



iyarn: Developing the Evidence Base: Final Project Report \

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Chapter 1

Working with this document

This report was written as a wrapper site to compile a set of outputs, along with their rationale and the overarching narrative. It was written using a tool called *bookdown*, with the aim to make it easier to navigate the materials without getting lost (and to support export to other formats like PDF).

Chapter 2

Introduction

2.1 About the research

The project proceeded as described in the project proposal below. This report provides a compilation of the outputs created through the research, and how these contribute to iyarn’s intended outcomes.

The work was executed with the following scope and context, that the research would:

- not undertake direct work with young people, or the public school sector, given constraints on resourcing and the administrative/time burden of ethics processes
- focus on wellbeing and general (tier 1) support and evidence, rather than mental health specifically or/and targeted support for at risk (tier 2) young people
- consider alignment of proposals with respect to the tool as it is, to ensure any recommendations were relatively agnostic with respect to the tool design (unless evidence based rationales existed)

The research aimed to develop resources that would:

1. ground the tool in evidence, with an aim to (a) maximise efficacy, and (b) provide materials and a model to communicate this evidence to stakeholders;
2. provide a path for ongoing research and evaluation; and
3. develop resources to be incorporated into the tool

This was set out in a (lightly updated) project plan, as in 2.2.

2.2 Project plan



UNIVERSITY
OF TECHNOLOGY
SYDNEY

iYarn COVID-19 TechVoucher program: Research overview

January – July 2022

UTS CRICOS 00099F



Your requirements

iyarn is a digital platform for 'check ins', intended primarily for use in schools and workplaces, as a powerful tool for monitoring and managing issues around stress, anxiety, isolation and depression and improving mental health wellbeing. The tool is already being used in schools to promote and support young people's mental health and wellbeing, and is now being adopted throughout schools across NSW.

The [NSW Government's COVID TechVouchers Program](#) is an opportunity to leverage government co-funding to invest in enhancing iyarn's product, in particular to augment the effectiveness of the tool in supporting young people to manage the significant impacts of COVID-19 on mental health and wellbeing.

The focus of this proposed research is to develop a suite of 'support resources' products focused on critical aspects of mental health and wellbeing, which can later be integrated into the iyarn tool for use by students and teachers.

These resources are ultimately intended to support and enhance wider benefits around:

- reducing stress, anxiety and mental health risk in young people
- improving wellbeing and social cohesion outcomes for young people
- improving performance of students in school (including reducing absenteeism and presenteeism)
- enhancing the iyarn product/tool to form a 'wrap around whole school wellbeing solution'
- further commercialisation, scale and market share of the iyarn product within Australia and in overseas markets



About us



Centre for Research on Education in a Digital Society

- Explores the dynamic relationship between technology and learning – across formal, informal, and professional education contexts throughout the lifespan
- Adopts sociocultural and human-centred approaches to understanding technology in practice to investigate learning technologies, the role of technology and data in learning and the changing learning needs of a digital society



Institute for Public Policy & Governance

- A leading policy and research institute dedicated to shaping public policy outcomes and decision-making, focused on work that furthers the public good across the broader public, private and community sectors
- Combines senior executive-level experience of working within the public sector with excellent policy and research skills to deliver practical, actionable and evidence-informed options, insights and solutions to all tiers of government, not-for-profits and industry

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Research team



Dr Simon Knight
Research Lead

Simon is Director of the Centre for Research on Education in a Digital Society, and leads the Transformative Learning research theme in the UTS Transdisciplinary School.

He is a recognised researcher in learning and technology and a UTS award winning teacher. He holds a PhD in learning analytics, and education Masters from both Cambridge and UCL Institute of Education, where he also did his high-school teacher training.



Peter Lee
Project Manager

Peter is Senior Manager, Advisory at the UTS Institute for Public Policy & Governance (IPPG) and a highly experienced public policy expert, strategist, research consultant and project manager.

He has extensive experience leading and managing complex policy, social and technical research projects and programs, both within government agencies in the UK and Australia and as a consultant for federal and state government agencies, local councils, private industry and not-for-profits.



Monique Potts
Researcher

Monique Potts is a PhD Candidate in the UTS Transdisciplinary School undertaking research on resilience and experiential learning for secondary school students.

Her professional background is in online learning, innovation, and strategy having held senior program management roles at ABC, UTS and TAFE. Monique has developed and delivered a range of interactive online learning programs including ABC Splash and suite of award-winning interactive learning games and tools.



Clara Mills
Researcher

Clara is an emerging social researcher at IPPG with experience across a diverse range of research and consultancy projects for local, state and federal government and NGOs, including in areas such as mental health.

She is a capable researcher with skills in research design, primary and secondary data collection and analysis. Clara holds a BA in History & Psychology from the University of Sydney and is currently completing a Master of Public Policy at USyd.



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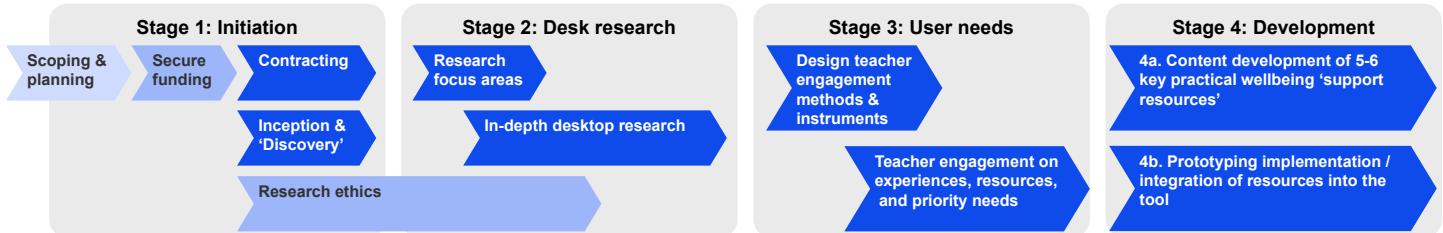
Project description

Overview

As a university committed to practical innovation and the development of impact-driven research that benefits the broader community, UTS is a key partner to industry in helping shape the world we live in. This is built on our culture of collaboration, creativity, use of agile and transdisciplinary approaches, and our industry and community connections to create real-world solutions to complex problems.

UTS has assembled a team of skilled researchers for this project, led by Dr Simon Knight, Director of the Centre for Research on Education in a Digital Society, with expertise in participatory approaches, including for educational technologies and schools-based wellbeing strategies.

We will take a participatory approach to the design and delivery of the iyarn research project, across four stages of work outlined below. This will involve desk research around scholarly and practitioner resources, identification of key needs and user expectations, the development of both practical wellbeing resources and initial prototyping with iyarn for implementation of these resources into the tool.



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Project description

Approach and key deliverables



Stage	Proposed approach	Key deliverables
1. Project initiation	<ul style="list-style-type: none"> Once funding is confirmed, and initial contracting is complete, UTS will hold a project inception meeting with iyarn to confirm project scope, objectives, approach and delivery schedule – early January UTS will also initiate the research ethics application and approval process Feb/March HREC cycle UTS will run a short 'discovery' workshop with iyarn and any other relevant iyarn stakeholders (such as representatives from the positive psychology institute) to establish the key issues of interest for the research, develop a set of desired focus areas for the research and examine what resources or other relevant sources of evidence may already exist to draw on in stage 2 - Feb 25th 	<ul style="list-style-type: none"> Defined list of focus topics / areas for the desk research Initial list of potential resources/sources and other inputs to the research Research ethics approval
2. Desk research	<ul style="list-style-type: none"> Following some further scoping work on the key focus areas for the research, UTS will refine and expand the initial list of resources/sources, including with input from UTS subject matter experts and the iyarn advisory panel The UTS research team will then conduct in-depth desktop research to review, capture and synthesise relevant resources and information in each of the key focus areas - commencing December through end of May 	<ul style="list-style-type: none"> Individual documents to capture and synthesise relevant information and resources on each focus area of interest
3. User needs	<ul style="list-style-type: none"> This stage will focus on engaging with teachers that currently use the iyarn tool to gather perspectives on: current experiences of the tool; resources they may already be using/referring to; priority issues or topics for support resources to be incorporated into the tool – early April-June UTS, in discussion with iyarn and the advisory panel, will identify a target cohort of teachers to engage in the research, determine an appropriate research method (e.g., online survey, engagement platform, semi-structured interviews, or focus groups/participatory workshops) and agree the best approach to communications and recruitment with this group Once the target group has been identified and preferred research method determined, UTS will work with iyarn to design research instruments and manage logistics to launch and run the engagement process, and analyse the results to determine key findings 	<ul style="list-style-type: none"> Research method and instruments Research findings and analysis – including 5-6 priority areas for the development of support resources
4. Development	<p>The final stage of work will incorporate two linked streams of activity:</p> <ul style="list-style-type: none"> <i>4a. Content Development:</i> This will involve working with iyarn to scope the format/design requirements and constraints for any support resources to ensure the parameters are clear. Based on this, UTS will use the content captured in stage 2 of the research to develop detailed content for 'support resources' in the 5-6 priority areas emerging from stage 3 of the research. <i>4b. Content Integration:</i> This will involve UTS conducting a participatory design process for user experience mapping to work through, with input from iyarn, how user access to resources can be integrated into the tool (e.g., where should they go, how should they be accessed, what are the 'triggers', how are specific resources linked to specific actions or states, etc). 	<ul style="list-style-type: none"> 5-6 'support resources' for use by teachers or students, for integration into the tool Recommendations for and initial prototyping of integration of 'support resources' into the tool



Project schedule

Timeline and key milestones

The project initiated on the basis of a December start and May end, with tolerance for later start resulting in a July completion.

Key milestones were:

1. Inception meeting (and HREC application arising) –
January–February with full team virtual meeting late Feb
2. Mid-research check-in for resources developed and approach adopted
– March 15th full team meeting (with HREC approved)
3. Review and iteration of produced materials for final delivery –
May 30th full team meeting
4. End of project report and project close –
July report



iYarn COVID-19 TechVoucher program: Project commencement

January – July 2022

UTS CRICOS 00099F



Research approach & scope

"What we wish to research and develop is additional supporting resources for students and teachers which will further equip them in developing the resilience needed to persevere and develop the language for better communication around mental health and wellbeing."

Key inputs:

1. Proposal text + initial literature survey
2. Existing tool & resources
3. Co-design and iteration of our approach together

Considerations:

1. Current UX and articulating the evidence base
2. Evidence for most impactful new resources
3. Evidence & user input re: how to integrate those into evolving UX

Mapping approach



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1. Developing an iyarn logic model through a feature:outcome matrix:

1. **Why?** Allows us to map Qs & evidence to claims you may make around impact & narrow scope
2. **How?** Review by iyarn team, and mapping to literature



2. Desk research to situate iyarn in the evidence:

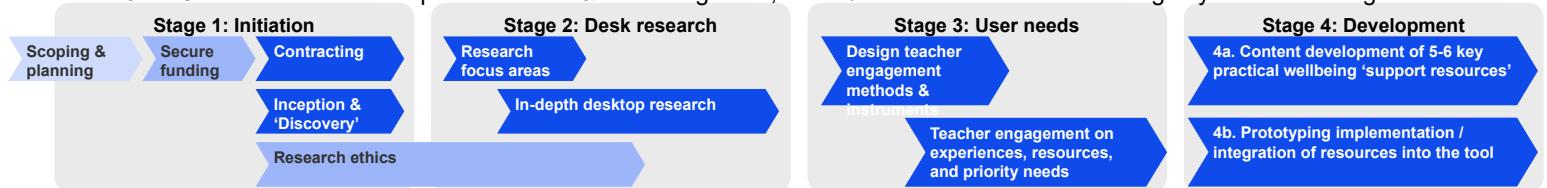
1. **Why?** Provide existing grounding of tool; Suggest new avenues & critical areas of focus
2. **How?** Use the model to guide literature survey & create scenarios identifying potential critical incidents & literature around these

3. User research to identify resource needs and integration:

1. **Why?** Understand what users currently draw on, triangulate with literature & test piloting (split phase)
2. **How?** Use scenarios with screenshots of tool journeys to identify existing resources to integrate, & identify where these are needed

4. Resource development grounded in evidence for iyarn's outcomes:

1. **Why?** Stages 1:3 identify needs & ground how to address these, phase 4 builds (in a way iyarn can adapt in future)
2. **How?** Create a resource template for items & their integration, create/curate resources addressing key needs and segments



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Chapter 3

Overview of Research Outcomes

3.1 Overview of project and outcomes

The research was conducted through a collaborative project between iyarn (Lockie Cooke), the Applied Positive Psychology Learning Institute (APPLI; Paula Robinson lead), and the University of Technology Sydney (UTS; Simon Knight research lead).

UTS undertook:

- A mapping activity to identify the program logic and theory of change for the iyarn platform (see 4).
- Evidence synthesis, targeting the key drivers in the iyarn model, distiling this evidence into key recommendations, and stakeholder-oriented FAQ (see 5)
- Evidence synthesis and design mapping, drawing on existing resources and evidence to develop practical resources for the iyarn intervention and an ‘evidence informed’ wheel based on wellbeing factors (see 6)
- User research, using scenarios that helped focus the evidence synthesis and connect user experience to key issues in iyarn’s design and development (see 7)

3.1.1 Overview of resources produced

Practically, this work has produced:

- A theory of change via a feature:outcome matrix model, with key questions and drivers identified
- Evidence syntheses * 3
 - FAQ distillations * 3
- An overview of wellbeing models and recommendation for iyarn wellbeing wheel with identified validated evaluation instruments

- An overview of intervention models and theories of behaviour change, with implications for iyarn
- A classroom slidedeck, and teacher resources to support stakeholder understanding of, and engagement with the tool
- An approach to mapping resources for use in the tool, and a preliminary mapping of these into an xslx
- A user study with key user insights and connections of this to the existing evidence base

Chapter 4

Mapping iyarn's theory of change through a feature:output matrix

4.1 Brief background to theory of change

Theories of change can be used to make clear how learning technology innovations are designed to produce their desired outcomes in a given context (Century & Cassata, 2016; Cukurova et al., 2019; Weatherby et al., 2022).

However, identifying the key features in technologies that produce their impact can be hard. Therefore, working with a range of experts and end users, with the technology and resources created to support the innovation, can be a helpful way to identify and define these features, and express their relationship to outcomes (Century & Cassata, 2016).

It can also be challenging to align research evidence with innovations and existing practices, because priorities in evidence production and use may differ, and often we have to navigate incomplete or jigsawed evidence alongside new and emerging tools and practices (Ming & Goldenberg, 2021, p. 130). For example, while evidence is often referred to in terms of a hierarchy from anecdotal to causal (often randomised control trials), this may not reflect evidence *quality* for particular *purposes* (Cukurova et al., 2019; Weatherby et al., 2022).

Similar to logic models, in the field of ‘persuasive technology’ behaviour change support systems can be modelled using an ‘outcome/change’ design matrix. These matrices are intended to map desired changes (attitudes, existing behaviours, or compliance with new behaviours), to outcome spaces (formation, alternation, reinforcement) (Langrial et al., 2013; Tikka & Oinas-Kukkonen, 2019). This model can be used to map *features* that target particular behavioural or attitudinal changes, to *outcomes* that reflect the longer term changes in users. Moreover, they provide an additional approach to mapping evidence to connect features of interventions to desired outcomes.

Similarly, ‘driver diagrams’ have been used in implementation and improvement research in education, to express how the key drivers towards our goals are addressed by secondary-drivers, to develop measurement models that allow us to test interventions across contexts (Bryk et al., 2015).

Practically, many funders now *require* applicants to have an explicit theory of change model. For example, the Victorian government ‘Mental Health Fund and Menu’ supplier application requires a logic model. These can be used to:

1. Make explicit how tools/interventions are connected to existing evidence
2. Shape product development, by making clear how proposed product changes influence desired outcomes
3. Drive evaluation by clearly defining desired outcomes, the observable indicators and outputs we may measure to evaluate progress on these outcomes, and the features of the tool that may be producing outcomes (and could be systematically varied).

4.2 References in this section

- Bryk, A. S., Gomez, L. M., Grunow, A., & LeMahieu, P. G. (2015). *Learning to improve: How America’s schools can get better at getting better*. Harvard Education Press.
- Century, J., & Cassata, A. (2016). Implementation Research: Finding Common Ground on What, How, Why, Where, and Who. *Review of Research in Education*, 40(1), 169–215. <https://doi.org/10.3102/0091732X16665332>
- Cukurova, M., Luckin, R., & Clark-Wilson, A. (2019). Creating the golden triangle of evidence-informed education technology with EDUCATE. *British Journal of Educational Technology*, 50(2), 490–504. <https://doi.org/10.1111/bjet.12727>
- Langrial, S., Stibe, A., & Oinas-Kukkonen, H. (2013). Practical Examples of Mobile and Social Apps using the Outcome/Change Design Matrix. *PERSUASIVE (Adjunct Proceedings)*, 7–13.
- Ming, N. C., & Goldenberg, L. B. (2021). Research Worth Using: (Re)Framing Research Evidence Quality for Educational Policymaking and Practice. *Review of Research in Education*, 45(1), 129–169. <https://doi.org/10.3102/0091732X21990620>
- Tikka, P., & Oinas-Kukkonen, H. (2019). Tailoring persuasive technology: A systematic review of literature of self-schema theory and transformative learning theory in persuasive technology context. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 13(3), Article 3. <https://doi.org/10.5817/CP2019-3-6>
- Weatherby, K., Clark-Wilson, A., Cukurova, M., & Luckin, R. (2022). The Importance of Boundary Objects in Industry-Academia Collaborations to Support Evidencing the Efficacy of Educational Technology. *TechTrends*, 1–14.

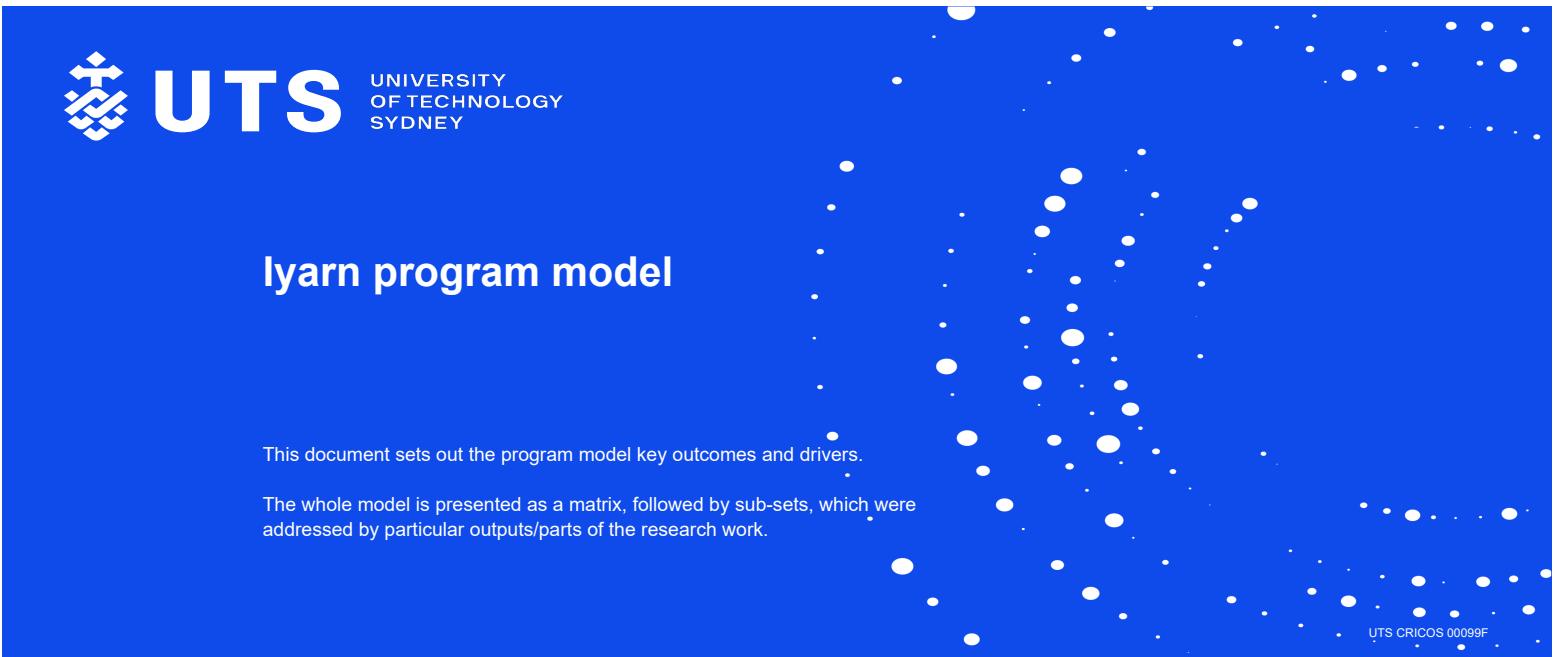
4.3 The iyarn model

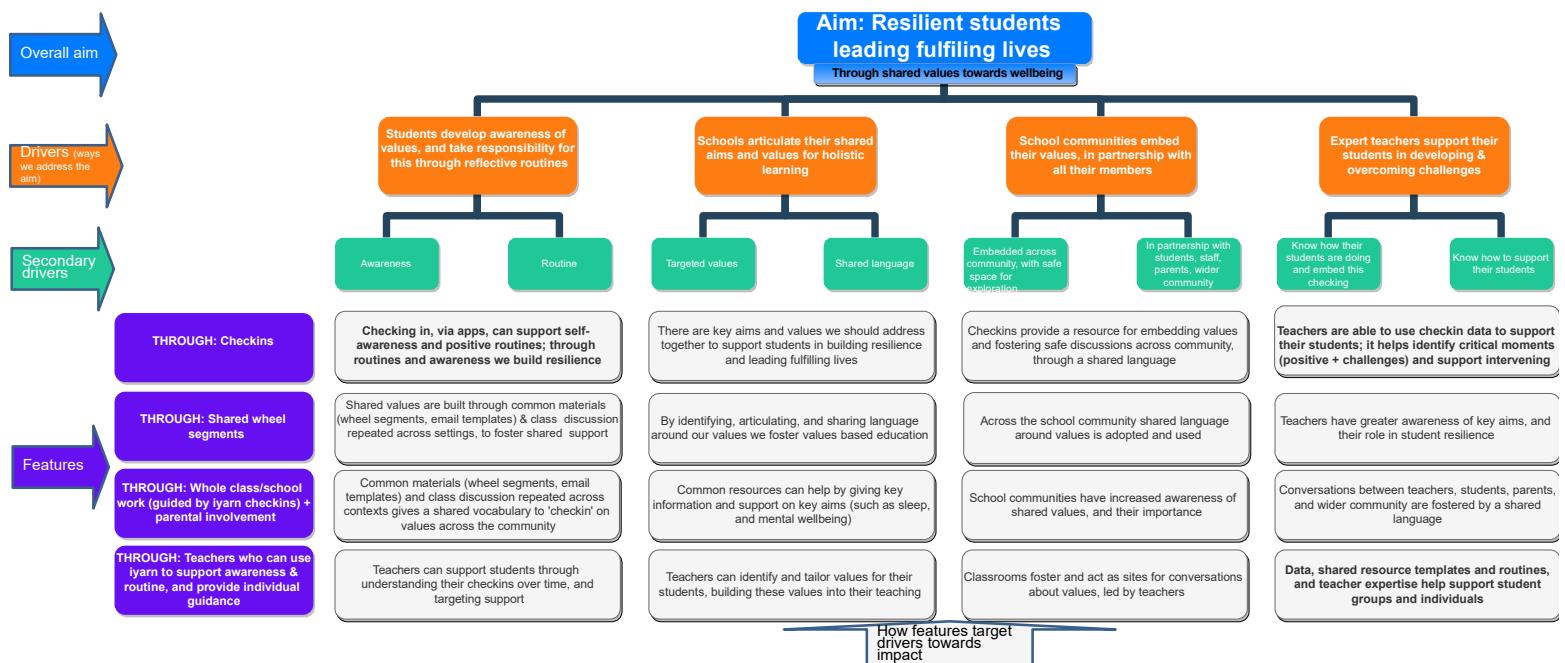
UTS and iyarn have co-developed a model that represents iyarn’s program logic, and allows mapping to evidence and evaluation against this logic. The model is based on:

