reported less positively about items related to human connection and relationships, such as Friendship Intimacy (79.7%), Emotional Engagement with Teachers (77.2%) and Peer Belonging (74.3%).

In line with previous results, while still positive overall, these findings show approximately 1 in 4 (or 5) students feeling negative or neutral about areas such as friendship intimacy and connectedness to classmates and teachers, highly important aspects of student wellbeing.

4. Wellbeing and COVID-19

The previous report concluded with a proposal of comparative analyses of the impacts of lockdowns on student wellbeing, with suggested research questions including a) to what extent were students affected by lockdowns? and b) did mitigation strategies improve their outcomes? The following section explores some of these impacts.

Ei Pulse commenced collection in schools in March 2020, at exactly the time COVID-19 began impacting Australian communities. In the time since, the pandemic has evolved from a disease that was relatively rare in Australia due to strict containment measures, to a disease that is now spreading much more widely in a mostly vaccinated population living under much looser restrictions.

While the absence of an ei Pulse baseline prior to March 2020 makes it difficult to judge the effect of the pandemic on student wellbeing, this section attempts to assess how changes in wellbeing correspond to changes in the pandemic situation over time. In particular, the effect of the pandemic on overall rating of wellbeing and the average responses for the *Healthy* and *Learning* domains. It tracks these outcomes across the 1-year cohort (those students who were in the sample in March 2021).

There are several factors that might explain how a pandemic would affect students. There is direct harm from contracting the virus (or a friend or family member contracting the virus); prolonged psychological stress of worrying about contracting the virus and the state of the wider world in a pandemic; and the effect of actual restrictions, particularly school-closures and stay-at-home orders. Wellbeing does not seem to track actual COVID cases in Australia, as the overall pattern is that wellbeing is rising while there were few cases in Australia before the second half of 2021 when Delta and Omicron (and its variants) became dominant, and a rapid uptake of vaccines made containment policies less important in saving lives.

When it comes to the prolonged mental toll of living through the pandemic, ei Pulse data does not provide a good measure of this effect. There are, however, many studies from other jurisdictions around the world showing such an effect among children and young people (Samji et al., 2022). At the very least, the gradual fall in negative responses shows this effect might be weakening, or that at the very least it is not currently a factor dominating student wellbeing in the schools conducting ei Pulse.

When it comes to restrictions, there are better data to study effects. The following charts use data from the Oxford Covid Government Response Tracker (OxCGRT) which tracks policy settings across Australian jurisdictions over time (Hale et al., 2021). It compares the OxCGRT stringency index which measures the overall strictness of the government's response for each day against the outcomes, and also highlight periods specifically where schools were closed. It uses the State Total measure for each Australian jurisdiction, which combines the state/territory and federal government policies in effect to address the pandemic.

On the ei Pulse data, this analysis tracks the 2021-22 cohort used for other analyses across time in this report (see for example, Figs 8 and 9). To smooth ei Pulse responses, the following graphs use a seven-day rolling average of responses. Where there were less than 100 responses in a day, in a jurisdiction, that day was treated as missing and so the rolling average drew in responses from further. This mostly occurred around school holiday periods.

The green background shows when schools were open and the red bars, periods where they were closed. Tasmania and Western Australia were excluded from the analysis as the sample sizes were too small for a visualisation to be informative and raises privacy concerns.