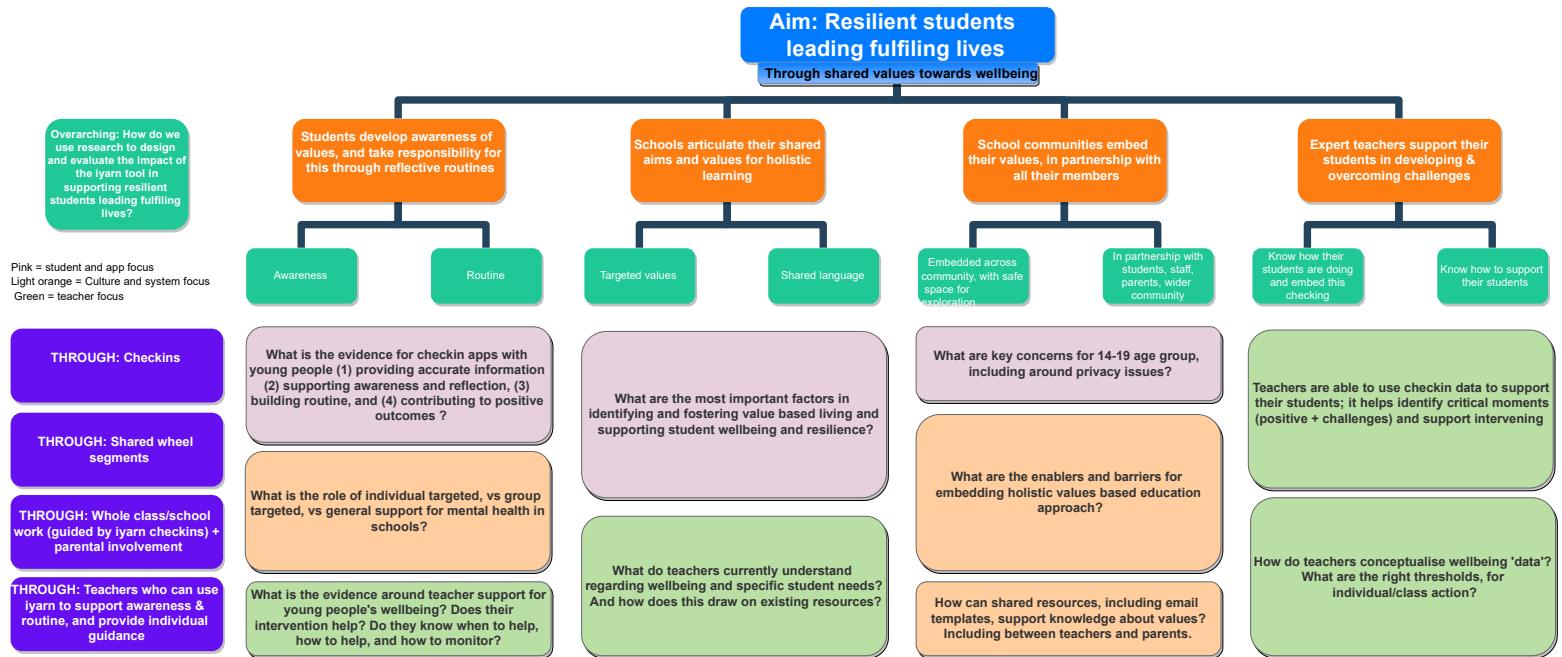
1. Our discussions and iyarn's existing stated model (grounded in practice and experience with schools)
2. Consultation with subject matter expertise particularly provided by APPLI
3. Our knowledge and initial scan of the literature and relevant policy and practices resources

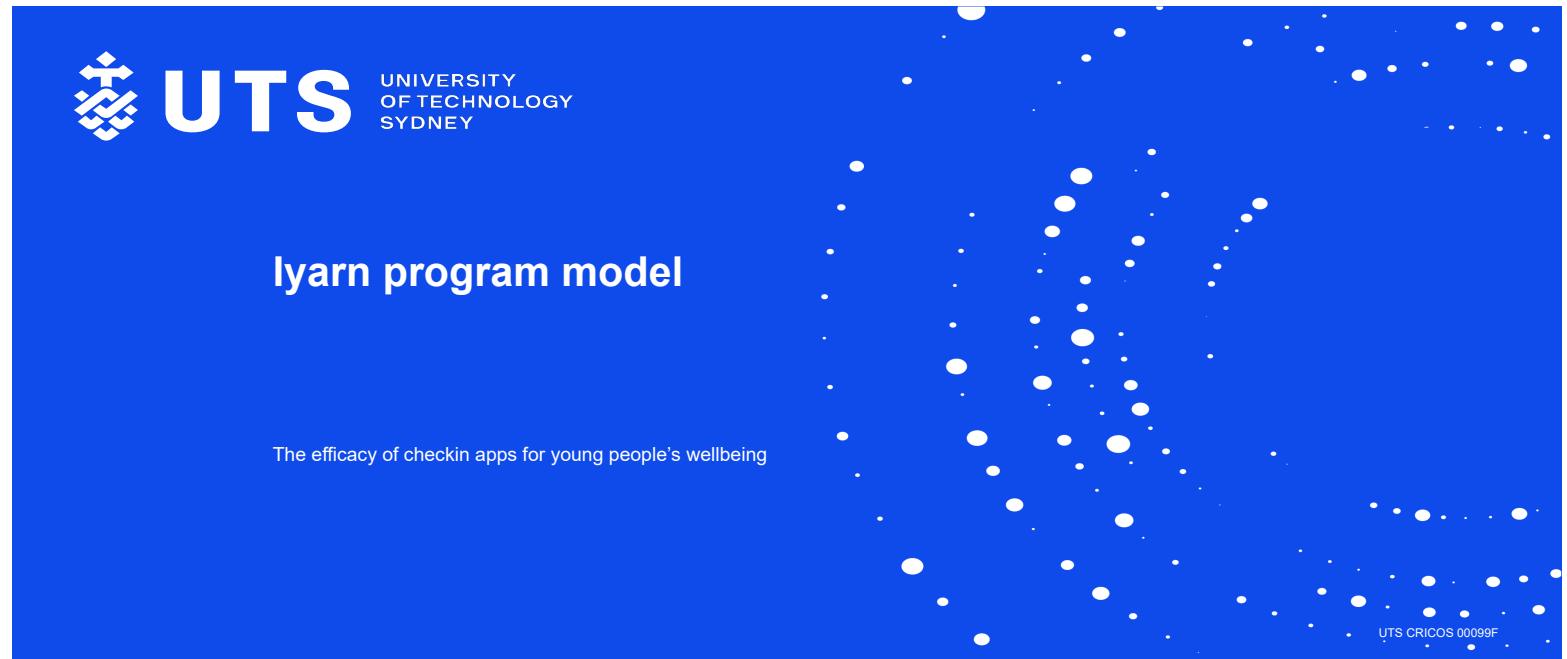
This representation of the model shows how iyarn's key features relate to its key outcomes and drivers. It was used to create key questions, targeted in the evidence synthesis and user testing, as shown in 4.3.1. The aim of this model was to focus on the key grounding evidence, and where that evidence might have implications for change and evaluation models for iyarn.

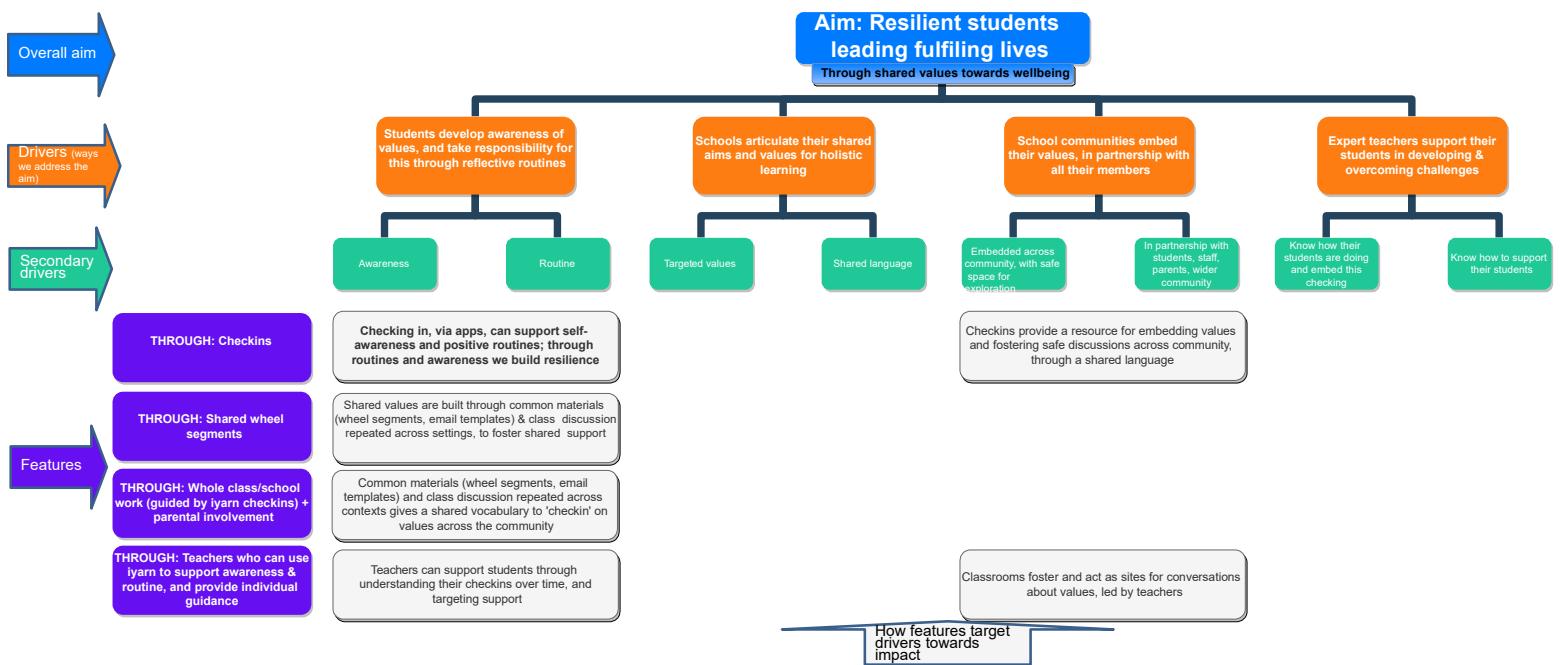
4.3.1 The model

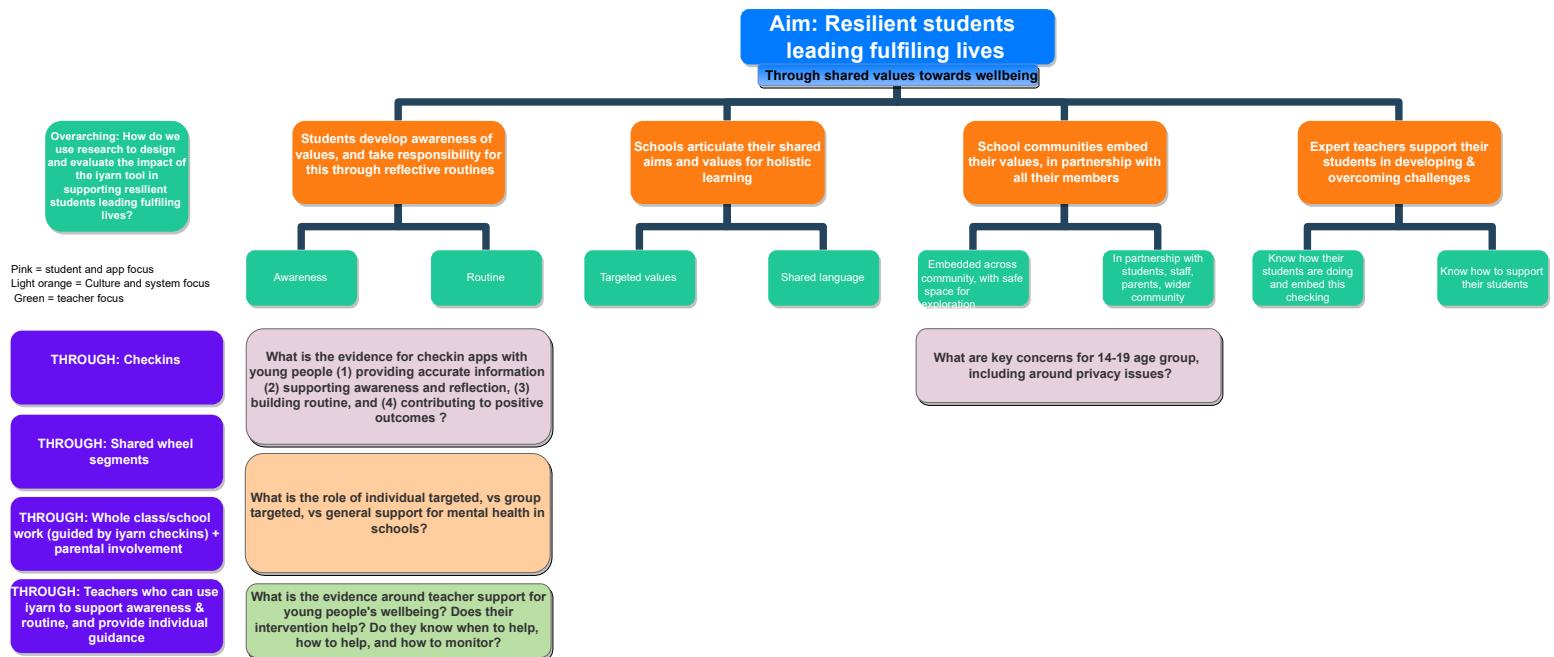


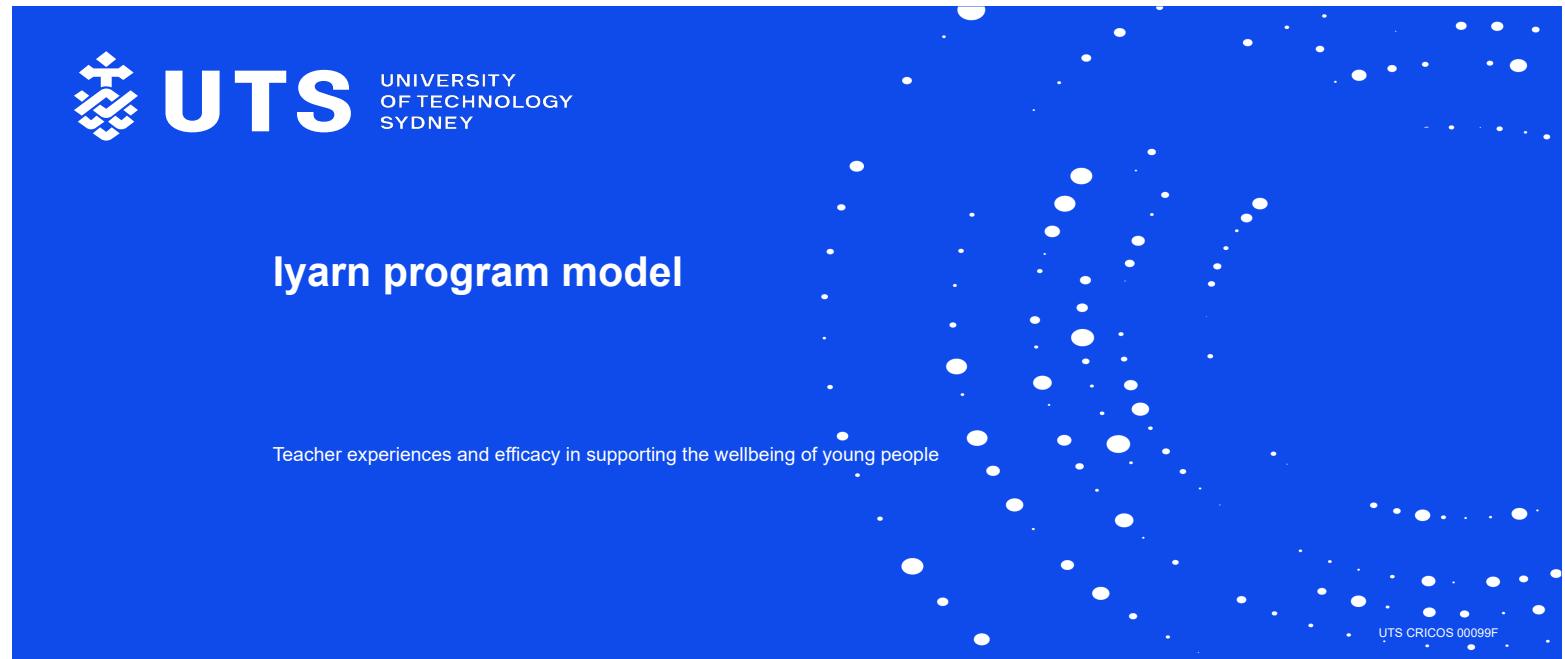


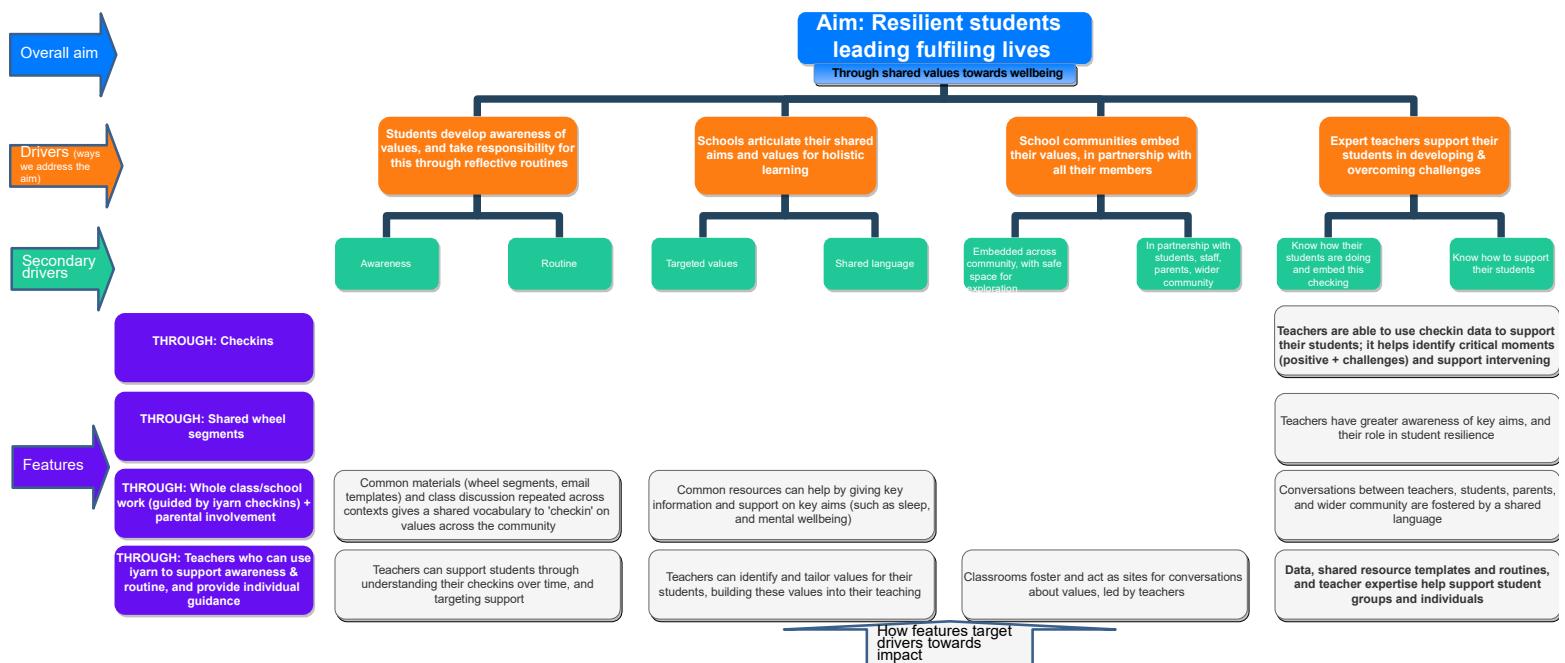


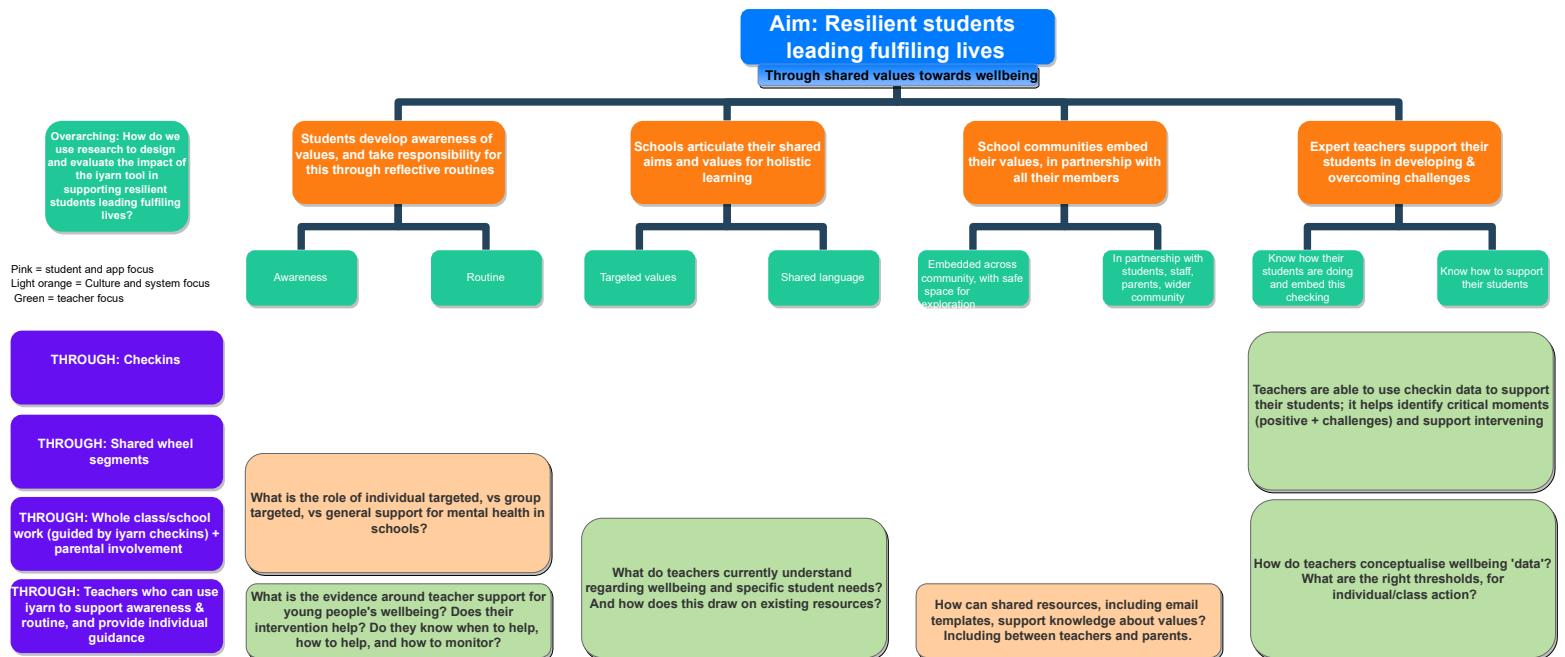


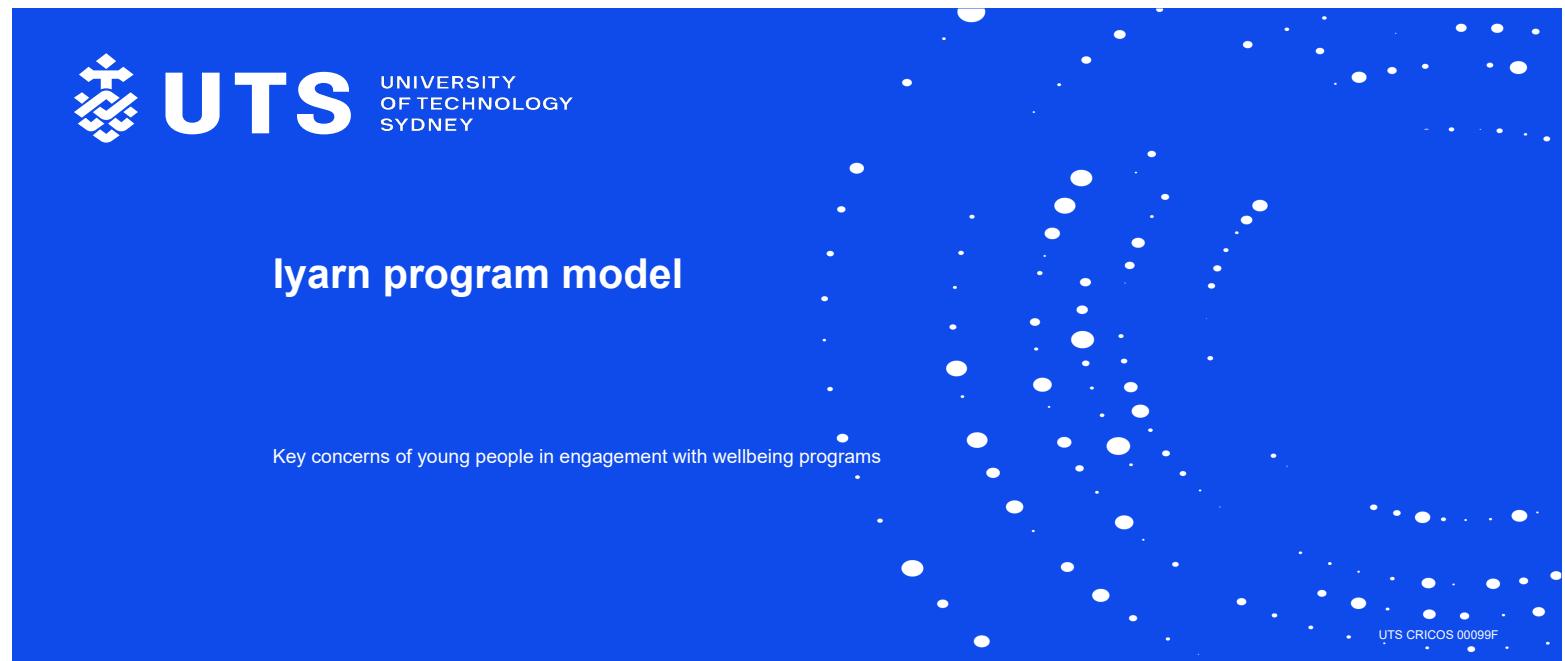


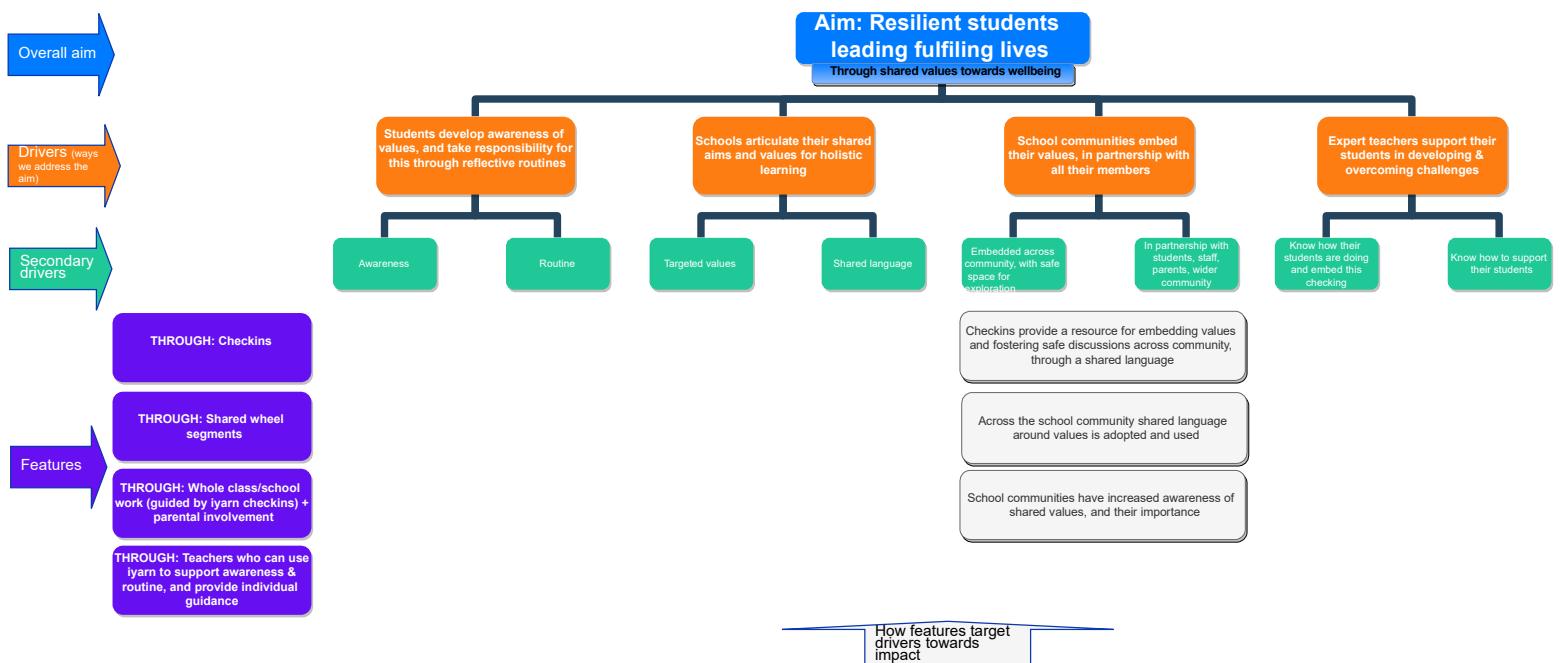


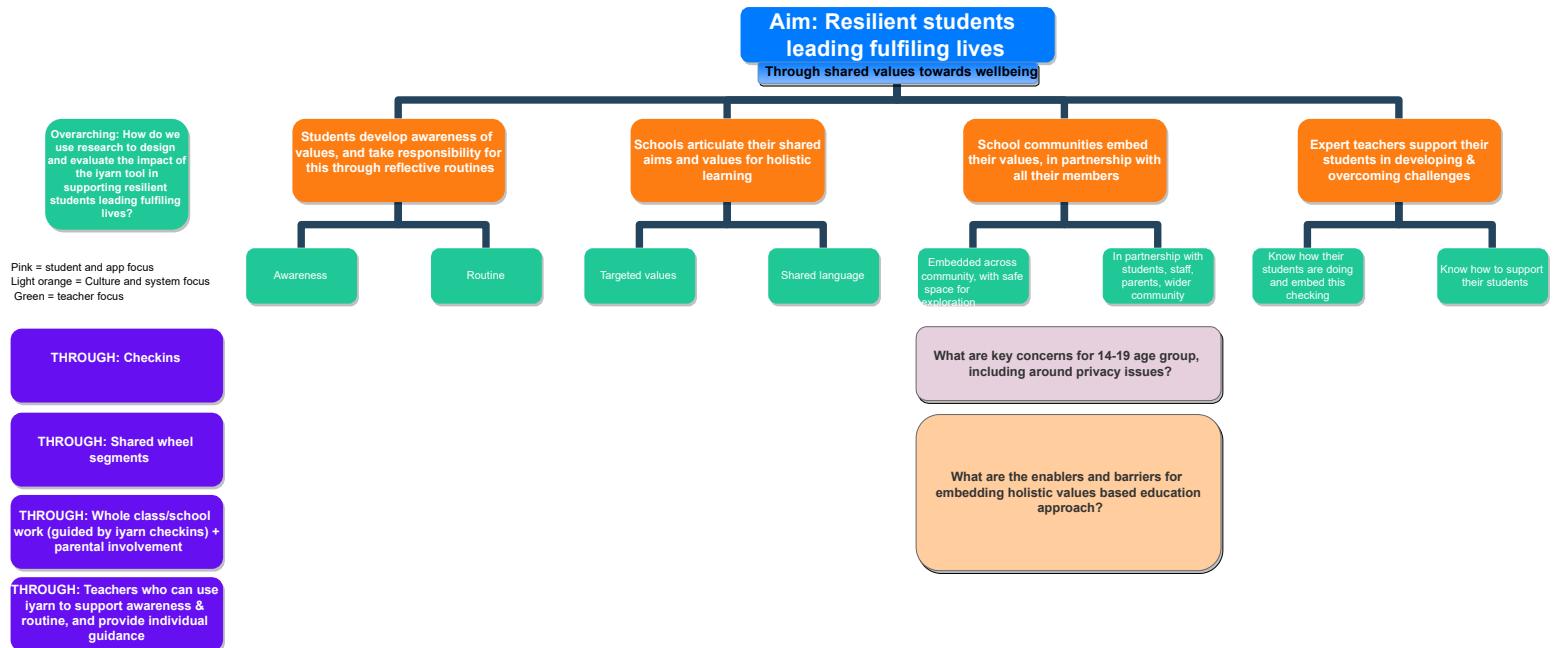


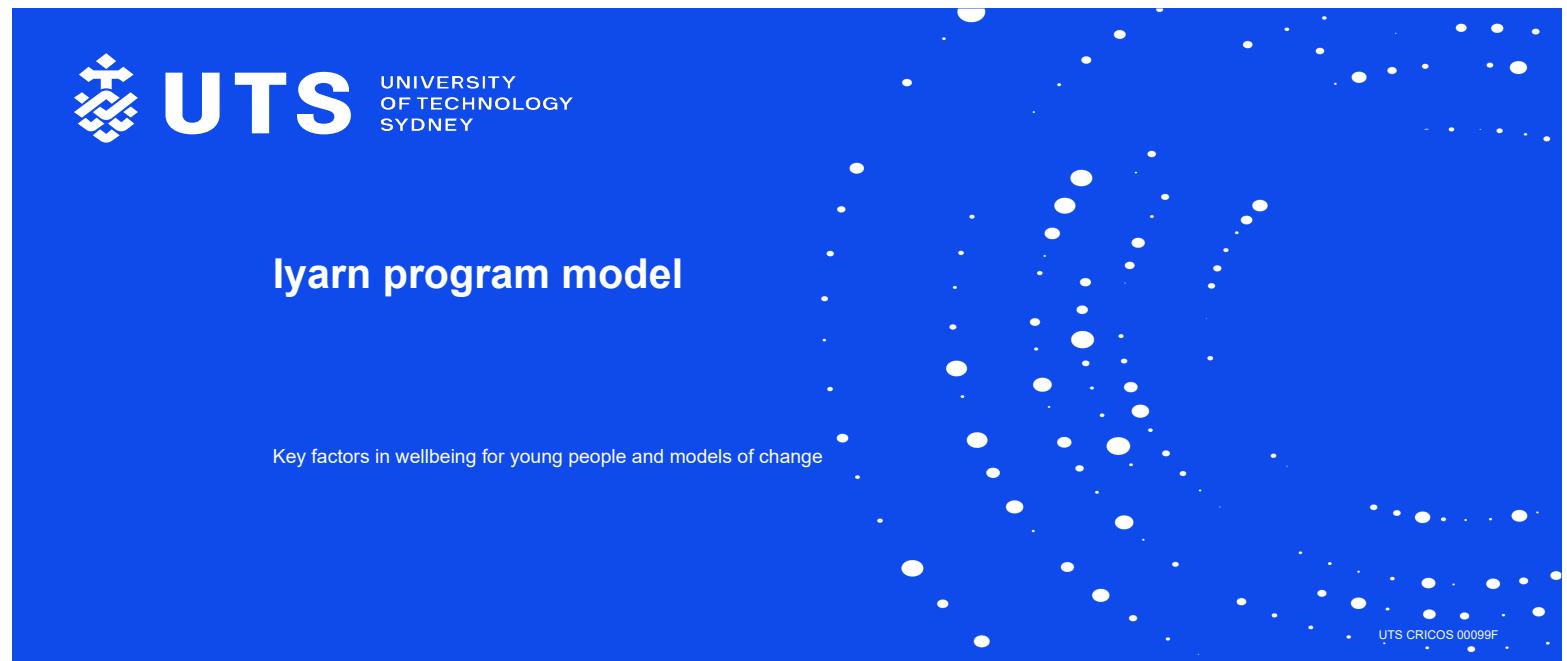


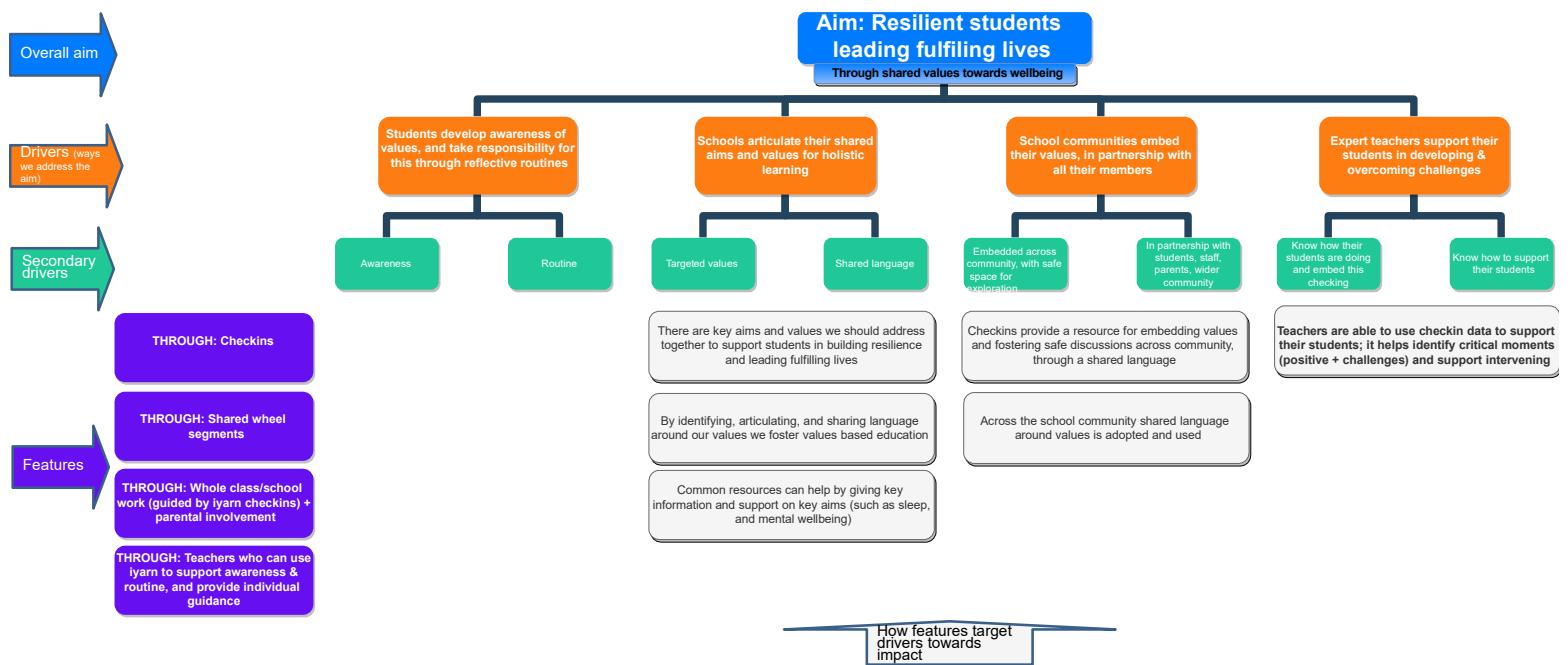


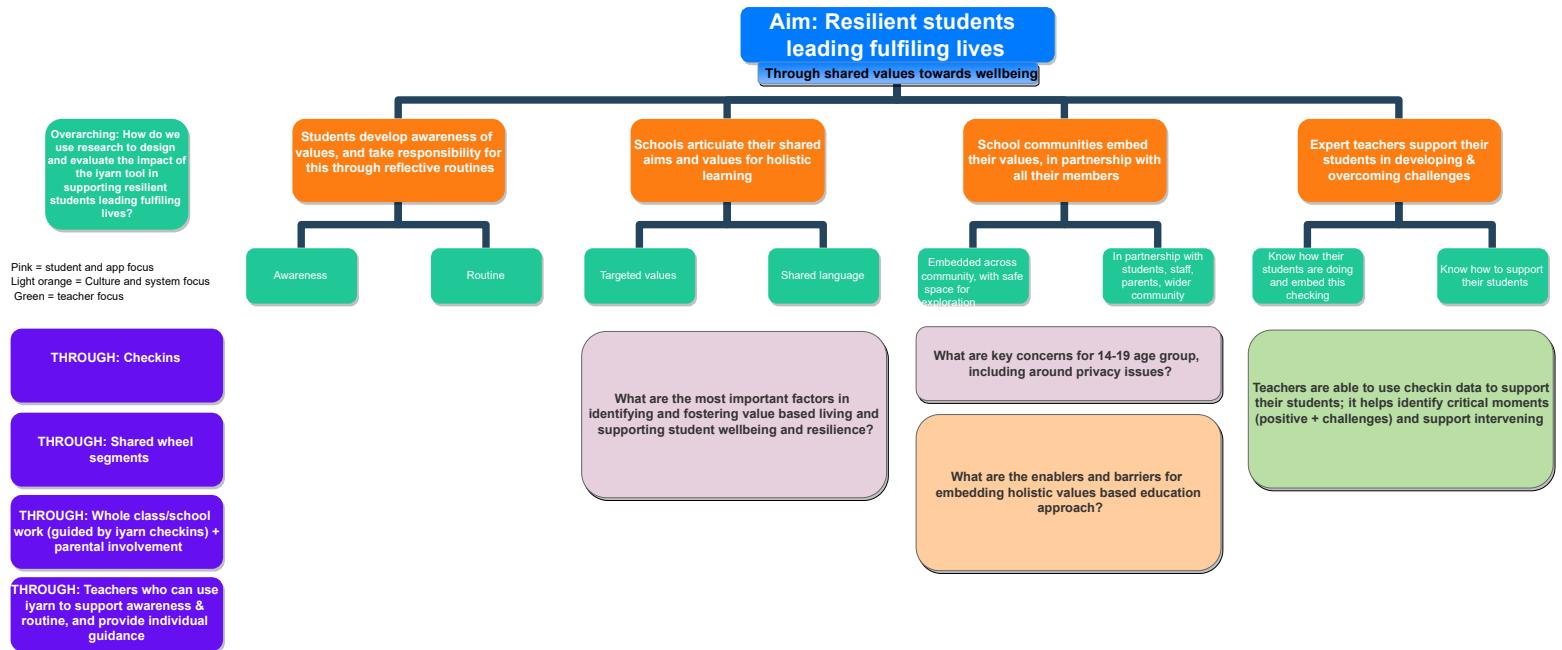












4.3.2 Adaptability to program logic models

This model is intended to be adaptable to a traditional logic model, as in the example (largely drafted by Lockie) in 4.3.2).

Program/support title: iyarn School Wellbeing check in solution for whole school positive mental health promotion

THEORY OF CHANGE:	Building student routines to stop, reflect and check in on their social and emotional wellbeing improves self-awareness and wellbeing.			
TARGET POPULATION	INPUTS	EVIDENCE	ACTIVITIES	OUTCOMES
<ul style="list-style-type: none"> Year 7 – 12 students Year 7 – 12 teachers School leader representative Health and wellbeing staff Young people, teachers and Student Advisory Councils 	<ul style="list-style-type: none"> Student & teachers have access to either Mobile app or internet via computer desktop or laptop for access to check in app and support resources along with video conferencing for remote facilitator check-in support. School Wellbeing leadership define support resources available to students that are year group appropriate One facilitators to run in-person or virtual sessions with school staff and wellbeing leaders generally school deputy principle Facilitators to support the delivery of virtual group sessions for whole year groups Space to conduct in-person sessions in schools - optional Curriculum development costs -optional, if schools require customized student resources. Research and evidence to inform program design 	<p>We commissioned a synthesis of the evidence underpinning our model, led by UTS researchers. Key points are:</p> <p>Whole-school approaches with youth engagement enhance outcomes</p> <ul style="list-style-type: none"> There is increasing consideration in education policy at both a national and state level about how to support the wellbeing, resilience and mental health of students in Australian schools. Research on the effectiveness of these programs in schools have found both universal and targeted interventions in school settings but argued that 'Enhancing youth engagement in these programs is necessary if program adherence is to be improved' (Werner Seidler et al., 2017). <p>The PERMAH positive psychology model and related approaches such as '5 ways to wellbeing' are well supported in literature for young people</p> <ul style="list-style-type: none"> Many of these programs focus on a positive psychology approach based on work by Seligman (2002), Noble & McGrath (2012) and others. This approach, known increasingly as 'positive education', focuses on 'The empirical study of human wellbeing, strengths and resilience to negative life events and the conditions that allow individuals, groups and organisations to flourish' (Noble & McGrath, 2012). These programs aim to build self-esteem, wellbeing and the ability to 'bounce back' from difficult experiences. The focus of these programs is primarily on developing individual skills and social and emotional competencies as well as communication skills. Three principles underpin the definition and selection of factors/segments <p>1. Conceptual: They should be distinct (and ideally mutually exclusive), e.g. sport & exercise overlap, while 'activity' might mean physical activity, or being busy</p>	<p><i>Core intervention involves 'checking in' by rating state on a set of agreed factors, represented as segments in a wheel. Young people can add a comment to their ratings, and view their ratings over time. Their checkins can be viewed by their teacher / year coordinator.</i></p> <p><i>The tool is integrated by:</i></p> <ul style="list-style-type: none"> <i>School year group coordinators are trained in the iyarn tool.</i> <i>School leadership teams curate the additional support resources</i> <i>School leadership define appropriate responses/interventions for red-flag scores</i> <i>Ongoing support throughout the school year with termly check ins</i> <i>Students will have online access to resources linked to check-in results</i> <i>iyarn team co-design resources and checkin factors/segments with school staff and/or students.</i> <p><i>School Wellbeing lead facilitates discussion after first term of iyarn use with the YAC (Youth Advisory Council) this youth advisory</i></p>	<p>Short term (1 – 3 months):</p> <ul style="list-style-type: none"> Improved ability to understand one's emotions, thoughts and values Earlier intervention, access to age-appropriate support resources, and increases in help-seeking behaviour Improved knowledge by young people of how to support personal mental health and wellbeing <p>Medium term (6-12 months):</p> <ul style="list-style-type: none"> Improved school support culture through shared language and systems for support Reduced likelihood of demonstrating generalised worry, fear or nervousness Improved self-esteem Improved student wellbeing <p>Medium-term school-level outcome (6 to 12 months):</p> <ul style="list-style-type: none"> Student engagement and participation in the wellbeing programs provided to young people leading to greater enrolment and participation.