Fig 11: Proportion of negative responses to the Big Question (black line) and OxCGRT Stringency Index (red line). (Periods of school closure are shown in the green and red bars in the backgrounds)
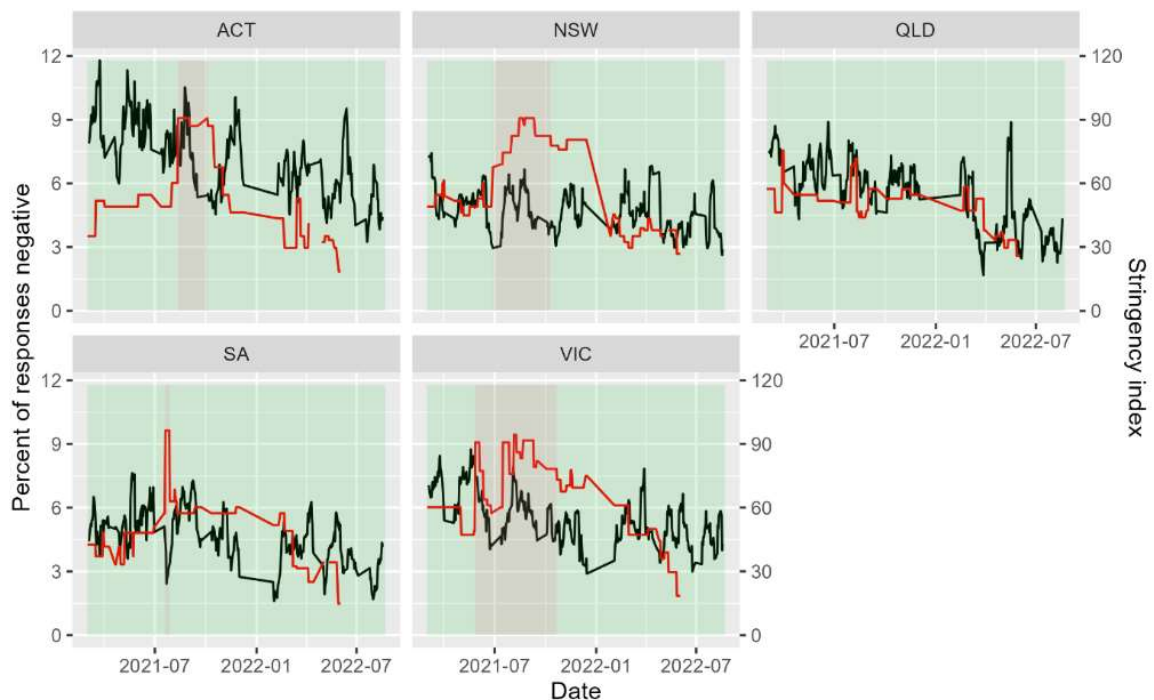