		<p>2. Research: Supported by research as being important for young people (and alignment with iyarn theoretical grounding in values-based education)</p> <p>3. Practical: The identified needs within schools and the ways schools articulate (in their current, and developing practice) (build on what you have)</p> <p>The facilitator will assist the school leadership with defining the segment selection</p> <p>Checkin apps support reflection and awareness</p> <ul style="list-style-type: none"> Self-monitoring through tech-platforms (via mobile apps or websites) is an effective tool for building self-awareness and reflection (Bakker et al., 2016; Miller et al., 2015). Self-monitoring is a core feature of many evidence-based psychological therapeutic techniques including Cognitive Behavioural Therapy (CBT) and acceptance and commitment therapy (ACT). Self-monitoring of mood can boost overall emotional self-awareness which in turn can lead to improvements in self-regulation (Kauer et al., 2012). There is increasing evidence that that self-monitoring is effective tool for routine/habit formation (Shiffman et al., 2008). <p>Increased awareness and reflection via apps improves wellbeing outcomes</p> <ul style="list-style-type: none"> Multiple studies have found that for young people the regular use of online platforms with a component of self-monitoring and CBT have been effective in reducing symptoms of anxiety and depression and increasing wellbeing over time (Bakker & Rickard, 2018 (correlational), 2019 (correlational); Clarke et al., 2015 (PRISMA systematic review); Eisenstadt et al., 2021 (PRISMA systematic review); Goldberg et al., 2022 (PRISMA+ systematic review); Kenny et al., 2020 (RCT); Lappalainen et al., 2021 (RCT)). Some studies have linked self-monitoring with improved help-seeking behaviour for mental health in young people as well as showing promising early intervention outcomes (Rickard et al., 2016). Monitoring for early detection of mental health problems allows for early intervention, which improves longer term outcomes (Rickard et al., 2016). 	<p><i>council amends the segment title and descriptions to meet the social and cultural needs of the schools young people.</i></p>
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		<p>Resources provided in online mental health promotion improve wellbeing outcomes</p> <ul style="list-style-type: none">Clarke et al., (2015) systematic review, found tentative evidence in support of online mental health promotion interventions – largely skills-based modular-format ones – for young people.		
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Assumptions:

List and describe the assumptions associated with the theory of change and the external factors that may influence attainment of the outcomes.

- Self-report checkin data (and experience sampling methods) are an accurate method for young people to monitor their moods and mental health (reasonable evidence through multiple studies including (Miller et al., 2015; Rickard et al., 2016) This has been confirmed in a number of studies including for MH apps, MyCompass (Harrison et al., 2011) and mobiltype (Reid et al., 2011).
- App use is reasonably consistent (across duration, occurrences, or specific features); specific features of use and external measures for validation are not always reported which is a limitation in the evidence base for all such apps (Eisenstadt et al., 2021). However integration with more direct contact (which in class use would constitute) suggests this supports app use (Clarke et al., 2015; Rickard et al., 2016).

- Evidence syntheses assume that there is an alignment between the features of the target intervention and those in the synthesised evidence, the approach taken to reviewing the evidence sought to maximise this alignment

The model comes with some key provisos. Notably, although for many contexts the evidence drawn on will be applicable, we have specifically targeted school-based tier 1 evidence, particularly in Australia and the UK. Other institutional, national and cultural, and needs-based contexts will vary. This has implications both for the grounding in evidence, but also for the kinds of *outcomes* a program might effectively target.

Chapter 5

Evidence synthesis: Situating iyarn + directions for evaluation and development

We have developed a synthesis of evidence, based on the program logic matrix 4 and questions. These syntheses should:

- Represent the evidence base iyarn draws on and give language to that
- Be shareable providing iyarn's stakeholders with an understanding of the research background
- Support development of iyarn by pointing to gaps (in the tool, or existing evidence) and methods for evaluation

In each of the syntheses, the sections and purposes should:

- Provide a key summary
- Highlight implications for iyarn
- Point to lessons for future work
- Link to practical use cases for iyarn (including those expressed in the developed scenarios).

These resources comprise:

1. Three evidence syntheses (plus the wellbeing factor synthesis).
2. Three Frequently Asked Questions (FAQ) summaries, with questions and answers directly linked back to the longer and fully referenced evidence syntheses.

5.1. What is the evidence for check-in apps with young people (1) providing accurate information (2) supporting awareness and reflection, (3) building routine, and (4) contributing to positive outcomes?

Section 5

5.1 What is the evidence for check-in apps with young people (1) providing accurate information (2) supporting awareness and reflection, (3) building routine, and (4) contributing to positive outcomes?

Introduction

Prepared by: UTS research team, lead author Monique Potts

Prepared for: iyarn research partner

Purpose: This document provides a synthesis of existing evidence. This synthesis is designed with an intent to:

1. be useful to iyarn, because it represents the evidence base iyarn is grounded in and helps give a language to that;
2. be something iyarn can share to demonstrate the evidence base to external stakeholders;
3. guide future development and evaluation within the iyarn tool and its use

Using this resource: To do that, these documents are designed to:

1. provide a summary of the key evidence;
2. highlight key implications for iyarn in tool design and implementation;
3. point towards lessons for future evaluation work.

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iyarn Desktop Research – Overview

The following sample of desktop research approach aims to provide an indicative document for discussion, feedback and dialogue to inform the further research. It focuses on one of the key questions identified through the mapping of key drivers and outlined below and presented previously. A list of the key questions and themes for the desktop research are also outlined below.

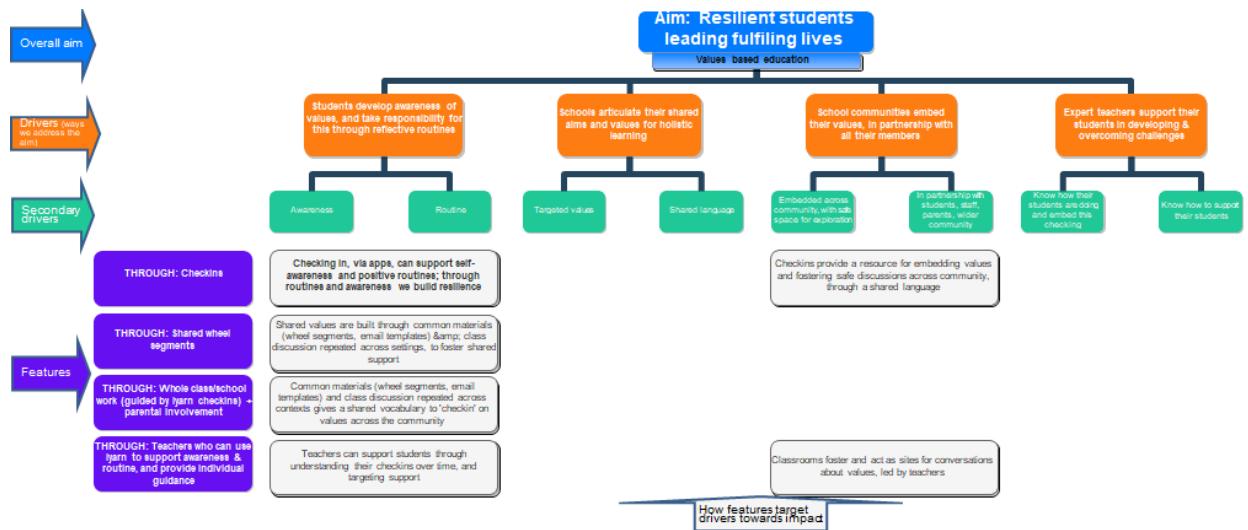
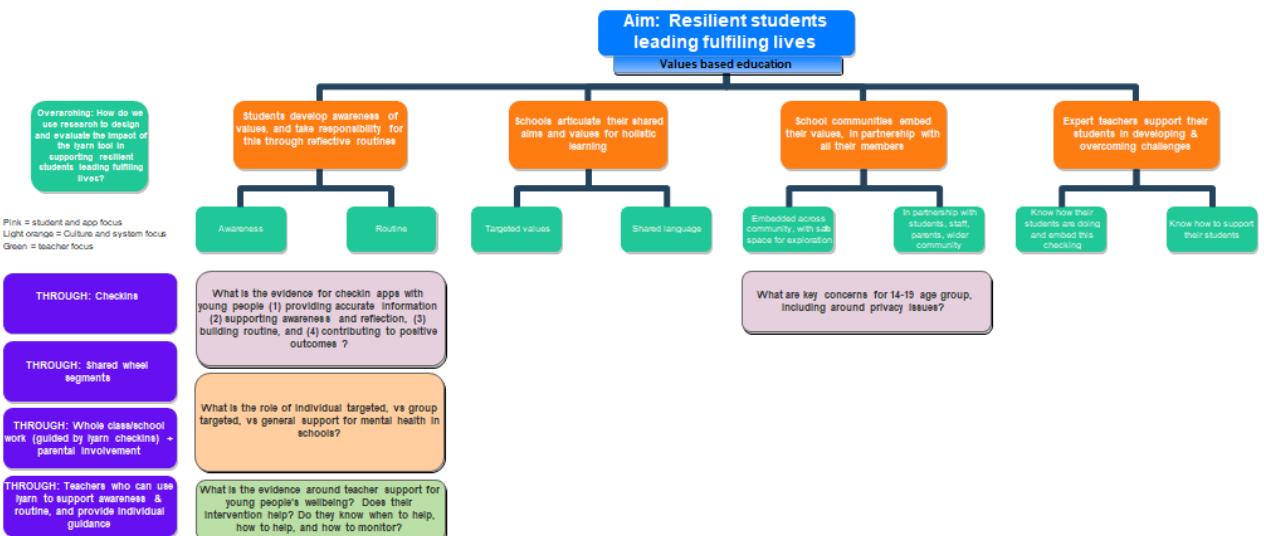


Figure 1: iyarn primary and secondary drivers research mapping

5.1. What is the evidence for check-in apps with young people (1) providing accurate information (2) supporting awareness and reflection, (3) building routine, and (4) contributing to positive outcomes?

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Desktop Research/Literature Review

Topic: How do check-in apps build wellbeing, and what are young people's key concerns when using them in schools?

Key questions: What is the evidence for check-in apps with young people (1) providing accurate information (2) supporting awareness and reflection, (3) building routine, and (4) contributing to positive outcomes?

Background assumptions and context

There are some key provisos in this review:

- The majority of evidence-based studies (particularly Random Controlled Trial – RCT's) focus on intervening in or improving mental health for students rather than focusing on building general resilience and wellbeing.
- Many of the findings referenced below are from research done with mobile rather than web-based apps
Many studies are primarily run with individual students rather than class-based or cohort-based studies (unless noted otherwise). Relatedly, many studies focus on interventions with targeted students (tier 2 and 3 interventions), rather than activities all students do (universal, or tier 1, interventions).¹

¹ Broadly Tier 1 interventions: All students undertake; Tier 2: those with risk factors; tier 3: those with **Unplanned Symptoms or Diagnoses**. These are cumulative, not exclusive.

Centre for Research on Education in a Digital Society (CREDS)

Institute for Public Policy and Governance (IPPG)

TD School

How accurate is the information from check-ins?

The use of Experience Sampling Methodology (ESMs) involves a systematic collection of self-report data from individuals throughout day has been found to be an effective way for young people to self-monitor their moods and mental health (Miller et al., 2015; Rickard et al., 2016). This has been confirmed in a number of studies including for MH apps, MyCompass (Harrison et al., 2011) and mobiltype (Reid et al., 2011). Self-monitoring and check-ins applied in these trials involved participants checking in daily or multiple times a day. Self-monitoring using ESM is most accurate when done in real-time so the use of MH apps in locations such as classrooms during a usual daily routine are more useful than reflections after the fact, as this reduces the bias in self-monitoring and improves accuracy (Shiffman et al., 2008).

One of the challenges identified by researchers in assessing the outcomes of tech-mediated MH apps is the ability to engage young people sufficiently to be able to determine the effect of the intervention or program (Punukollu et al., 2020). This is a common problem, and an issue in research evidence in which app use (duration, occurrences, or specific features), and external measures (validated instruments, diary methods) are not always reported (Eisenstadt et al., 2021). Most research for MH apps indicate good short-term engagement, however longer term engagement and compliance is often low (Huberty et al., 2021; Rickard et al., 2016). This was found by Rickard et al. (2016) when testing the MyCompass check-in app which had high initial compliance followed by a high drop-out rate (Rickard et al., 2016). This is also an issue in digital vs telephone surveys, although here too as evidenced in the Australian Young and Well Survey, web-surveys provide quality data (Milton et al., 2017). Engagement and participation have been found to be improved by integration with face-to-face and or web-based in person communication (Clarke et al., 2015; Rickard et al., 2016).

Do check-in apps support awareness and reflection?

Current evidence shows that self-monitoring through tech-mediated platforms (via mobile apps or websites) is an effective tool for building self-awareness and reflection (Bakker et al., 2016; Miller et al., 2015). Self-monitoring is a core feature of many evidence-based psychological therapeutic techniques including Cognitive Behavioural Therapy (CBT) and acceptance and commitment therapy (ACT). Self-monitoring of mood can boost overall emotional self-awareness (ESA) which in turn can lead to improvements in self-regulation (Kauer et al., 2012).

In a number of cases check-in and check-out practices (CICO) are applied as part of a Tier 2 intervention years as part of Positive Behaviour Intervention Support (PBIS) or Schoolwide Positive Behaviour Support Model (Bruhn et al., 2017; Clarke et al., 2015). This approach typically involves a morning check-in (often in a discussion with a mentor or coach), and an end-of-day check-out with the same person, to review how the day went against the morning check-in. Online tools and apps have adopted this approach. Research in the US using technology-mediated CICO practices along with mentoring have found potential for self-monitoring to build greater independence (Eg. self-awareness and regulation) which may replace formal behaviour monitoring by teachers over time (Miller et al., 2015).

Do check-in apps build health routines?

There is increasing evidence that self-monitoring is effective tool for routine/habit formation (Shiffman et al., 2008). Multiple studies have found that for young people the regular use of online platforms with a component of self-monitoring and CBT have been effective in reducing symptoms of anxiety and depression and increasing wellbeing over time

review); Eisenstadt et al., 2021 (PRISMA systematic review); Goldberg et al., 2022 (PRISMA+ systematic review); Kenny et al., 2020 (RCT); Lappalainen et al., 2021 (RCT)). Obtaining daily information on significant changes to emotional state has the capacity to support early intervention and promote emotional health (Bakker et al., 2016). Habit formation can be driven in MH apps linked to activities that decrease psychological distress, increase self-efficacy or reward users in some other way (Bakker et al., 2016; Wendel, 2020). An important consideration is internal and external triggers for engagement, while external triggers (such as group class-based check-ins) may help to initiate the engagement process, internal triggers (motivated by an intention of self-care) are more reliable drivers of long-term habit (Bakker et al., 2016; Eyal, 2014).

Do check-in apps contribute to wellbeing outcomes?

While the number of Mental Health apps (MH apps) and wellbeing/mindfulness platforms are increasing rapidly there have only been a limited number of RCT trials in schools to assess their effectiveness (Bakker et al., 2016) with a need for many more in this field. Mobile based apps can be effective for improving anxiety and depression and are most effective combined with face-to-face support and treatment (Chandrashekhar, 2018), tentative evidence for use of apps to improve wellbeing and decrease depression (but not anxiety) in adults comes from an RCT comparison of 3 apps (Bakker et al., 2018),

The evidence of whether check-in apps alone can contribute to health outcomes is inconclusive. A recent RCT 2020 study in Ireland of CopeSmart MH app across a cluster of 10 schools and 560 students aged 15-18 years involved students checking in daily on their mobile phone on the mood and mental state with the option to access support resources (Kenny et al., 2020). The trial ran for four weeks and expected to find an increased level of emotional self-awareness (ESA) and improved positive coping strategies. However, they found no significant change in the intervention group compared to the control group in terms of ESA, wellbeing or positive coping strategies. Their findings suggest that four weeks might not be a long enough period to assess the outcomes or that the level of participant engagement was not sufficient to effect improvements. These findings are echoed by Clarke et al.'s (2015) systematic review, which found tentative evidence in support of online mental health promotion interventions – largely skills-based modular-format ones – for young people, but also highlighted the limited amount of research and variation in quality.

And, what is the evidence around how apps support teachers to support their students?

Other examples of recent school integrated MH app research includes SafeSpot in Scotland, where using a mixed methods approach with 2,300 students and 90 teachers, the research tested the ability of online and mobile apps to enable teachers to support their students' mental health (Punukollu et al., 2020). The response and engagement of both teachers and students was positive in this study and it highlighted the potential for further develop MH awareness programs incorporating both classroom activities and a mobile app, 'that are likely to improve the mental health and resilience of young people' (Punukollu et al., 2020). One of the aims of the NHS Scotland Mental Health Strategy is 'that every child and young person should have appropriate access to emotional and mental well-being support in school' (Scottish Government, 2017). Australia has similar stated goals in the Australian Student Wellbeing Framework (Education Council, 2018).

Some studies have linked self-monitoring with improved help-seeking behaviour for mental health in young people as well as showing promising early intervention outcomes (Rickard et

al., 2016). Monitoring for early detection of mental health problems allows for early intervention, which improves longer term outcomes (Rickard et al., 2016).

What are the UX/design implications for high efficacy MH apps?

The literature has a number of potential implications for iyarn development. However it is important to remember that any recommendations from literature are based on the specific aims and theories of change being evaluated and investigated in that literature. Iyarn adopts a different model to much of this literature, and therefore the recommendations are not directly transferable.

Research regarding the user interface and design of MH apps for young people is summarised below, alongside a preliminary assessment of iyarn against these key implications (note these are primarily from reviews of mobile apps).

Design Implication	Iyarn status	Comment
Automated tailoring (using self-report, self-monitoring, and prediction of which features users are likely to engage with)*		Less suitable in school context.
Reporting of thoughts, feelings, or behaviours: self monitoring to support emotional-self awareness and reflection. Keep self-reports structured in a simple interface to allow quick reporting*		Core function, with easy checkin model.
Allow user to see feedback-focused progress eg. Chart of moods/data*		Unclear status
Build in recommended activities, including: Activities that directly enhance mood (e.g. exercise, music); engage behavioural activation (setting goals, planning activities); provide coping skills training; give mental health information; with real-time engagement.*		Priority area
Link activities explicitly to the specific issues identified*		Priority area
Encourage nontechnology-based activities		(will be part of above responses)
Try to use internal rather than external triggers to engage, with a log of app use (promoting personal investment) to promote repeated engagement*		Explicitly in iyarn model to build student routine and culture. Requires evaluation over time.
Language to be simple, concrete, confident and hopeful*		Largely present, may need some framing around segments and support resources
Link to support services with optional 'Get help' 'Learn more' prompts*		Two features, (1) general support (as above) other is crisis support-to discuss.
Evaluate – use other measures, EMA, app use data, etc. to measure impact*+		See below

*Mental Health Smartphone Apps: Review and Evidence-Based Recommendations for Future Development, (Bakker et al., 2016), specifically targeted at MHapp development; Note their first 3 major recommendations: Use of CBT, addressing anxiety and low mood, and design for non-clinical populations are not covered here; crucially, the first is focused on use of an evidence-based framework – which iyarn has, albeit not CBT – the second is largely around clinical populations; the third is core to iyarn's approach.

+ Noting also the provisos, and limitations in systematic evidence syntheses thus far noted above, and in Pundakova and Marques (2019), who specifically reviewed evidence around apps for young

5.1. What is the evidence for check-in apps with young people (1) providing accurate information (2) supporting awareness and reflection, (3) building routine, and (4) contributing to positive outcomes?

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What are potential implications of these findings for iyarn?

This table is intended to provide an overview summary of the evidence synthesis, mapping the key takeaways to the driving questions.

Explanatory note.

 = strength of evidence, with 3* indicating very strong evidence (e.g. from systematic reviews, meta-analyses, and multiple robust randomised control trials); 2* indicating multiple experimental or quasi experimental designs; and 1 * other studies such as observational or correlational work.

 is used to indicate a positive effect found, or supportive evidence.

 is used to indicate a negative effect found, or non-supportive evidence.

 is used to indicate the evidence is unclear or/and underexplored or/and cannot be addressed using quantitative research.

This approach is informed by van der Bles et al.'s discussion (n.d.)

Driver	Evidence	Comment
Do wellbeing check-in apps provide accurate information?	  	Realtime class integration improves the likelihood of ongoing engagement and thus positive wellbeing outcomes. Checkins suffer from scale measurement issues as other self-reports & issues around what the target constructs are.
Do wellbeing check-in apps support awareness and reflection?	   	self-monitoring or check-ins that take place in real-time and are based in the environment relevant to the behaviour or experience is more accurate and potentially effective (than reflecting afterwards for example).
Do wellbeing check-in apps supporting building routines?	   	Apps can support routines especially when integrated into other aspects of life (such as classroom routine and culture)
Do wellbeing check-in apps contribute to positive wellbeing outcomes?	   	Positive small effects, stronger for general wellbeing than specific disorders, with provisos in evidence as below
Do wellbeing check-in apps support teachers to support their students?	 	Combining online with face-to-face engagement supports iyarn's approach to classroom-based check-in practices.
What are the key concerns and preferences for young people in using check-in apps?	 	Area for ongoing exploration. Students value privacy and autonomy, must be seen in context of needs, and regulatory environment.