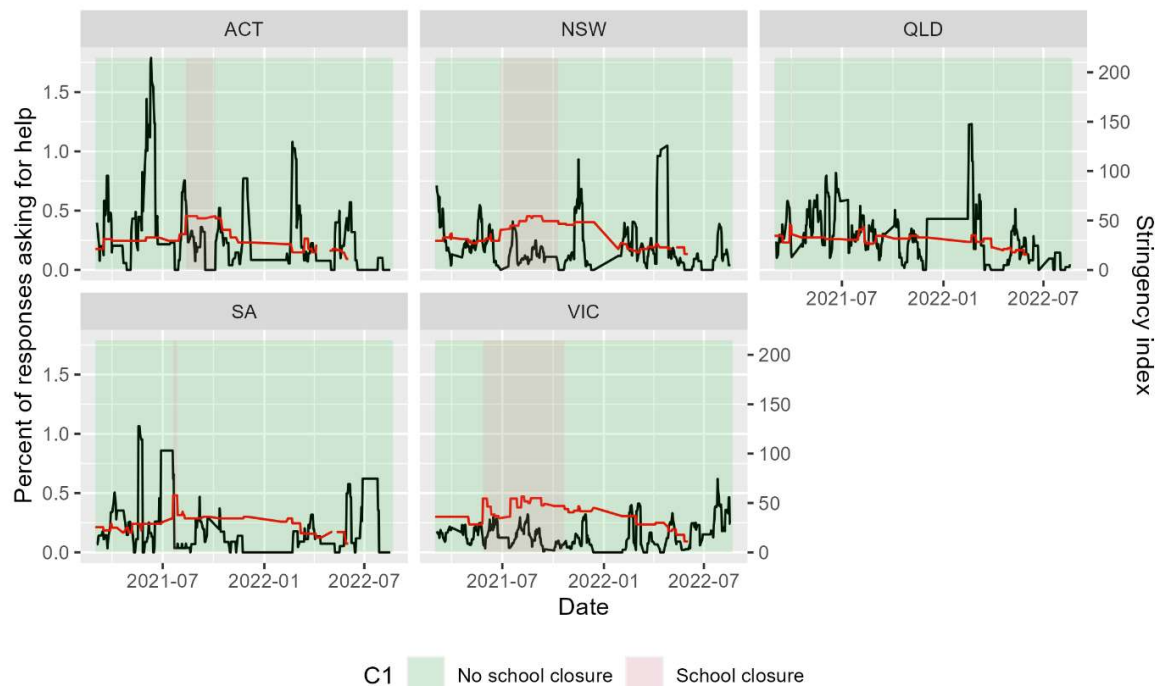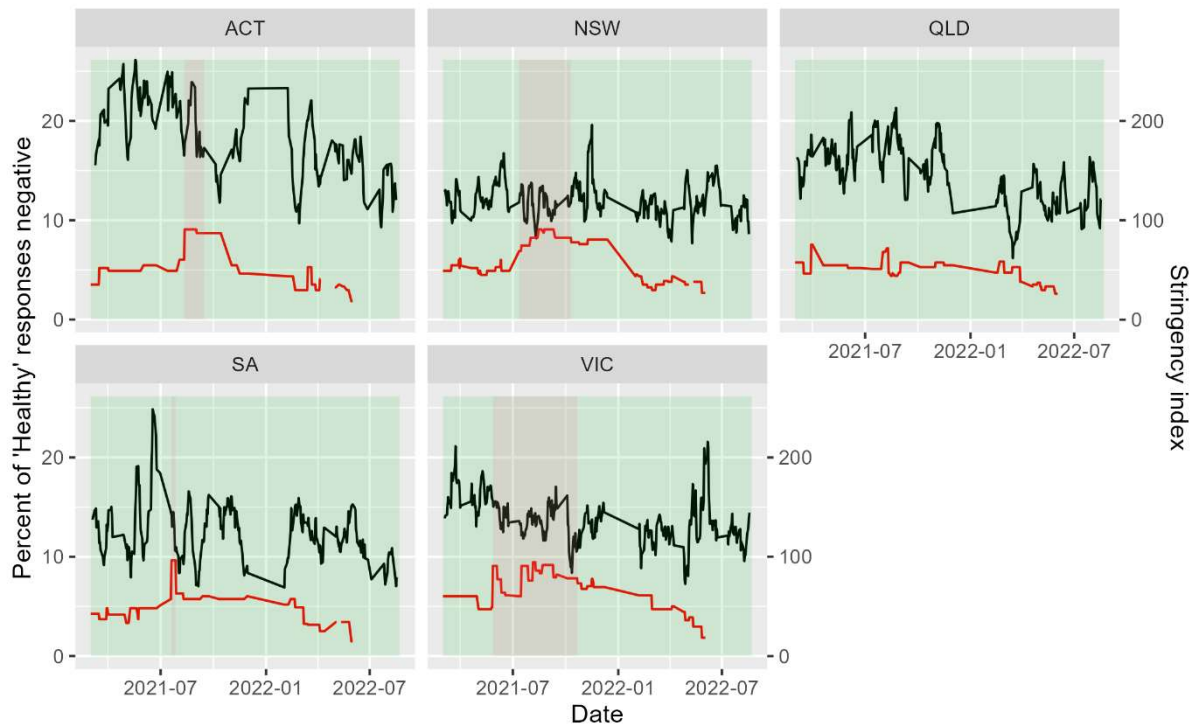
Fig 12: Proportion of respondents reaching out for help (black line) and OxCGRT Stringency Index (red line). (Periods of school closure are shown in the green and red bars in the backgrounds)

On overall wellbeing, we see no clear association between restrictions and asking for help (if anything there may be a negative one). The lack of a clear pattern may be due to the very small proportion of students reaching out for help (below one per cent every day). On negative responses overall though, there seems to be some association, although the negative effect of spikes in Stringency Index seems to be short-lived. This can be seen for example in in mid-year lockdowns in Victoria and NSW where the rate of negative responses fell long before the Stringency Index came back down.

In addition, it is worth noting that rates of negative responses were as high or higher at the beginning of 2021 as they were later in the year. One COVID-related reason for this may relate to vaccination and the freedoms that came with it. In fact, the mid-year spike in negative responses (specifically in NSW and Victoria) drops off around the time that young people over 16 became eligible for the vaccine (30th August 2021).

Fig 13: Proportion of low 'Healthy' responses (black line) and OxCGRT Stringency Index (red line). (Periods of school closure are shown in the green and red bars in the backgrounds)

There appears to be no relationship between stringency and the averages of the *Healthy* and *Learning* dimensions. In *Healthy*, there may be a correlation in the simultaneous fall in both variables in the latter half of 2021 and 2022, however there does not seem to be much impact from lockdowns. Note that in ACT, sample sizes fell below 100 for these dimensions near the start of 2022 and therefore the time-series is incomplete.

Fig 14: Proportion of low 'Learning' responses (black line) and OxCGRT Stringency Index (read line). (Periods of school closure are shown in the green and red bars in the backgrounds)
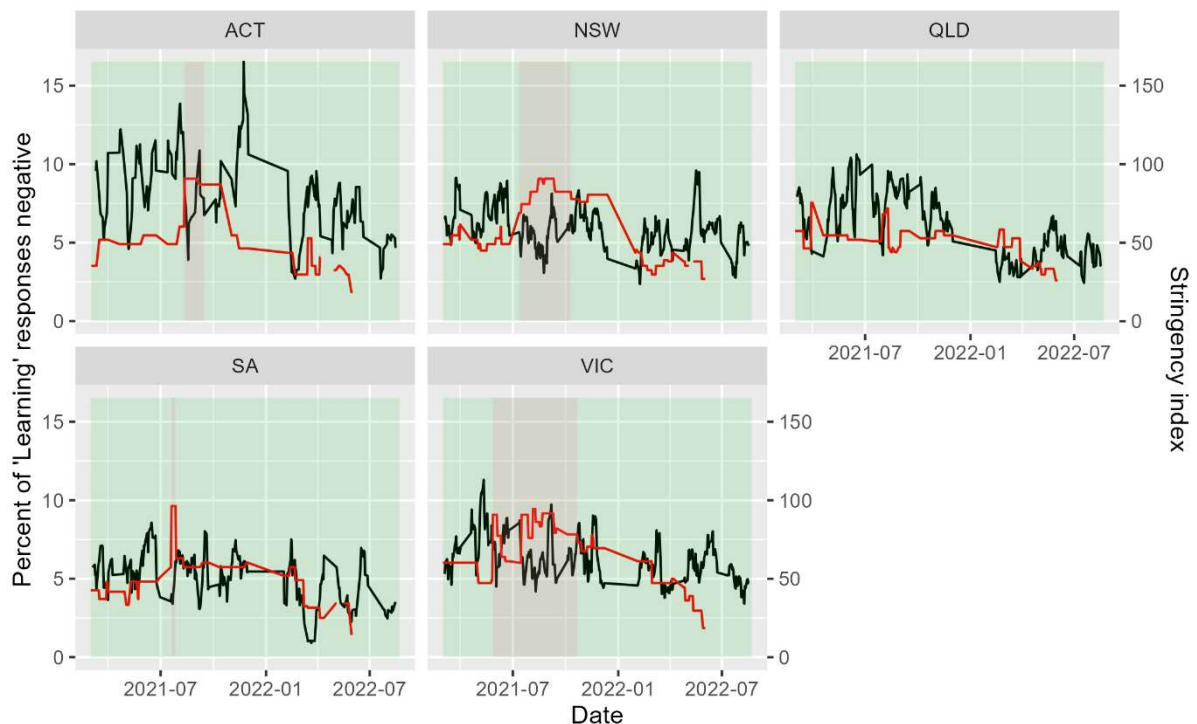
An important caveat with this analysis is that none of it is in any way causal or rigorous enough to properly test correlation. There may be several reasons for any seeming relationship observed in these charts. While it is possible there is a causal link, there are likely also common factors affecting both. For example, higher restrictions also generally correspond with an uptick in cases (often from zero or near zero) and moments of unusual anxiety so any associations can hardly be seen as causal with restrictions affecting wellbeing. In these cases, a change in the state of the pandemic may drive changes in wellbeing regardless of whether there is a direct causal effect or not. However, there does seem to perhaps be some weak relationship between Stringency Index and negative Big Question answers, suggesting the pandemic overall might have had a negative measurable effect.