Area of exploration and future evaluation for iyarn:

Issue	Implication
There is a gap in the research in the area of using technology for regular check-ins in schools that focuses on wellbeing and resilience rather than behaviour management and mental health interventions. Monitoring for early support and intervention in mental health for students is another potential valuable application of the tool. There is an increasing demand for monitoring and responding to mental health challenges and development of wellbeing frameworks in schools (see reference above to Scottish and Australian examples).	Iyarn should consider establishing an ongoing research evaluation, investigating the tool's impact in schools. This should include use of validated instruments (survey tools) regarding targeted wellbeing factors or mindfulness and motivational drivers, to act as an external measure alongside the iyarn 'scores'. Ongoing teacher and student interviews are also likely to be useful.
Teachers in most of the studies said they feel unprepared and undertrained to deal with monitoring wellbeing and mental health for their students (See Teacher Support for further details).	The priority UX area around support resources provides a useful step forward here, these resources must consider how teachers will interact with them and students as part of their efficacy.
A key recommendation in the literature is evaluation of any tool against its intended outcomes	

In addition, Chan et al (2015) reviewed guidelines for other types of health app, and provide a set of principles for patients and providers of primarily adult-clinical-population-focused mental health oriented apps; while this target group, and the specific app context is somewhat different, these may be informative. Verbatim, they are:

1. "Usefulness dimension
 - a. Validity and accuracy: Does the app work as advertised?
 - b. Reliability: Will the app consistently function from session to session?
 - c. Effectiveness: Is the app clinically effective—with demonstrated improved outcomes—for the target population, disease, or disability?
 - d. Time and number of sessions: What time is required for the user to derive some benefit from the app?
2. Usability dimension
 - a. Satisfaction and reward: Is the app pleasurable and enjoyable to use, or does it discourage repeat use?
 - b. Usability: Can the user easily—or with minimal training—use and understand the app?
 - c. Disability accessibility: Is the app usable by those with disabilities (e.g., incorporates screen readers for blind users, closed captions for the hard-of-hearing and deaf communities)?
 - d. Cultural accessibility: Does the app work effectively with the user's culture (as defined by factors such as ethnicity and language)?
 - e. Socioeconomic and generational accessibility: Does the app take into account socioeconomic status and the user's age, with potential implications for the user's digital health literacy?
3. Integration and infrastructure dimension
 - a. Security: Are the app's data encrypted on the device and/or in transmission? Are they anonymized, or do they contain personal health information? If so, what do they do?
 - b. Workflow integration: Does the app work within its user's workflow?
 - c. Data integration: Does the app share data with other apps, networks, and medical record systems?

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- d. Safety: Does the app take into account patient safety, such as suicidality or homicidality?
- e. Privacy: Does the app contain a robust privacy policy addressing the type of information collected, rationale for collecting information, sharing of information, and user controls?"

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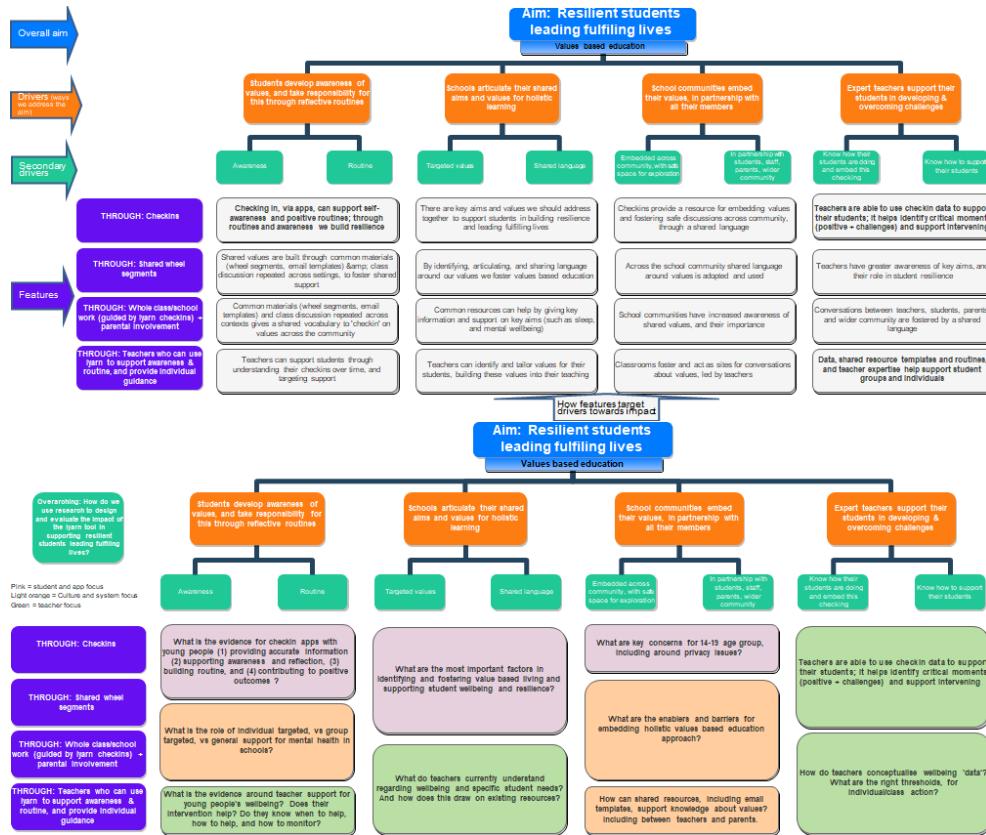
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For an additional slice of the literature and issues around use of digital technologies in wellbeing and mental health work with young people see:

Burns, P. J. (2017). *Technology use by, and to support, children and young people – a snapshot of the research evidence*. 17. <https://www.ccyp.wa.gov.au/media/2522/report-technology-use-by-and-to-support-emergency-document-to-the-report-of-the-2016-17-thinker-in-residence-june-2017.pdf>

Appendix



5.1. What is the evidence for check-in apps with young people (1) providing accurate information (2) supporting awareness and reflection, (3) building routine, and (4) contributing to positive outcomes?

Section 5

5.1.1 Checkins FAQ

Introduction

Prepared by: UTS research team, lead author Simon Knight

Prepared for: iyarn research partner

On: 30 May 2022

Purpose: This document translates the literature evidence synthesis on checkins into a 'Frequently Asked Question' aligned with the iyarn matrix model. This FAQ is designed to:

1. Provide a 'snapshot' of the research evidence, useful in conversation and materials with stakeholders;
2. Mirror the extended literature review, so the detail is *always* available to those who want it, and you can provide assurance that the claims made are warranted by the evidence;
3. Align with the iyarn matrix model, which shows how the features of the tool target particular outcomes;

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How accurate is the information from check-ins?.....	3
Do check-in apps support awareness and reflection?.....	3
Do check-in apps build health routines?.....	3
Do check-in apps contribute to wellbeing outcomes?.....	3
And, what is the evidence around how apps support teachers to support their students?.....	3

Topic: How do check-in apps build wellbeing, and what are young people's key concerns when using them in schools?

Key questions: What is the evidence for check-in apps with young people (1) providing accurate information (2) supporting awareness and reflection, (3) building routine, and (4) contributing to positive outcomes?

Background assumptions and context

There are some key provisos in this review:

- The majority of evidence-based studies (particularly Random Controlled Trial – RCT's) focus on intervening in or improving mental health for students rather than focusing on building general resilience and wellbeing.
- Many of the findings referenced below are from research done with mobile rather than web-based apps
Many studies are primarily run with individual students rather than class-based or cohort-based studies (unless noted otherwise). Relatedly, many studies focus on interventions with targeted students (tier 2 and 3 interventions), rather than activities all students do (universal, or tier 1, interventions).¹

How accurate is the information from check-ins?

Checkins can provide useful information, especially when done routinely, and in real-time (i.e., reflecting on now, not historically).

Do check-in apps support awareness and reflection?

Checkin tools can be effective tools for building self-awareness and reflection and is well grounded in evidence-based psychological approaches to supporting wellbeing and emotional self-awareness.

Do check-in apps build health routines?

Checkin tools can help to build routine and habit formation, which can (1) support early intervention; (2) promote mental health; and (3) reduce symptoms for those with existing diagnoses over time.

Do check-in apps contribute to wellbeing outcomes?

There is tentative support for mental health apps – including checkin apps – in supporting wellbeing and decreasing incidence of depression. However, there is limited research evidence across the range of approaches.

And, what is the evidence around how apps support teachers to support their students?

Apps seem well received by students and teachers, and may support awareness, and help seeking behaviours which may lead to earlier intervention.

¹ Broadly Tier 1 interventions: All students undertake; Tier 2: those with risk factors; tier 3: those with University of Dysfunctional Students. These are cumulative, not exclusive.
Centre for Research on Education in a Digital Society (CREDS)
Institute for Public Policy and Governance (IPPG)
TD School

5.2 What are teacher perceptions, efficacy, and knowledge around supporting wellbeing?

Teacher Experience Evidence Summary

Prepared by: UTS research team, lead author Monique Potts

Prepared for: iyarn research partner

On: 30 May 2022

Purpose: This document provides a literature review and summary focusing on *how teachers currently support students' wellbeing and what might support this.*

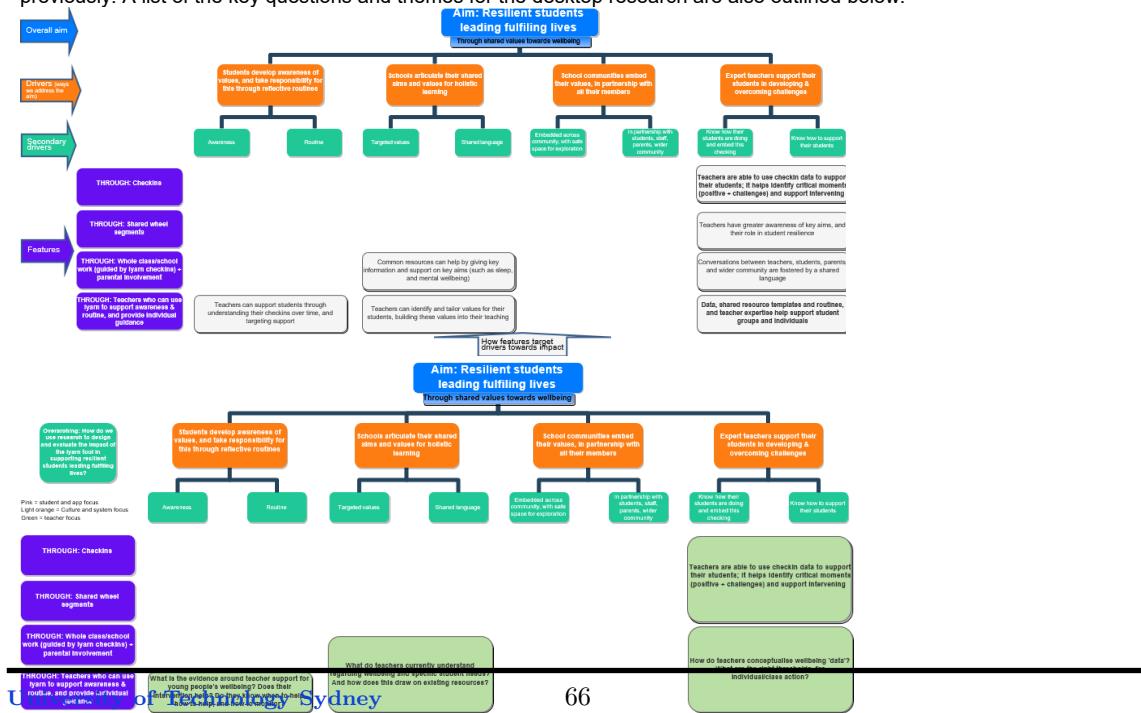
This literature summary provide;

1. a summary of the key evidence;
2. highlight key implications for iyarn in tool design and implementation;
3. point towards lessons for future evaluation work.

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iyarn Desktop Research – Overview

The following sample of desktop research approach aims to provide an indicative document for discussion, feedback and dialogue to inform the further research. It focuses on one of the key questions identified through the mapping of key drivers and outlined below and presented previously. A list of the key questions and themes for the desktop research are also outlined below.



University of Technology Sydney
Figure 1: iyarn primary and secondary drivers research mapping society (CREDS)
Institute for Public Policy and Governance (IPPG)
TD School

Topic: How do teachers currently support students' wellbeing and mental health and what might support this?

Background assumptions and context

It is important to better understand Australian school teachers' perspectives and understanding regarding mental health as approximately one in four Australian young people experience mental health issues each year (headspace & Colmar Brunton, 2018). The role of teachers is evolving, and expectations are changing over time in part due to the higher prevalence of mental health concerns amongst students (Mazzer & Rickwood, 2015).

Overall research shows that teachers see supporting the mental health and wellbeing of their students as a fundamental part of their role, however there are a range of issues which may impact a teacher's ability to provide the support required including a lack of training and support, a lack of clarity around roles and responsibilities and lack of skills and knowledge (survey, Askell-Williams & Cefai, 2014; interview, Mazzer & Rickwood, 2015).

This review of literature and summary focuses primarily on Australian research literature as well informed by relevant research from Canada, UK and USA.

Key questions:

- What is the evidence around teachers understanding of, and support for, young people's mental health, and barriers and enables for this support?
- Do teachers' interventions at an individual and class level help?
- How do teachers conceptualise mental health data? What are the right thresholds for individual/class action? How are teachers able to use check-ins to support their students? Does it help to identify critical moments (both positive and challenging) that support intervening?

What do teachers currently understand regarding mental health and specific needs?

Competing demands

One of the greatest challenges reported by teachers is a lack of time to integrate wellbeing and mental health programs, particularly in secondary schools where teachers usually spend only short periods of time with classes of students. Teachers report experiencing a tension between student wellbeing concerns and the demands of academic performance and improvement agendas (surveys: Graham et al., 2011; Willis, 2022). Most teachers will prioritise student social and emotional needs over covering curriculum content and show a strong tendency of care towards their students (Willis, 2022), while also not wanting to fall into the role of 'therapist' (interview, Shelemy et al., 2019). With a strong link between teacher and student mental health more focus is needed on teacher mental health and wellbeing (pre/post intervention survey, Pandori-Chuckal, 2020).

Teachers have been found to have a better understanding of and ability to identify externalised mental health issues for example bullying or aggressive behaviour (often regarded as problematic behaviour requiring disciplinary action) over internalised behaviours such as anxiety and depression (case study, Armstrong et al., 2015; survey, Dods, 2016). Internalised behaviours often result in student withdrawal and may be overlooked as this does not interrupt learning in the same way, however these are generally better understood by teachers in terms of mental health understanding (Dods, 2016; interview, Trudgen & Lawn, 2011).

Mental health literacy

In some studies teachers' report a mismatch between feeling responsible for students' wellbeing and mental health and feeling equipped to deal with students' concerns resulting in significant stress for teachers (Askell-Williams & Cefai, 2014; interview+survey, Ekornes, 2017; survey, Willis et al., 2019). A lack of knowledge, a sense of being unprepared, and a lack of necessary skills to appropriately support students' mental health has been shown to contribute to low self-efficacy and inaction on the part of teachers (Dods, 2016). The assumptions, values, beliefs and attitudes of teachers in relation to young people's mental health are integral to their level of confidence and skill in supporting their students' mental health (survey, Graham et al., 2011).

Mental health literacy is defined by Jorm as the 'knowledge, attitudes, beliefs, and skills related to mental health that emerge from experience, education and existing belief systems' (Jorm et al., 1997). Mental health literacy is an area of increasing focus for teachers and schools across Australia and internationally including in Canada, US and UK (Dods, 2016; Mazzer & Rickwood, 2015). Higher mental health literacy on the part of teachers has been found to enable prevention, early recognition and intervention as well as a reduction of stigma associated with mental illness and disorders in classrooms (Dods, 2016). There is currently little consistency in measuring or understanding the level of mental health literacy of teachers across Australian schools.

Teachers tend to describe mental health with a pathology-oriented perspective (in terms of seeking to identify mental illness) rather than as a continuum or using strength-based approach (Graham et al., 2011). In a study of Australia pre-service teachers using a series of vignettes that described students experiencing mental health challenges more than 80% of the participants wanted to diagnose the students in the vignette (Armstrong et al., 2015). A greater focus of education for pre-service and in-service teachers is recommended with a focus on 'positive supports mentoring and using relationships to improve emotional and behavioural health' (Dods, 2016).

Training

Teacher self-efficacy and capacity building have been identified as key factors that contribute to the sustainability of mental health and wellbeing interventions in schools (RCT, Holmes et al., 2022; Mazzer & Rickwood, 2015). A study by Mazzer & Rickwood (2015) of teachers in secondary schools in Canberra in 2015 found most teachers were moderately confident in their ability to deal with mental health issues, however many expressed a lack of experience and training for supporting students' mental health.

Similarly, the level of support and training for teachers in mental health literacy may vary widely between education sectors (independent, catholic or public) and individual schools with some providing teachers with comprehensive support and training and others little or no support and/or training (Willis, 2022). There is a lack of consistency and focus in pre-service teachers training for mental health literacy and wellbeing. Many teachers report relying on their own life experiences of mental health and illness as the main influence in the development of their perceived knowledge (Dods, 2016).

Teacher-student relationships, teacher wellbeing, and school culture and systems

Whole school 'climate' interventions in secondary schools that promote teacher-student relationships can improve mental health help-seeking behaviour (Halladay et al., 2020). Evidence from student and teacher survey and interviews indicates that student views of wellbeing include considerations around being involved and listened to (Anderson & Graham, 2016). Evidence has shown that teacher-student relationships can play a critical role in supporting wellbeing, preventing mental illness, reducing stigma associated with this and promoting help-seeking behaviour and early intervention (Allen & McKenzie, 2015;

Anderson & Graham, 2016; Dods, 2016; Halladay et al., 2020). Class-based mental health literacy reduces stigma and promotes help-seeking behaviour (Dods, 2016; Kutcher et al., 2013; Pandori-Chuckal, 2020).

Teachers' mental health and wellbeing has been found to impact the quality of teacher-student relationships as well as the overall culture and climate of wellbeing in schools (Graham et al., 2011; Harding et al., 2019; Willis et al., 2019). Many recent studies report that teachers feel overwhelmed with the workload, crowded curriculum and levels of change taking place particularly in states effected by COVID lockdowns (Trudgen & Lawn, 2011; Willis, 2022). The benefits of improved mental health literacy of teachers have been found to impact children, families and communities (Kelly et al., 2007).

Across a range of studies, systems and responsibilities are flagged as crucial. These include, the importance of systems that support teachers and students with clear approaches and responsibilities for referral and intervention (Mazzer & Rickwood, 2015), consultation in the design of programs (Shelemy et al., 2019), training (Shelemy et al., 2019), and implementation approaches that work flexibly with time restrictions and other competing demands (Shelemy et al., 2019; Taylor, 2018).

Do teachers' interventions at an individual and class level help?

Schools and teachers are well place to support mental health and wellbeing interventions due to their regular contact with young people and connections with family and community. Both individual and class-based interventions have been shown to be effective for mental health promotion for students. Class-based interventions may take place during roll call or home room, as part of the PDHPE curriculum and/or during specific wellbeing and mental health programs. Class-based mental health literacy has been found to reduce stigma and promote help-seeking behaviours in students (Dods, 2016; Kutcher et al., 2013; Pandori-Chuckal, 2020). One of promising outcomes of these school and class-based interventions is an increased sense of social connectedness and belonging for students, which has been found to have a role in prevention of mental health issues (acting to buffer the effects of anxiety and depression) and fostering greater wellbeing (Allen & McKenzie, 2015). Australian teachers trained in a positive education wellbeing model, reported that student wellbeing literacy grew with greater ability to identify features of wellbeing and key language around this (Waters & Higgins, 2022). A review of 12 school-based positive psychology interventions to foster wellbeing similarly indicates the potential of school-wide approaches (Waters, 2011).

Individual identification and intervention (tier 2): Early detection and referral to early intervention services by teachers has been found to effective and vital in enabling improved long-term health outcomes for young people (McGorry et al., 2007; Pandori-Chuckal, 2020). Australian schools will generally have their own individualised student at-risk referral programs (Trudgen & Lawn, 2011). If teachers are concerned about a student's mental health they will generally refer this to a year coordinator, pastoral care staff, school counsellor or psychologist (Mazzer & Rickwood, 2015). Teachers will rarely make a direct referral to an external agency for mental health support for students, except however this is more likely in rural and regional schools where there is no school counsellor or pastoral care available (Graham et al., 2011).

Tensions in tier 2 referral thresholds: Some studies have found that the threshold when teachers report their concerns about a student's mental health and wellbeing is subjective and largely reliant on the individual teacher's intuitive sense of the need to take action rather than based on training, skills and knowledge in identifying mental health concerns (Trudgen

& Lawn, 2011). Teachers often rely on other colleagues or peers to consult with and check-in with if they are concerned about a student's mental health before referring to specialist staff. Time pressures and lack of resources in student wellbeing teams and school counsellors have been found to be barriers to teachers reporting their concerns about students as they do not want to put more pressure on overworked staff (Trudgen & Lawn, 2011). There are also concerns around confidentiality and balancing privacy of information versus communicating necessary information to others such as school counsellors, parents and mental health professionals (Mazzer & Rickwood, 2015).

Whole school mental health promotion (tier 1): Whole of school approaches that focus on promoting mental health (as opposed to prevention of mental illness) can be effective in supporting student mental health and wellbeing, where they are implemented alongside ongoing training and support for teachers (Graham et al., 2011; Mazzer & Rickwood, 2015). These approaches provide 'well-articulated networks of care and effective referral pathways, both within and beyond the school' (Mazzer & Rickwood, 2015). Many schools and school systems in Australia have embraced evidence based prevention programs such as Mindmatters, Kidsmatter, Act-Belong-Commit and the National Safe Schools Framework (Allen & McKenzie, 2015).

Tensions in whole school mental health promotion: The success and longevity of these programs is often contingent on sufficient resources being allocated to training and supporting teachers to implement these programs (Allen & McKenzie, 2015; Holmes et al., 2022). Without appropriate training and resources allocated to deliver program implementation loses integrity and quality falls. If teachers lack the knowledge and confidence to deliver programs this can also affect the implementation quality and outcomes (Askell-Williams & Cefai, 2014; Holmes et al., 2022). Studies have shown if teachers are consulted on the design and implementation of programs they are more likely to be successfully and consistently implemented (Shelemy et al., 2019). There is little evidence available on how teachers monitor the outcomes of individual interventions or track ongoing student mental health.

How do teachers think about data for mental health? What are the right thresholds for individual/class action?

Data literacy can be described as 'the ability to examine multiple measures and multiple levels of data, to consider the research and to draw sound inferences' (Jacobs et al., 2009; Love, 2004). Research proposes that many secondary school educators may lack training and capacity in the areas of data literacy (Jacobs et al., 2009). In the absence of adequate training in data literacy, educators may rely instead on 'role-based, intuitive and often ad-hoc approaches' to decision making (Mandinach & Honey, 2008).

Response to Intervention (RtI) frameworks seek to embed data collection and analysis into the daily role of teachers using universal screening and ongoing monitoring. This approach is currently used primarily for monitoring student academic performance, however it may be useful for adapting to other purposes such as wellbeing data tracking and interventions (Jacobs et al., 2009). There is limited evidence around specific thresholds for individual or class-based action or intervention for mental health, however anecdotal evidence suggests schools are more likely to set up interventions following a critical incident such as a student suicide or serious behavioural incident at school. Similarly, many individual referrals follow critical incidents within the school classroom or premises.

Research has found that teachers rely on multiple data sources when considering wellbeing and mental health of students. These might include observing a student's appearance,

submissions, intuition and information from other teachers, year advisors or pastoral care staff (Graham et al., 2016; Halladay et al., 2020). Regular digital check-ins may provide an additional source of data for teachers to validate their existing observations and intuition.

Teachers describe the use of data as creating a sense of ‘urgency’ and a catalyst for making interventions (Jacobs et al., 2009). These actions might involve finding a time to check-in with a student, consulting with other colleagues who have specialised knowledge and/or reflecting on their own teaching practices. In the context of a crowded curriculum and managing classroom behavioural issues the process of gathering and interpreting data creates a space for teachers to focus on understanding an individual student’s needs (Jacobs et al., 2009).

A range of measures exists for understanding wellbeing factors, and their antecedents (or enablers/barriers) (for an excellent resource, see Bates & Boren, n.d., in addition to our other resources.). It is not clear how widely these are used by schools to understand and monitor their needs, however recent systematic review of measures of social emotional and behavioural screening instruments indicates that ‘useability’ (i.e., how feasible it is for a stakeholder to use the tool to achieve the intended goal) is under-reported, with a focus on technical validity, likely limiting use of these measures in multitiered support systems (Brann et al., 2022).

What are the potential implications of this research for iyarn?

The literature has a number of potential implications for iyarn development in terms of how to best support teachers' experience. However it is important to remember that any recommendations from literature may be influenced by the particular context of the study or research (school, country, pastoral care systems) and therefore some recommendations might not be directly transferable.

Teacher experience support	iyarn status	Comment
Teacher input into the design and implementation of program	✓	Through consultation and research
Training for staff in using the platform with sample data, case studies, and AV resources, reflecting real world school scenarios	⌚	Some case studies & video training available on website. Develop 'what if' scenarios for what to/not to do.
Support from colleagues, school administration and community	⌚	Unclear status, likely to vary by school.
Evidence of efficacy of program and interventions	🚫	Priority area
Adaptability of program or intervention to accommodate time restrictions and shifting priorities	✓	Check-ins can be done quickly and at different time intervals
Training resources that can be adapted to own content	⌚	Some interface adaptation available (naming segments, scale). Support resource customization a priority
Training that is expert-led, evidence-based and accredited	🚫	Additional research and quantitative studies required
Training on working with parents and well as students	⌚	Not current priority?

(Recommendations drawn from reviewed literature, and particularly summaries available in Shelemy et al., 2019)

5.2. What are teacher perceptions, efficacy, and knowledge around supporting wellbeing?Section 5

What do teachers want to support them to promote wellbeing and mental health?
A resource that may be particularly useful, and which iyarn is just one part of, is the checklist developed by Shelemy, Harvey, and Waite (2019) (note due to copyright restriction I can't include it here but it's a tickbox yes/no 17 question survey asking "Does your school staff mental health training include..."). The paper is freely available at the link below, and the table can be viewed on the final page of the PDF.

Checklist from: Shelemy, L., Harvey, K., & Waite, P. (2019). Supporting students' mental health in schools: What do teachers want and need? *Emotional and Behavioural Difficulties*, 24(1), 100–116. <https://doi.org/10.1080/13632752.2019.1582742> - available open access at https://centaur.reading.ac.uk/82380/1/Supporting%20students%27%20mental%20health%20in%20schools-%20what%20do%20teachers%20want%20and%20need_%20%20Revised%20manuscript.pdf

What are potential implications of these findings for iyarn?

This table is intended to provide an overview summary of the evidence synthesis, mapping the key takeaways to the driving questions.

Explanatory note.

= strength of evidence, with 3* indicating very strong evidence (e.g. from systematic reviews, meta-analyses, and multiple robust randomised control trials); 2* indicating multiple experimental or quasi experimental designs; and 1 * other studies such as observational or correlational work.

is used to indicate a positive effect found, or supportive evidence.

is used to indicate a negative effect found, or non-supportive evidence.

is used to indicate the evidence is unclear or/and underexplored or/and cannot be addressed using quantitative research.

This approach is informed by van der Bles et al.'s discussion (2019)

Driver	Evidence	Comment
What do teachers understand regarding mental health and specific needs?		-Research around teacher mental health literacy and self-efficacy has increased in recent years with increased incidence of student mental health challenges in schools. -Studies in the UK, US, Canada and Australia show an inconsistent approach to pre-teacher and in-service teacher training and support with a general lack of mental health literacy confidence and skills.
What is the evidence around teacher support for young people's mental health?		Reasonable evidence suggest teachers increasingly see support for young people's mental health as part of their role; however many lack the confidence, knowledge and skills to provide this support.
Do teachers know when to help and how to monitor outcomes?		A range of constraints effect teachers' ability and confidence to intervene in students wellbeing and mental health. These may include time constraints, lack of training and skills, lack of support and clarity of roles, poor data literacy. Teachers' mental health literacy has not been a priority and training has been ad-hoc. There is very limited evidence on how they monitor outcomes.
Do teacher interventions help?		Teacher interventions at class and individual level have been found to be effective in promoting help-seeking behaviour, early intervention and referral for students
What is the evidence around the impact of individual vs class interventions for wellbeing?		Whole-school positive education supports wellbeing. Class-based interventions can reduce stigma and promote help-seeking behaviour. Individual intervention supported for early-intervention and referral. Little evidence on comparison of relative impact, class-based tend to be preventative and individual in response to a student perceived to be struggling with mental health

5.2. What are teacher perceptions, efficacy, and knowledge around supporting wellbeing? Section 5

How do teachers conceptualise mental health data?		Teacher data literacy in general has not been a priority for teacher education or professional development. With more data-driven reporting and assessments this is becoming increasingly important. There is little evidence around mental health data literacy or experience for teachers.
What are the right thresholds for individual/class action		<p>Area for ongoing exploration. There is little evidence or research on current thresholds for referrals or intervention for individual or class action and which from anecdotal evidence are often in response to a crisis.</p> <p>See resources in our segment mapping for approaches to evaluation, which may inform this.</p>

* Most research on teacher experience is based on survey and interview methods.

Area of exploration and future evaluation for iyarn:

Issue	Implication
There is a large degree of inconsistency in teacher training and capability around student wellbeing and mental health literacy. Teachers recognise the increase in mental health challenges for their students but often feel unprepared or lack confidence in supporting students. Data may not be used effectively to support wellbeing or wellbeing literacy.	While iyarn is a 'stand alone', it is used in wider systems; training should support effective practice, while being flexible to the particular contexts. Opportunities may exist to integrate resources to improve mental health and data literacy for teachers using an experiential learning approach.
Teachers' report experiencing increasing pressures and stress leading to mental health challenges. Teachers require additional support and resources in order to care for their own mental health before they can care for their students.	An extension of the teacher check-in tool might provide resources and suggestions to support teachers' mental health and wellbeing
Teachers' experience challenges in implementing wellbeing and mental health programs due to a lack of training, time constraints and the need to have flexibility to adapt to changes in the school environment and timetable Programs and resources that involve teachers in the design and implementation plan tend to have more consistent and higher quality implementation	Iyarn has strength in the ability to use it flexibly inside or outside of the classroom with little time commitment required from teachers. Involving teachers in planning how they might want to use the platform and planning implementations collaboratively may improve consistency and commitment of teachers. Input into design and feature development by teachers is likely to increase usability and improve implementation.

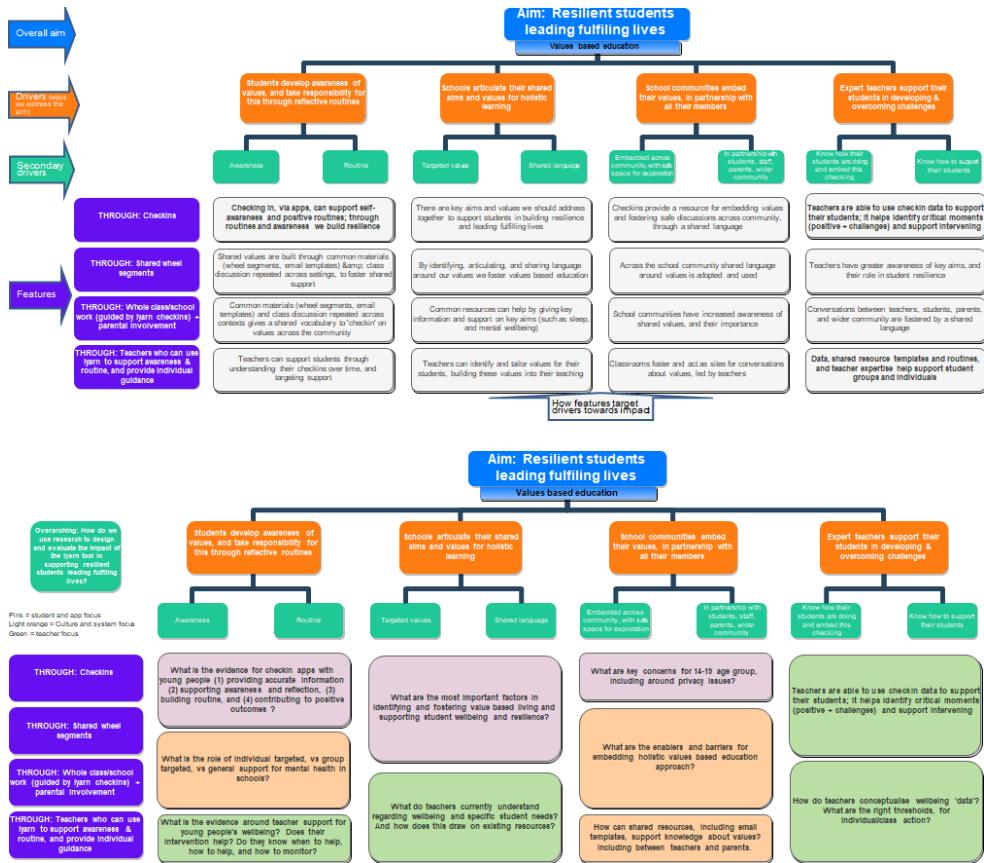
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Appendix



5.2.1 Teachers FAQ

Teacher Experience Evidence Summary

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Prepared for: iyarn research partner

On: 30 May 2022

Purpose: This document provides a literature review and summary focusing on *how teachers currently support students' wellbeing and what might support this.*

This literature summary provide;

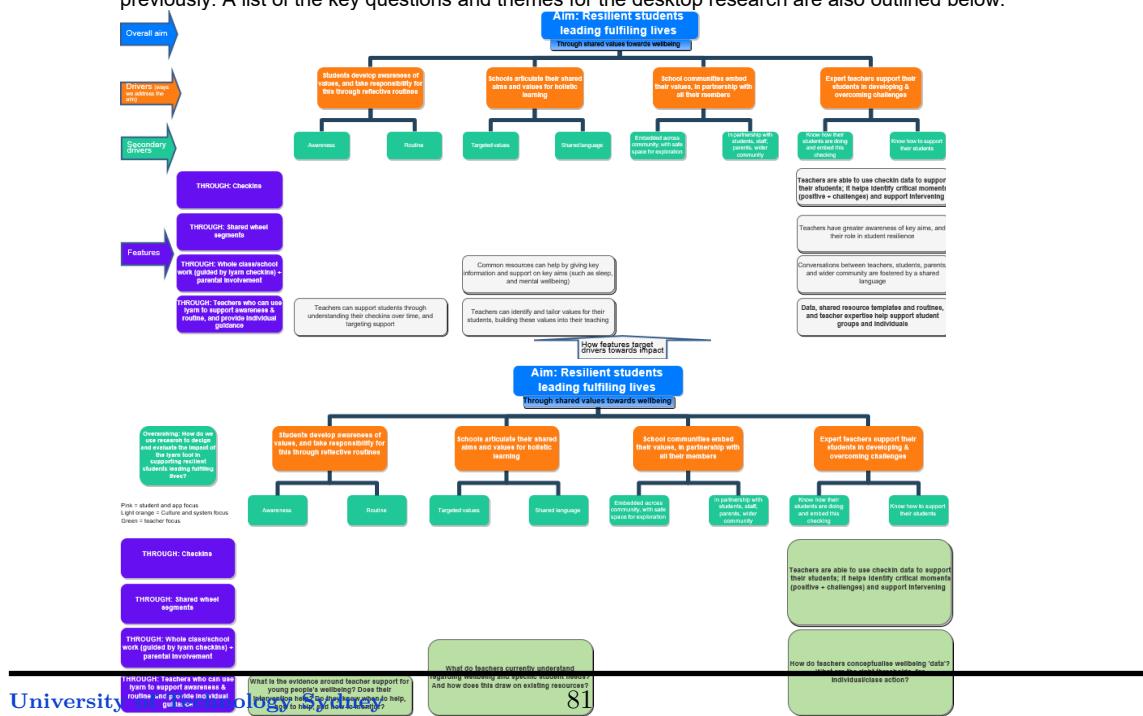
1. a summary of the key evidence;
2. highlight key implications for iyarn in tool design and implementation;
3. point towards lessons for future evaluation work.

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5.2. What are teacher perceptions, efficacy, and knowledge around supporting wellbeing?Section 5

iyarn Desktop Research – Overview

The following sample of desktop research approach aims to provide an indicative document for discussion, feedback and dialogue to inform the further research. It focuses on one of the key questions identified through the mapping of key drivers and outlined below and presented previously. A list of the key questions and themes for the desktop research are also outlined below.



Topic: How do teachers currently support students' wellbeing and mental health and what might support this?

Background assumptions and context

It is important to better understand Australian school teachers' perspectives and understanding regarding mental health as approximately one in four Australian young people experience mental health issues each year (headspace & Colmar Brunton, 2018). The role of teachers is evolving, and expectations are changing over time in part due to the higher prevalence of mental health concerns amongst students (Mazzer & Rickwood, 2015).

Overall research shows that teachers see supporting the mental health and wellbeing of their students as a fundamental part of their role, however there are a range of issues which may impact a teacher's ability to provide the support required including a lack of training and support, a lack of clarity around roles and responsibilities and lack of skills and knowledge (survey, Askell-Williams & Cefai, 2014; interview, Mazzer & Rickwood, 2015).

This review of literature and summary focuses primarily on Australian research literature as well informed by relevant research from Canada, UK and USA.

Key questions:

- What is the evidence around teachers' understanding of, and support for, young people's mental health, and barriers and enablers for this support?
- Do teachers' interventions at an individual and class level help?
- How do teachers conceptualise mental health data? What are the right thresholds for individual/class action? How are teachers able to use check-ins to support their students? Does it help to identify critical moments (both positive and challenging) that support intervening?

What do teachers currently understand regarding mental health and specific needs?

Competing demands

One of the greatest challenges reported by teachers is a lack of time to integrate wellbeing and mental health programs, particularly in secondary schools where teachers usually spend only short periods of time with classes of students. Teachers report experiencing a tension between student wellbeing concerns and the demands of academic performance and improvement agendas (surveys: Graham et al., 2011; Willis, 2022). Most teachers will prioritise student social and emotional needs over covering curriculum content and show a strong tendency of care towards their students (Willis, 2022), while also not wanting to fall into the role of 'therapist' (interview, Shelemy et al., 2019). With a strong link between teacher and student mental health more focus is needed on teacher mental health and wellbeing (pre/post intervention survey, Pandori-Chuckal, 2020).

Teachers have been found to have a better understanding of and ability to identify externalised mental health issues for example bullying or aggressive behaviour (often regarded as problematic behaviour requiring disciplinary action) over internalised behaviours such as anxiety and depression (case study, Armstrong et al., 2015; survey, Dods, 2016). Internalised behaviours often result in student withdrawal and may be overlooked as this does not interrupt learning in the same way, however these are generally better understood by teachers in terms of mental health understanding (Dods, 2016; interview, Trudgen & Lawn, 2011).

Mental health literacy

In some studies teachers' report a mismatch between feeling responsible for students' wellbeing and mental health and feeling equipped to deal with students' concerns resulting in significant stress for teachers (Askell-Williams & Cefai, 2014; interview+survey, Ekornes, 2017; survey, Willis et al., 2019). A lack of knowledge, a sense of being unprepared, and a lack of necessary skills to appropriately support students' mental health has been shown to contribute to low self-efficacy and inaction on the part of teachers (Dods, 2016). The assumptions, values, beliefs and attitudes of teachers in relation to young people's mental health are integral to their level of confidence and skill in supporting their students' mental health (survey, Graham et al., 2011).

Mental health literacy is defined by Jorm as the 'knowledge, attitudes, beliefs, and skills related to mental health that emerge from experience, education and existing belief systems' (Jorm et al., 1997). Mental health literacy is an area of increasing focus for teachers and schools across Australia and internationally including in Canada, US and UK (Dods, 2016; Mazzer & Rickwood, 2015). Higher mental health literacy on the part of teachers has been found to enable prevention, early recognition and intervention as well as a reduction of stigma associated with mental illness and disorders in classrooms (Dods, 2016). There is currently little consistency in measuring or understanding the level of mental health literacy of teachers across Australian schools.

Teachers tend to describe mental health with a pathology-oriented perspective (in terms of seeking to identify mental illness) rather than as a continuum or using strength-based approach (Graham et al., 2011). In a study of Australia pre-service teachers using a series of vignettes that described students experiencing mental health challenges more than 80% of the participants wanted to diagnose the students in the vignette (Armstrong et al., 2015). A greater focus of education for pre-service and in-service teachers is recommended with a focus on 'positive supports mentoring and using relationships to improve emotional and behavioural health' (Dods, 2016).

Training

Teacher self-efficacy and capacity building have been identified as key factors that contribute to the sustainability of mental health and wellbeing interventions in schools (RCT, Holmes et al., 2022; Mazzer & Rickwood, 2015). A study by Mazzer & Rickwood (2015) of teachers in secondary schools in Canberra in 2015 found most teachers were moderately confident in their ability to deal with mental health issues, however many expressed a lack of experience and training for supporting students' mental health.

Similarly, the level of support and training for teachers in mental health literacy may vary widely between education sectors (independent, catholic or public) and individual schools with some providing teachers with comprehensive support and training and others little or no support and/or training (Willis, 2022). There is a lack of consistency and focus in pre-service teachers training for mental health literacy and wellbeing. Many teachers report relying on their own life experiences of mental health and illness as the main influence in the development of their perceived knowledge (Dods, 2016).

Teacher-student relationships, teacher wellbeing, and school culture and systems

Whole school 'climate' interventions in secondary schools that promote teacher-student relationships can improve mental health help-seeking behaviour (Halladay et al., 2020). Evidence from student and teacher survey and interviews indicates that student views of wellbeing include considerations around being involved and listened to (Anderson & Graham, 2016). Evidence has shown that teacher-student relationships can play a critical role in supporting wellbeing, preventing mental illness, reducing stigma associated with this and promoting help-seeking behaviour and early intervention (Allen & McKenzie, 2015;

Anderson & Graham, 2016; Dods, 2016; Halladay et al., 2020). Class-based mental health literacy reduces stigma and promotes help-seeking behaviour (Dods, 2016; Kutcher et al., 2013; Pandori-Chuckal, 2020).

Teachers' mental health and wellbeing has been found to impact the quality of teacher-student relationships as well as the overall culture and climate of wellbeing in schools (Graham et al., 2011; Harding et al., 2019; Willis et al., 2019). Many recent studies report that teachers feel overwhelmed with the workload, crowded curriculum and levels of change taking place particularly in states effected by COVID lockdowns (Trudgen & Lawn, 2011; Willis, 2022). The benefits of improved mental health literacy of teachers have been found to impact children, families and communities (Kelly et al., 2007).

Across a range of studies, systems and responsibilities are flagged as crucial. These include, the importance of systems that support teachers and students with clear approaches and responsibilities for referral and intervention (Mazzer & Rickwood, 2015), consultation in the design of programs (Shelemy et al., 2019), training (Shelemy et al., 2019), and implementation approaches that work flexibly with time restrictions and other competing demands (Shelemy et al., 2019; Taylor, 2018).

Do teachers' interventions at an individual and class level help?

Schools and teachers are well place to support mental health and wellbeing interventions due to their regular contact with young people and connections with family and community. Both individual and class-based interventions have been shown to be effective for mental health promotion for students. Class-based interventions may take place during roll call or home room, as part of the PDHPE curriculum and/or during specific wellbeing and mental health programs. Class-based mental health literacy has been found to reduce stigma and promote help-seeking behaviours in students (Dods, 2016; Kutcher et al., 2013; Pandori-Chuckal, 2020). One of promising outcomes of these school and class-based interventions is an increased sense of social connectedness and belonging for students, which has been found to have a role in prevention of mental health issues (acting to buffer the effects of anxiety and depression) and fostering greater wellbeing (Allen & McKenzie, 2015). Australian teachers trained in a positive education wellbeing model, reported that student wellbeing literacy grew with greater ability to identify features of wellbeing and key language around this (Waters & Higgins, 2022). A review of 12 school-based positive psychology interventions to foster wellbeing similarly indicates the potential of school-wide approaches (Waters, 2011).

Individual identification and intervention (tier 2): Early detection and referral to early intervention services by teachers has been found to effective and vital in enabling improved long-term health outcomes for young people (McGorry et al., 2007; Pandori-Chuckal, 2020). Australian schools will generally have their own individualised student at-risk referral programs (Trudgen & Lawn, 2011). If teachers are concerned about a student's mental health they will generally refer this to a year coordinator, pastoral care staff, school counsellor or psychologist (Mazzer & Rickwood, 2015). Teachers will rarely make a direct referral to an external agency for mental health support for students, except however this is more likely in rural and regional schools where there is no school counsellor or pastoral care available (Graham et al., 2011).

Tensions in tier 2 referral thresholds: Some studies have found that the threshold when teachers report their concerns about a student's mental health and wellbeing is subjective and largely reliant on the individual teacher's intuitive sense of the need to take action rather than based on training, skills and knowledge in identifying mental health concerns (Trudgen

& Lawn, 2011). Teachers often rely on other colleagues or peers to consult with and check-in with if they are concerned about a student's mental health before referring to specialist staff. Time pressures and lack of resources in student wellbeing teams and school counsellors have been found to be barriers to teachers reporting their concerns about students as they do not want to put more pressure on overworked staff (Trudgen & Lawn, 2011). There are also concerns around confidentiality and balancing privacy of information versus communicating necessary information to others such as school counsellors, parents and mental health professionals (Mazzer & Rickwood, 2015).

Whole school mental health promotion (tier 1): Whole of school approaches that focus on promoting mental health (as opposed to prevention of mental illness) can be effective in supporting student mental health and wellbeing, where they are implemented alongside ongoing training and support for teachers (Graham et al., 2011; Mazzer & Rickwood, 2015). These approaches provide 'well-articulated networks of care and effective referral pathways, both within and beyond the school' (Mazzer & Rickwood, 2015). Many schools and school systems in Australia have embraced evidence based prevention programs such as Mindmatters, Kidsmatter, Act-Belong-Commit and the National Safe Schools Framework (Allen & McKenzie, 2015).

Tensions in whole school mental health promotion: The success and longevity of these programs is often contingent on sufficient resources being allocated to training and supporting teachers to implement these programs (Allen & McKenzie, 2015; Holmes et al., 2022). Without appropriate training and resources allocated to deliver program implementation loses integrity and quality falls. If teachers lack the knowledge and confidence to deliver programs this can also affect the implementation quality and outcomes (Askell-Williams & Cefai, 2014; Holmes et al., 2022). Studies have shown if teachers are consulted on the design and implementation of programs they are more likely to be successfully and consistently implemented (Shelemy et al., 2019). There is little evidence available on how teachers monitor the outcomes of individual interventions or track ongoing student mental health.