5. Data limitations

ARACY and EI acknowledge the limitations of the data contained in this report and advise caution when interpreting the findings. Given the emerging nature of ei Pulse, the data are not representative of student populations in Australian states and territories. Additionally, as not all jurisdictions are currently involved, and the number of schools participating is currently limited, the data are not representative of all Australian students or schools.

As the number of schools using ei Pulse increases, the findings from the data will grow more nuanced, and comparative analyses may be explored.

6. Conclusion

It is ARACY's aspiration that all children and young people are loved and thriving (ARACY, 2021). To thrive, children and young people need to be **valued, loved and safe**, they need their basic **material needs** met, they need to be **healthy, learning,** and **participating** in family, community and decision-making, and have a **positive sense of their identity and culture**. These six interconnected domains form the Nest, a wellbeing framework that provides a way of thinking about the whole child in the context of their daily lives, viewing wellbeing in a way that brings together the different elements a child or young person needs in order to thrive (Goodhue et al., 2021).

In an increasing number of schools across Australia since March 2020, the ei Pulse wellbeing check-in tool highlights the powerful nature of supporting young people to reflect on their wellbeing by engaging them in questions which use principles of the Nest and ARACY's Common Approach®. It is intended that through their ongoinguse of ei Pulse, students will become actively engaged in improving their wellbeing.

In the most recent collection period to August 2022, findings from check-ins illustrates more than two-thirds of students (71.2%) feeling 'positive' or 'great' in any given week of the collection period, but also highlights significant variation from week to week, with 39% of students in any given week choosing a different answer to their previous week's check-in.

For students needing support, ei Pulse enabled 2,568 individuals to connect with help over the year.At almost every school during the first month using ei Pulse, at least one student who was unexpected and had no wellbeing concerns identified by the school previously, used the tool to reach out for assistance. Schools have expressed that ei Pulse provides students with a low-stakesand convenient way to initiate a wellbeing conversation with a trusted adult.

In line with the previous findings, this report shows most young people felt positive about their access to food, necessities, and feeling valued, but two in five students worry a lot about mistakes they make (39.1%), and almost 3 in 10 students said they worry a lot about things at school (28.7%), felt nervous often (27.4%), or felt upset about things often (27.4%). Ei Pulse also tells us that approximately one in four (or five) students felt negative or neutral about areas such as friendship intimacy and connectedness to classmates and teachers, all of which are highly

important aspects of student wellbeing.

The previous report concluded with a proposal of comparative analyses, and in this report, we have included a section on this. While the analysis of the impacts of lockdowns on student wellbeing is inconclusive, the gradual fall in negative responses observed may be evidence that the effect of the prolonged mental toll of living through the pandemic might be weakening, or that at the very least it is not currently a factor dominating student wellbeing in the schools conducting ei Pulse.

It is intended that ei Pulse enables students to build their wellbeing literacy, while also allowing schools to monitor trends in data and adjust policies and strategies for continuous improvement. ARACY supports the expansion of the ei Pulse app and the Common Approach® in the Australian school system as a means of supporting the wellbeing of children and young people.

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