How do teachers think about data for mental health? What are the right thresholds for individual/class action?

Data literacy can be described as 'the ability to examine multiple measures and multiple levels of data, to consider the research and to draw sound inferences' (Jacobs et al., 2009; Love, 2004). Research proposes that many secondary school educators may lack training and capacity in the areas of data literacy (Jacobs et al., 2009). In the absence of adequate training in data literacy, educators may rely instead on 'role-based, intuitive and often ad-hoc approaches' to decision making (Mandinach & Honey, 2008).

Response to Intervention (RtI) frameworks seek to embed data collection and analysis into the daily role of teachers using universal screening and ongoing monitoring. This approach is currently used primarily for monitoring student academic performance, however it may be useful for adapting to other purposes such as wellbeing data tracking and interventions (Jacobs et al., 2009). There is limited evidence around specific thresholds for individual or class-based action or intervention for mental health, however anecdotal evidence suggests schools are more likely to set up interventions following a critical incident such as a student suicide or serious behavioural incident at school. Similarly, many individual referrals follow critical incidents within the school classroom or premises.

Research has found that teachers rely on multiple data sources when considering wellbeing and mental health of students. These might include observing a student's appearance,

5.2. What are teacher perceptions, efficacy, and knowledge around supporting wellbeing?Section 5

submissions, intuition and information from other teachers, year advisors or pastoral care staff (Graham et al., 2016; Halladay et al., 2020). Regular digital check-ins may provide an additional source of data for teachers to validate their existing observations and intuition.

Teachers describe the use of data as creating a sense of ‘urgency’ and a catalyst for making interventions (Jacobs et al., 2009). These actions might involve finding a time to check-in with a student, consulting with other colleagues who have specialised knowledge and/or reflecting on their own teaching practices. In the context of a crowded curriculum and managing classroom behavioural issues the process of gathering and interpreting data creates a space for teachers to focus on understanding an individual student’s needs (Jacobs et al., 2009).

A range of measures exists for understanding wellbeing factors, and their antecedents (or enablers/barriers) (for an excellent resource, see Bates & Boren, n.d., in addition to our other resources.). It is not clear how widely these are used by schools to understand and monitor their needs, however recent systematic review of measures of social emotional and behavioural screening instruments indicates that ‘useability’ (i.e., how feasible it is for a stakeholder to use the tool to achieve the intended goal) is under-reported, with a focus on technical validity, likely limiting use of these measures in multitiered support systems (Brann et al., 2022).

What are the potential implications of this research for iyarn?

The literature has a number of potential implications for iyarn development in terms of how to best support teachers' experience. However it is important to remember that any recommendations from literature may be influenced by the particular context of the study or research (school, country, pastoral care systems) and therefore some recommendations might not be directly transferable.

Teacher experience support	iyarn status	Comment
Teacher input into the design and implementation of program	✓	Through consultation and research
Training for staff in using the platform with sample data, case studies, and AV resources, reflecting real world school scenarios	⌚	Some case studies & video training available on website. Develop 'what if' scenarios for what to/not to do.
Support from colleagues, school administration and community	⌚	Unclear status, likely to vary by school.
Evidence of efficacy of program and interventions	🚫	Priority area
Adaptability of program or intervention to accommodate time restrictions and shifting priorities	✓	Check-ins can be done quickly and at different time intervals
Training resources that can be adapted to own content	⌚	Some interface adaptation available (naming segments, scale). Support resource customization a priority
Training that is expert-led, evidence-based and accredited	🚫	Additional research and quantitative studies required
Training on working with parents and well as students	⌚	Not current priority?

(Recommendations drawn from reviewed literature, and particularly summaries available in Shelemy et al., 2019)

What do teachers want to support them to promote wellbeing and mental health?

A resource that may be particularly useful, and which iyarn is just one part of, is the checklist developed by Shelemy, Harvey, and Waite (2019) (note due to copyright restriction I can't include it here but it's a tickbox yes/no 17 question survey asking "Does your school staff mental health training include..."). The paper is freely available at the link below, and the table can be viewed on the final page of the PDF.

Checklist from: Shelemy, L., Harvey, K., & Waite, P. (2019). Supporting students' mental health in schools: What do teachers want and need? *Emotional and Behavioural Difficulties*, 24(1), 100–116. <https://doi.org/10.1080/13632752.2019.1582742> - available open access at https://centaur.reading.ac.uk/82380/1/Supporting%20students%27%20mental%20health%20in%20schools-%20what%20do%20teachers%20want%20and%20need_%20%20Revised%20manuscript.pdf

What are potential implications of these findings for iyarn?

This table is intended to provide an overview summary of the evidence synthesis, mapping the key takeaways to the driving questions.

Explanatory note.

= strength of evidence, with 3* indicating very strong evidence (e.g. from systematic reviews, meta-analyses, and multiple robust randomised control trials); 2* indicating multiple experimental or quasi experimental designs; and 1 * other studies such as observational or correlational work.

is used to indicate a positive effect found, or supportive evidence.

is used to indicate a negative effect found, or non-supportive evidence.

is used to indicate the evidence is unclear or/and underexplored or/and cannot be addressed using quantitative research.

This approach is informed by van der Bles et al.'s discussion (2019)

Driver	Evidence	Comment
What do teachers understand regarding mental health and specific needs?		-Research around teacher mental health literacy and self-efficacy has increased in recent years with increased incidence of student mental health challenges in schools. -Studies in the UK, US, Canada and Australia show an inconsistent approach to pre-teacher and in-service teacher training and support with a general lack of mental health literacy confidence and skills.
What is the evidence around teacher support for young people's mental health?		Reasonable evidence suggest teachers increasingly see support for young people's mental health as part of their role; however many lack the confidence, knowledge and skills to provide this support.
Do teachers know when to help and how to monitor outcomes?		A range of constraints effect teachers' ability and confidence to intervene in students wellbeing and mental health. These may include time constraints, lack of training and skills, lack of support and clarity of roles, poor data literacy. Teachers' mental health literacy has not been a priority and training has been ad-hoc. There is very limited evidence on how they monitor outcomes.
Do teacher interventions help?		Teacher interventions at class and individual level have been found to be effective in promoting help-seeking behaviour, early intervention and referral for students
What is the evidence around the impact of individual vs class interventions for wellbeing?		Whole-school positive education supports wellbeing. Class-based interventions can reduce stigma and promote help-seeking behaviour. Individual intervention supported for early-intervention and referral. Little evidence on comparison of relative impact, class-based tend to be preventative and individual in response to a student perceived to be struggling with mental health

How do teachers conceptualise mental health data?		Teacher data literacy in general has not been a priority for teacher education or professional development. With more data-driven reporting and assessments this is becoming increasingly important. There is little evidence around mental health data literacy or experience for teachers.
What are the right thresholds for individual/class action		<p>Area for ongoing exploration. There is little evidence or research on current thresholds for referrals or intervention for individual or class action and which from anecdotal evidence are often in response to a crisis.</p> <p>See resources in our segment mapping for approaches to evaluation, which may inform this.</p>

* Most research on teacher experience is based on survey and interview methods.

Area of exploration and future evaluation for iyarn:

Issue	Implication
There is a large degree of inconsistency in teacher training and capability around student wellbeing and mental health literacy. Teachers recognise the increase in mental health challenges for their students but often feel unprepared or lack confidence in supporting students. Data may not be used effectively to support wellbeing or wellbeing literacy.	While iyarn is a 'stand alone', it is used in wider systems; training should support effective practice, while being flexible to the particular contexts. Opportunities may exist to integrate resources to improve mental health and data literacy for teachers using an experiential learning approach.
Teachers' report experiencing increasing pressures and stress leading to mental health challenges. Teachers require additional support and resources in order to care for their own mental health before they can care for their students.	An extension of the teacher check-in tool might provide resources and suggestions to support teachers' mental health and wellbeing
Teachers' experience challenges in implementing wellbeing and mental health programs due to a lack of training, time constraints and the need to have flexibility to adapt to changes in the school environment and timetable Programs and resources that involve teachers in the design and implementation plan tend to have more consistent and higher quality implementation	Iyarn has strength in the ability to use it flexibly inside or outside of the classroom with little time commitment required from teachers. Involving teachers in planning how they might want to use the platform and planning implementations collaboratively may improve consistency and commitment of teachers. Input into design and feature development by teachers is likely to increase usability and improve implementation.

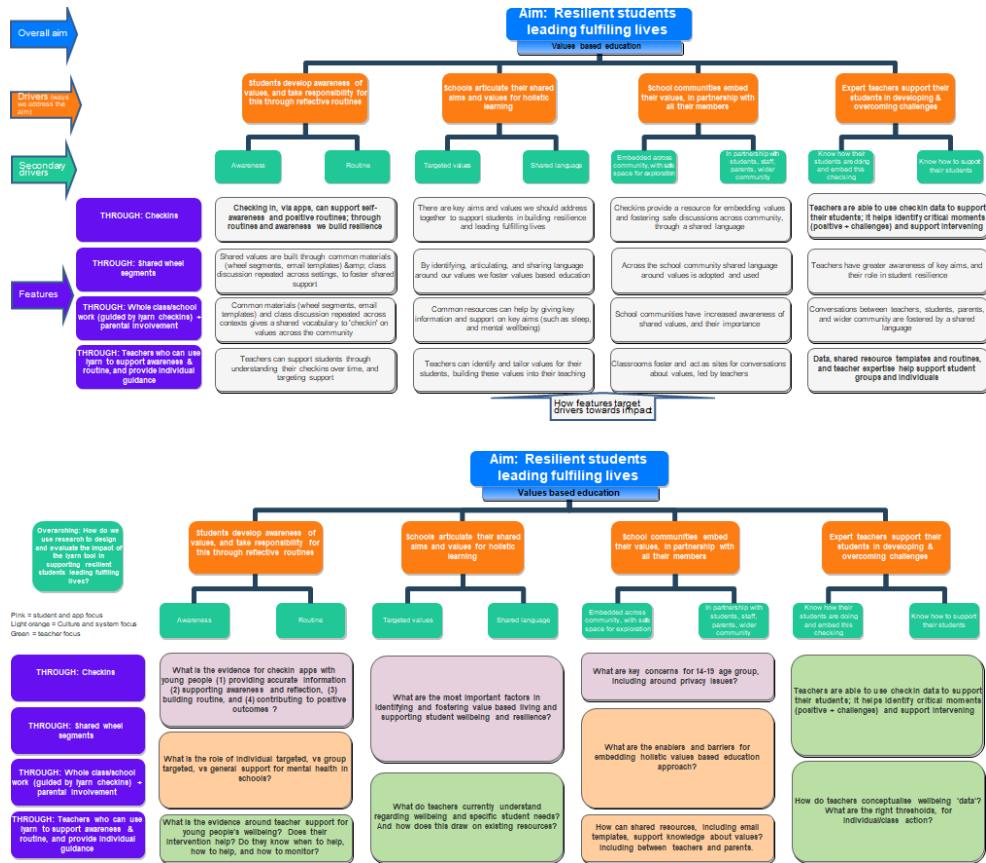
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Appendix



5.3 Key other concerns

Introduction

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Prepared for: iyarn research partner

Purpose: This document provides a synthesis of existing evidence. This synthesis is designed with an intent to:

1. be useful to iyarn, because it represents the evidence base iyarn is grounded in and helps give a language to that;
2. be something iyarn can share to demonstrate the evidence base to external stakeholders;
3. guide future development and evaluation within the iyarn tool and its use

Using this resource: To do that, these documents are designed to:

1. provide a summary of the key evidence;
2. highlight key implications for iyarn in tool design and implementation;
3. point towards lessons for future evaluation work.

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iyarn Desktop Research – Overview

The following sample of desktop research approach aims to provide an indicative document for discussion, feedback and dialogue to inform the further research. It focuses on one of the key questions identified through the mapping of key drivers and outlined below and presented previously. A list of the key questions and themes for the desktop research are also outlined below.

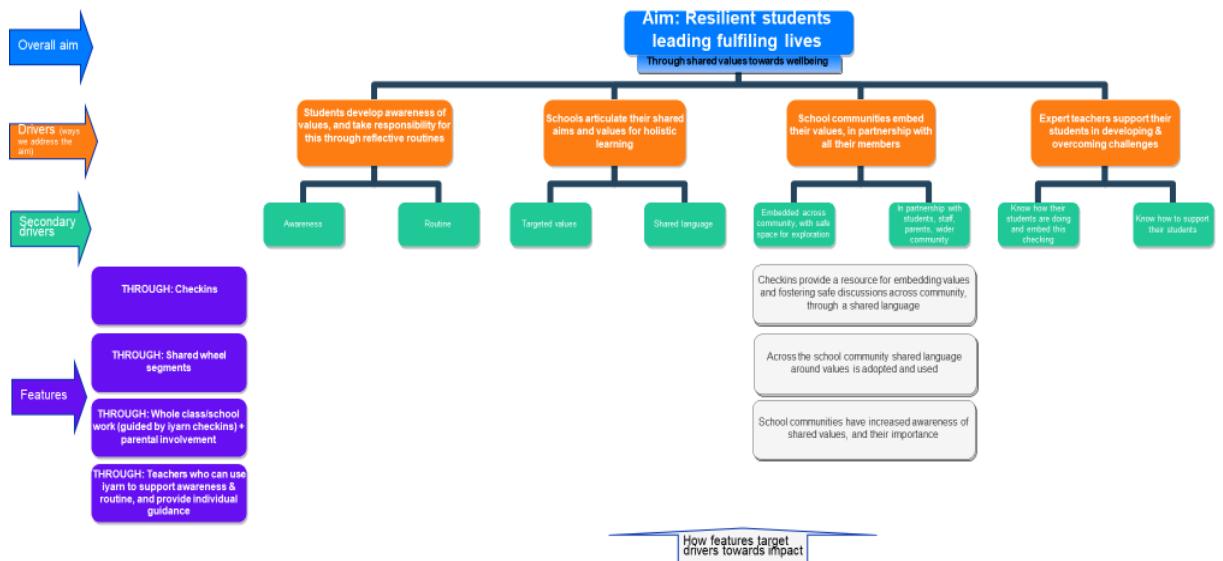


Figure 1: iyarn primary and secondary drivers research mapping

Topic: How do check-in apps build wellbeing, and what are young people's key concerns when using them in schools?

What are the key concerns for 14-19 year old age including around privacy?

The context of wellbeing and mental health for young Australians

The events of the past three years in Australia have seen a series of significant challenges including COVID-19, the 'Black Summer' bushfires, flooding and growing concerns over economic security and cost of living. These events have impacted our mental health, sense of wellbeing and certainty about the future. Young people are one group who have been found to be disproportionately affected in terms of the impact on their mental health and wellbeing (Headspace, 2020; Power et al., 2020a). These largely unforeseen and unexpected events have placed additional stress and strain on the systems of learning and education in secondary schools in Australia, which have already been struggling to deal with a significant and growing challenges of mental health issues for young people in their care.

Some contributing factors to these mental health challenges for young people include the rapidity in change of technology and society, the loss of security in traditional pathways for the future and climate anxiety (Potts, 2020). These concerns are in addition to traditional adolescent challenges of self-image and forming identity, social connection, family dynamics and pressures of study and work (Mission Australian and Black Dog Institute, 2017). It has become increasingly urgent to understand and explore what kinds of learning experiences and resources might support young people to cope in this context and to develop wellbeing and resilience through personal and collective agency for the challenges ahead (Potts, 2020).

What impact has COVID-19 had on young people's wellbeing and mental health?

In a survey by Australian youth mental health service headspace, 40% of young respondents believed the pandemic had impacted their confidence to achieve future goals and 51% felt their mental health had worsened during the pandemic (Headspace, 2020). Young people reported increased experiences of loneliness, isolation, anxiety and depression (Headspace, 2020). Evidence suggests young people may be one of the demographics more vulnerable to experiencing poor mental health outcomes both in the short and longer term (Power et al., 2020a)

While the potential physical health implications of the pandemic have been at the forefront of the response to the pandemic the psychosocial impacts and their consequences for young people are only now a priority. Research conducted in the UK by the YoungMinds (Power et al., 2020a) organisation found 83% of young people surveyed believed their mental health had been negatively affected and were specifically concerned about loss of social contact and structured activities. Young people have been impacted in the short term by issues such as job losses, loss of independence, social isolation, exacerbation of existing mental health issues, reduced access to services and emergence of new mental health issues. Young people are likely to find it more difficult cope with the ongoing uncertainty created by COVID-19 as their coping skills are still developing according to Fields & Prinz (Fields & Prinz, 1997).

These additional mental health stresses have compounded the pre-existing mental health crisis being experienced by young Australians. The Youth Mental Health Report 2012-2017 (Mission Australian and Black Dog Institute, 2017) found that one in four young Australians are at risk of a serious mental illness with greater risk for young women and Indigenous young people. Young people with existing mental health conditions such as anxiety and

depression, anorexia, obsessive compulsive disorders reported the COVID-19 crisis had

worsened these pre-existing conditions, while one in four reported they were no longer able to access their support services due to the crisis (Power et al., 2020a).

These poor mental health outcomes for young people have both a short term and potential longer-term impacts. According to Headspace CEO Jason Trethewan these results are concerning as they reflect not only the acute effects on wellbeing and mental health but also raise concerns for future wellbeing, 'We can see from the research that COVID-19 has had significant negative short term impacts for young people when it comes to things like study, interactions with friends, work situation and mood, but the long term impacts have the potential to be much greater' (Headspace, 2020).

What is the relationship of wellbeing, mental health and education?

There is increasing consideration in education policy at both a national and state level about how to support the wellbeing, resilience and mental health of students in Australian schools. At a national level these concerns have been recognised as a major focus by the Education Council in a follow-on document to the *Melbourne Declaration on Educational Goals for Young Australians*, the *Alice Springs (Mparntwe) Education Declaration on Education Goals for Young Australians* December 2019 to which all state education ministers are signatories. This declaration states a core strategic aim of education in for students to be, 'Confident and creative individuals who are resilient and develop the skills and strategies they need to tackle current and future challenges' and, 'Are able to recognise, adapt to, and manage change' (Education Council, 2019). The NSW Department of Education and Communities (DEC) has developed a *Wellbeing Framework for Schools*, which recognises the changes in the school environment and world in which young people are growing up and commits to strengthening their cognitive, physical, social, emotional and spiritual development (NSW Department of Education, n.d.). Alongside this is a commitment in the NSW Department of *Education Inclusive Education Statement* to students with a disability to 'building a more inclusive education system...where every student is known, valued and cared for and all students are learning to their fullest capacity.' (NSW Department of Education, 2022).

The growing levels of stress and mental illness affecting children and young people is impacting their ability to learn and thrive. International research found 47% of Australian students feel very tense when they study, which negatively effects their academic results, engagement and mental health (OECD Publishing, 2017)

What are the key concerns and preferences for young people in using check-in apps including privacy?

As young people increasingly rely on the internet for information and services, the use of apps and online mental health services provide a space where young people increasingly feel confident to talk about their physical and mental health issues (OECD Publishing, 2017). The high levels of access to technology and mobile phones for Australian young people means there is increasing access to wellbeing and mental health apps to support physical, social and mental wellbeing. Research undertaken by Project Synergy as part of the 'Young and Well CRC' in collaboration with young people found one of the core features for inclusion in online health and wellbeing systems includes, 'A rapid but comprehensive self-rating system that examines a range of health and wellbeing domains' (Davenport et al., 2019). Other features included a specific goal setting function and real time tracking of actions to achieve self-determined goals (Davenport et al., 2019).

Do young people understand confidentiality and reporting duties?

Recent research has shown that high school students may have a limited understanding of the professional confidentiality obligations (Carlisle et al., 2006). A 2017 study involving over

legally required to keep their secrets (Lubman et al., 2017). This is significant because concerns about confidentiality are a major barrier to help seeking behaviour for mental health problems during adolescence (Carlisle et al., 2006). Information and education confidentiality are necessary to complement existing programs focusing on increasing accessibility and affordability (Bassilios et al., 2016)

What are young people's perceptions of privacy and trust in wellbeing apps?

Research in schools shows students understand wellbeing in a multi-faceted way which includes having a say, being listened to, having rights and being respected (Anderson & Graham, 2016). In studies which compare young peoples' perspectives on wellbeing to experts there are some interesting differences in how they perceive wellbeing (Gennings et al., 2021). For example young people were found to place greater emphasis on the value of friendship and belonging to feel accepted and respected (Foley et al., 2012) Other differences included the impact of others' judgements and the importance of family life for wellbeing (Gennings et al., 2021).

Young people consistently indicate that they prefer non-professional or self-managed strategies for mental health support. This is partly due to the stigma associated with having mental health challenges (Rickard et al., 2016). There is also a preference for privacy, anonymity, autonomy and the ability to opt out (Bakker et al., 2016; Clarke et al., 2015). For young people, stigmatising attitudes and embarrassment are often named as reasons they do not seek help. Other barriers include concerns around confidentiality and trust (Hickle et al., 2019).

What are considerations of diversity, equity, inclusion, in mobile wellbeing apps?

Therefore, any self-rating or check-in system needs to take into account these differences in understandings of wellbeing. Similarly, considerations of diversity, equity and inclusion are essential when looking at evaluation frameworks for wellbeing and mental health apps and services, along with ongoing user testing and validation with young people from marginalised groups (Ramos et al., 2021). In Australia this might include young women, Aboriginal and Torres Strait Islander young people and young people with disabilities, all of whom suffer disproportionate levels of mental ill health with many having less access to services (Mission Australian and Black Dog Institute, 2017).

How can we design to foster productive use of mobile wellbeing apps?

The importance of pro-actively including young people in the design of services and platforms for wellbeing and mental health is being increasingly recognised within Australia internationally. This approach recognises the expertise of due to their age and lived experience as equally valuable to that of clinicians and designers in order to design solutions that meet the needs of young people (Hetrick et al., 2018). Recommendations for co-design with young people from the Young and Well Cooperative Research Centre (CRC) include the following;

1. Young people are active participants throughout the entire design process including planning and design
2. Young people as design partners where they contribute by generating ideas, creating solutions and giving feedback on design concepts
3. Ongoing iteration and evaluation of platform and technology from perspective of young people to ensure it remains relevant, meaningful and engaging (Davenport et al., 2019).

Further principles recommended for participatory design or co-design with young people include ensuring clear expectations from team members about the scope of each person's

contribution; being flexible and enabling involvement (Eg, providing transport or reimbursement); valuing diverse forms of experience; making sure young people benefit from the experience (Eg. Skill development); avoiding tokenism and involving more than one young person; and providing feedback and updates on progress of what has been achieved (Hetrick et al., 2018).

Applying human-centred design approaches and co-design with young people has been found to be effective in developing digital mental health services to better meet their needs. In a co-design research process from the Centre for Youth Mental Health, University of Melbourne in collaboration with headspace young people (aged 18-25) with experience of depression along with clinicians worked on designing a mobile app for self-monitoring of moods to be used between meetings with clinicians (Hetrick et al., 2018). Young people involved saw the value of self-monitoring as a ‘feedback mechanism assisting individuals to notice fluctuations in their symptoms and how this might relate to changes in circumstances or life events’ (Hetrick et al., 2018). They expressed a strong level of comfort with using technology in particular mobile phones for this purpose. Some of the key features prioritised by young people in the co-design of the app were; the ability to access support in real time, the ability to customise the interface including colours, types of ratings and display options for ratings, the ability to enter comments and notes but also decide if they want to view and access these in future sessions, a range of real-time distractions including mindfulness or games, messages from friends and the ability to customise these (Hetrick et al., 2018).

A group of young people from the Oxford Neuroscience, Ethics and Society Young People's Advisory Group (NeuroOx YPAG) recommend online, mobile-based interventions as they are less likely to carry the stigma attached to formal mental health services and provide self-reliant intervention platforms for those who would not otherwise seek help (Kretzschmar et al., 2019). They also note that given the long waiting periods for professional services and lack of availability in many locations well designed, evidence based digital services may fill some gaps. As with other research they comment on common barrier of young people seeking fearing that their problems are too personal and having concerns about the privacy and confidentiality if they were to disclose sensitive information. In their research they explore three AI mental health bots or automated conversational agents; Wysa, Woebot and Joy and consider the ethical and privacy implications of this kind of technology for mental health support for young people. They conclude that alongside efficacy and safety, privacy and transparency are essential for any chatbot services and question the limited capacity to recreate human interactions and offer tailored responses combined with a lack of access to real world services and support (Kretzschmar et al., 2019).

The recommendations from NeuroOx YPAG for principles of privacy and confidentiality for chatbots, also relevant for other digital mental health apps, include the following;

1. Personal information, if collected, should be kept confidential
2. Content of conversations, if shared, should be de-identified
3. Privacy arrangements and limitations should be made transparent to users
4. Users should have the option of being reminded of privacy arrangements and limitations at any stage (Kretzschmar et al., 2019).

What are the key considerations for parents in giving consent to their children engaging with digital wellbeing and mental health programs in school?

There is very little research or evidence available regarding parents experience of giving consent for their children to engage with digital wellbeing and mental health programs in

research given the importance of parental consent in enabling the platform to be used by students in school.

What role can parents play in early identification and support for mental health?

There is however a growing body of evidence surrounding parents experience of supporting young people with mental health issues which has been boosted by the co-design approach of services such as Reachout that provide parents with information and support about caring for teenagers and mental health. In this research Australian parents reported needing support to understand and respond appropriately to issues related to mental health and wellbeing for their teenagers (Cairns et al., 2019). Given mental health problems commonly first appear during adolescence and parents are often the first people that children raise their concerns with the ongoing education and support for parents is a critical part of growing a wellbeing ecosystem around students and schools.

Evidence has shown that parents' recognition that their child has a problem strongly influences whether the young person receives helps (Sayal et al., 2010). Parents, however, report difficulty in knowing whether or not their child's behaviour warrants attention from a mental health professional and as a result may delay seeking help (Boulter & Rickwood, 2013). There is a general lack of information and education for parents of teenagers about the early warning signs of mental health issues and how to undertake mental health first aid in the community (Jorm et al., 2007). Following the National Mental Health Commissions strategic approach of investing in services for prevention and early intervention for young people self-help and non clinical online support are increasingly preferred (National Mental Health Commission, 2014). However broader community support and communication is required to inform and support parents to work closely with service providers and schools to support young people. Iyarn fits well with this preventative health strategy and also has potential to educate parents along with students. Many parents (61% in the Reachout study) rely on informal sources of information in the early stages of their help-seeking journey for their child. They may talk to other parents, to friends and family and often use the internet to source information (Cairns et al., 2019). In terms of seeking help at school the results were very mixed with 40% of parents saying they were likely or extremely likely to talk to a teachers, while 39% said the were unlikely to do so (Cairns et al., 2019). Parents from diverse cultural backgrounds were more likely to indicate they would handle the issue on their own or with help from friends and family (Zwaanswijk et al., 2003).

What are the potential issues around parental consent?

In the same study young people reported their relationships with their parents changing during high school from being a close relationship in Year 7 where they were reliant on their parents for support. Then in year 8 & 9 many reported experiencing tension with their parents as they explored their sense of identity separate to the family group. This continued into Year 11 & 12 when some young people reported shutting out their parents and taking them for granted as they turn to their own peers for support and advice et al., 2019). One strategy that has been found effective in communicating with teenagers is validating their feelings and asking questions rather than trying to solve the problem or criticise their behaviour (Cairns et al., 2019). Parental consent has been identified as a significant barrier for young people considering engaging with digital mental health services with on study with teenagers with eating disorders citing concerns about privacy and their parents not understanding enough about mental health. Over one half of potential participants stated they would not take part if parental consent was required (Cavazos-Rehg et al., 2020).

Young people interviewed felt strongly that a website for parents which could help them understand what they were going through would be valuable to encourage them and prevent them being alarmist (Cairns et al., 2019). Research on how parents have responded

during COVID-19 with many having to facilitate home schooling during lockdown as well as

support their children's mental health have demonstrated some shifts in willingness of parents to engage in digital mental health interventions, however there is still significant reluctance and preference for face to face treatment with health professionals (Linardon et al., 2021).

There are ongoing concerns about privacy and confidentiality of data in the broader community. With the proliferation of self-help and wellbeing apps, many having been implemented on limited budgets, users are right to be concerned about their wellbeing and mental health data being poorly secured and misused. A 2019 study of 61 mental health apps found nearly half had no privacy policy to inform users about how their data might be used (Parker et al., 2019). Shifts in practices since the introduction of the European GDPR have promoted the interests of consumers and the protection of privacy as a high priority. Iyarn has a clear and well described privacy policy on its website (Iyarn, 2022).

What are the UX/design implications lyarn?

Design Implication	lyarn status	Comment
Students actively involved in co-design of platform		Involvement in expression of segments. Wider input in design, or implementation unclear
Clear messaging around privacy and confidentiality		Priority area*
Ability for students to hide or show comments when reviewing past entries		Consider this feature for future
Ability for students to modify colours and look and feel		Consider this feature for future
Include one click buttons to request support from counsellor or teacher		Priority area
Include links to self-help resources in platform		Potentially integrating from resources bank developed for emails
Information for parents about their children's use of lyarn and links to reliable resources for parents such as Reachout		Increase information for parents as introduction to lyarn and blog posts
Enabling customisation of segments for students		Currently available with school support

*lyarn may wish to create a simple 'duty of care' document for teachers, parents, and young people to understand policies and obligations in interaction with the tool, and may take some inspiration from the reachout model: <https://schools.au.reachout.com/articles/reachout-duty-of-care-framework>

What are potential implications of these findings for iyarn?

This table is intended to provide an overview summary of the evidence synthesis, mapping the key takeaways to the driving questions.

Explanatory note.

 = strength of evidence, with 3*  indicating very strong evidence (e.g. from systematic reviews, meta-analyses, and multiple robust randomised control trials); 2* indicating multiple experimental or quasi experimental designs; and 1* other studies such as observational or correlational work.

  is used to indicate a positive effect found, or supportive evidence.

  is used to indicate a negative effect found, or non-supportive evidence.

  is used to indicate the evidence is unclear or/and underexplored or/and cannot be addressed using quantitative research.

This approach is informed by van der Bles et al.'s discussion (n.d.)

Driver	Evidence	Comment
What are key concerns for 12-15 year age group, including around privacy?	  	General research on the key concerns for young people aged 12-15 has a strong foundation, however given the rapid changes with issues such as climate disruption and COVID-19 this research needs to be constantly reviewed and updated, particularly with regards to the impact on wellbeing and mental health. There is some research on the concerns and perspective of young people in using wellbeing and mental health apps, however specific evidence regarding students experience of issues such as privacy and confidentiality in self-monitoring apps in schools is very limited.
What are the key considerations for parents in giving consent to their children engaging with digital wellbeing and mental health programs in school.	  	Limited research could be found regarding parents considerations of consent, confidentiality and this could potentially be an important area for iyarn to understand given parent consent is essential for students to use the platform at school
How can shared resources and information between parents, teachers and students help to build relationships to support student mental health		Program based approaches (across school communities, with a systematic implementation) are well supported, however the role of technologies and use of checkin apps to foster these has not been well explored yet.

Area of exploration and future evaluation for lyarn:

Issue	Implication
There is a lack of research and evidence of students experience of using wellbeing tools such as lyarn in a school setting Exploring students' perspective of using wellbeing, self-monitoring tools in a school setting in particular with regards to privacy, trust and impact on help seeking behaviour could be valuable	Additional research and evidence of students' experience could contribute to considerations of how to develop the tool to continue to meet the needs of students within a school setting. It could also inform the use of the platform by young people outside of a school setting.
The role of parents in supporting young people's mental health and wellbeing in programs run within school time has limited research available	This research could be valuable to understand any potential barriers to consent from parents as well as providing a coordinated approach to support for young people across their networks

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5.3.1 Issues FAQ

Introduction

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Prepared for: iyarn research partner

Purpose: This document provides a synthesis of existing evidence. This synthesis is designed with an intent to:

1. be useful to iyarn, because it represents the evidence base iyarn is grounded in and helps give a language to that;
2. be something iyarn can share to demonstrate the evidence base to external stakeholders;
3. guide future development and evaluation within the iyarn tool and its use

Using this resource: To do that, these documents are designed to:

1. provide a summary of the key evidence;
2. highlight key implications for iyarn in tool design and implementation;
3. point towards lessons for future evaluation work.

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iyarn Desktop Research – Overview

The following sample of desktop research approach aims to provide an indicative document for discussion, feedback and dialogue to inform the further research. It focuses on one of the key questions identified through the mapping of key drivers and outlined below and presented previously. A list of the key questions and themes for the desktop research are also outlined below.

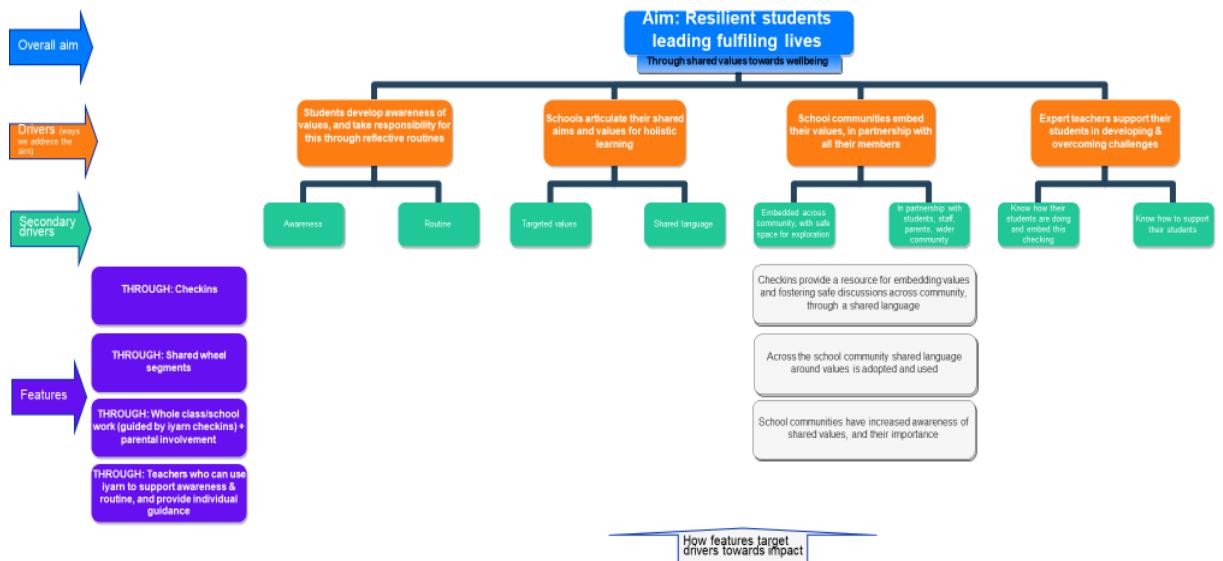


Figure 1: iyarn primary and secondary drivers research mapping

Topic: How do check-in apps build wellbeing, and what are young people's key concerns when using them in schools?

What are the key concerns for 14-19 year old age including around privacy?

The context of wellbeing and mental health for young Australians

The events of the past three years in Australia have seen a series of significant challenges including COVID-19, the 'Black Summer' bushfires, flooding and growing concerns over economic security and cost of living. These events have impacted our mental health, sense of wellbeing and certainty about the future. Young people are one group who have been found to be disproportionately affected in terms of the impact on their mental health and wellbeing (Headspace, 2020; Power et al., 2020a). These largely unforeseen and unexpected events have placed additional stress and strain on the systems of learning and education in secondary schools in Australia, which have already been struggling to deal with a significant and growing challenges of mental health issues for young people in their care.

Some contributing factors to these mental health challenges for young people include the rapidity in change of technology and society, the loss of security in traditional pathways for the future and climate anxiety (Potts, 2020). These concerns are in addition to traditional adolescent challenges of self-image and forming identity, social connection, family dynamics and pressures of study and work (Mission Australian and Black Dog Institute, 2017). It has become increasingly urgent to understand and explore what kinds of learning experiences and resources might support young people to cope in this context and to develop wellbeing and resilience through personal and collective agency for the challenges ahead (Potts, 2020).

What impact has COVID-19 had on young people's wellbeing and mental health?

In a survey by Australian youth mental health service headspace, 40% of young respondents believed the pandemic had impacted their confidence to achieve future goals and 51% felt their mental health had worsened during the pandemic (Headspace, 2020). Young people reported increased experiences of loneliness, isolation, anxiety and depression (Headspace, 2020). Evidence suggests young people may be one of the demographics more vulnerable to experiencing poor mental health outcomes both in the short and longer term (Power et al., 2020a)

While the potential physical health implications of the pandemic have been at the forefront of the response to the pandemic the psychosocial impacts and their consequences for young people are only now a priority. Research conducted in the UK by the YoungMinds (Power et al., 2020a) organisation found 83% of young people surveyed believed their mental health had been negatively affected and were specifically concerned about loss of social contact and structured activities. Young people have been impacted in the short term by issues such as job losses, loss of independence, social isolation, exacerbation of existing mental health issues, reduced access to services and emergence of new mental health issues. Young people are likely to find it more difficult cope with the ongoing uncertainty created by COVID-19 as their coping skills are still developing according to Fields & Prinz (Fields & Prinz, 1997).

These additional mental health stresses have compounded the pre-existing mental health crisis being experienced by young Australians. The Youth Mental Health Report 2012-2017 (Mission Australian and Black Dog Institute, 2017) found that one in four young Australians are at risk of a serious mental illness with greater risk for young women and Indigenous young people. Young people with existing mental health conditions such as anxiety and

depression, anorexia, obsessive compulsive disorders reported the COVID-19 crisis had

worsened these pre-existing conditions, while one in four reported they were no longer able to access their support services due to the crisis (Power et al., 2020a).

These poor mental health outcomes for young people have both a short term and potential longer-term impacts. According to Headspace CEO Jason Trethewan these results are concerning as they reflect not only the acute effects on wellbeing and mental health but also raise concerns for future wellbeing, 'We can see from the research that COVID-19 has had significant negative short term impacts for young people when it comes to things like study, interactions with friends, work situation and mood, but the long term impacts have the potential to be much greater' (Headspace, 2020).

What is the relationship of wellbeing, mental health and education?

There is increasing consideration in education policy at both a national and state level about how to support the wellbeing, resilience and mental health of students in Australian schools. At a national level these concerns have been recognised as a major focus by the Education Council in a follow-on document to the *Melbourne Declaration on Educational Goals for Young Australians*, the *Alice Springs (Mparntwe) Education Declaration on Education Goals for Young Australians* December 2019 to which all state education ministers are signatories. This declaration states a core strategic aim of education in for students to be, 'Confident and creative individuals who are resilient and develop the skills and strategies they need to tackle current and future challenges' and, 'Are able to recognise, adapt to, and manage change' (Education Council, 2019). The NSW Department of Education and Communities (DEC) has developed a *Wellbeing Framework for Schools*, which recognises the changes in the school environment and world in which young people are growing up and commits to strengthening their cognitive, physical, social, emotional and spiritual development (NSW Department of Education, n.d.). Alongside this is a commitment in the NSW Department of *Education Inclusive Education Statement* to students with a disability to 'building a more inclusive education system...where every student is known, valued and cared for and all students are learning to their fullest capacity.' (NSW Department of Education, 2022).

The growing levels of stress and mental illness affecting children and young people is impacting their ability to learn and thrive. International research found 47% of Australian students feel very tense when they study, which negatively effects their academic results, engagement and mental health (OECD Publishing, 2017)

What are the key concerns and preferences for young people in using check-in apps including privacy?

As young people increasingly rely on the internet for information and services, the use of apps and online mental health services provide a space where young people increasingly feel confident to talk about their physical and mental health issues (OECD Publishing, 2017). The high levels of access to technology and mobile phones for Australian young people means there is increasing access to wellbeing and mental health apps to support physical, social and mental wellbeing. Research undertaken by Project Synergy as part of the 'Young and Well CRC' in collaboration with young people found one of the core features for inclusion in online health and wellbeing systems includes, 'A rapid but comprehensive self-rating system that examines a range of health and wellbeing domains' (Davenport et al., 2019). Other features included a specific goal setting function and real time tracking of actions to achieve self-determined goals (Davenport et al., 2019).

Do young people understand confidentiality and reporting duties?

Recent research has shown that high school students may have a limited understanding of the professional confidentiality obligations (Carlisle et al., 2006). A 2017 study involving over

legally required to keep their secrets (Lubman et al., 2017). This is significant because concerns about confidentiality are a major barrier to help seeking behaviour for mental health problems during adolescence (Carlisle et al., 2006). Information and education confidentiality are necessary to complement existing programs focusing on increasing accessibility and affordability (Bassilios et al., 2016)

What are young people's perceptions of privacy and trust in wellbeing apps?

Research in schools shows students understand wellbeing in a multi-faceted way which includes having a say, being listened to, having rights and being respected (Anderson & Graham, 2016). In studies which compare young peoples' perspectives on wellbeing to experts there are some interesting differences in how they perceive wellbeing (Gennings et al., 2021). For example young people were found to place greater emphasis on the value of friendship and belonging to feel accepted and respected (Foley et al., 2012) Other differences included the impact of others' judgements and the importance of family life for wellbeing (Gennings et al., 2021).

Young people consistently indicate that they prefer non-professional or self-managed strategies for mental health support. This is partly due to the stigma associated with having mental health challenges (Rickard et al., 2016). There is also a preference for privacy, anonymity, autonomy and the ability to opt out (Bakker et al., 2016; Clarke et al., 2015). For young people, stigmatising attitudes and embarrassment are often named as reasons they do not seek help. Other barriers include concerns around confidentiality and trust (Hickle et al., 2019).

What are considerations of diversity, equity, inclusion, in mobile wellbeing apps?

Therefore, any self-rating or check-in system needs to take into account these differences in understandings of wellbeing. Similarly, considerations of diversity, equity and inclusion are essential when looking at evaluation frameworks for wellbeing and mental health apps and services, along with ongoing user testing and validation with young people from marginalised groups (Ramos et al., 2021). In Australia this might include young women, Aboriginal and Torres Strait Islander young people and young people with disabilities, all of whom suffer disproportionate levels of mental ill health with many having less access to services (Mission Australian and Black Dog Institute, 2017).

How can we design to foster productive use of mobile wellbeing apps?

The importance of pro-actively including young people in the design of services and platforms for wellbeing and mental health is being increasingly recognised within Australia internationally. This approach recognises the expertise of due to their age and lived experience as equally valuable to that of clinicians and designers in order to design solutions that meet the needs of young people (Hetrick et al., 2018). Recommendations for co-design with young people from the Young and Well Cooperative Research Centre (CRC) include the following;

1. Young people are active participants throughout the entire design process including planning and design
2. Young people as design partners where they contribute by generating ideas, creating solutions and giving feedback on design concepts
3. Ongoing iteration and evaluation of platform and technology from perspective of young people to ensure it remains relevant, meaningful and engaging (Davenport et al., 2019).

Further principles recommended for participatory design or co-design with young people include ensuring clear expectations from team members about the scope of each person's

contribution; being flexible and enabling involvement (Eg, providing transport or reimbursement); valuing diverse forms of experience; making sure young people benefit from the experience (Eg. Skill development); avoiding tokenism and involving more than one young person; and providing feedback and updates on progress of what has been achieved (Hetrick et al., 2018).

Applying human-centred design approaches and co-design with young people has been found to be effective in developing digital mental health services to better meet their needs. In a co-design research process from the Centre for Youth Mental Health, University of Melbourne in collaboration with headspace young people (aged 18-25) with experience of depression along with clinicians worked on designing a mobile app for self-monitoring of moods to be used between meetings with clinicians (Hetrick et al., 2018). Young people involved saw the value of self-monitoring as a ‘feedback mechanism assisting individuals to notice fluctuations in their symptoms and how this might relate to changes in circumstances or life events’ (Hetrick et al., 2018). They expressed a strong level of comfort with using technology in particular mobile phones for this purpose. Some of the key features prioritised by young people in the co-design of the app were; the ability to access support in real time, the ability to customise the interface including colours, types of ratings and display options for ratings, the ability to enter comments and notes but also decide if they want to view and access these in future sessions, a range of real-time distractions including mindfulness or games, messages from friends and the ability to customise these (Hetrick et al., 2018).

A group of young people from the Oxford Neuroscience, Ethics and Society Young People's Advisory Group (NeuroOx YPAG) recommend online, mobile-based interventions as they are less likely to carry the stigma attached to formal mental health services and provide self-reliant intervention platforms for those who would not otherwise seek help (Kretzschmar et al., 2019). They also note that given the long waiting periods for professional services and lack of availability in many locations well designed, evidence based digital services may fill some gaps. As with other research they comment on common barrier of young people seeking fearing that their problems are too personal and having concerns about the privacy and confidentiality if they were to disclose sensitive information. In their research they explore three AI mental health bots or automated conversational agents; Wysa, Woebot and Joy and consider the ethical and privacy implications of this kind of technology for mental health support for young people. They conclude that alongside efficacy and safety, privacy and transparency are essential for any chatbot services and question the limited capacity to recreate human interactions and offer tailored responses combined with a lack of access to real world services and support (Kretzschmar et al., 2019).

The recommendations from NeuroOx YPAG for principles of privacy and confidentiality for chatbots, also relevant for other digital mental health apps, include the following;

1. Personal information, if collected, should be kept confidential
2. Content of conversations, if shared, should be de-identified
3. Privacy arrangements and limitations should be made transparent to users
4. Users should have the option of being reminded of privacy arrangements and limitations at any stage (Kretzschmar et al., 2019).

What are the key considerations for parents in giving consent to their children engaging with digital wellbeing and mental health programs in school?

There is very little research or evidence available regarding parents experience of giving consent for their children to engage with digital wellbeing and mental health programs in schools. This is an area that could be very valuable for Iyarn to consider undertaking

research given the importance of parental consent in enabling the platform to be used by students in school.

What role can parents play in early identification and support for mental health?

There is however a growing body of evidence surrounding parents experience of supporting young people with mental health issues which has been boosted by the co-design approach of services such as Reachout that provide parents with information and support about caring for teenagers and mental health. In this research Australian parents reported needing support to understand and respond appropriately to issues related to mental health and wellbeing for their teenagers (Cairns et al., 2019). Given mental health problems commonly first appear during adolescence and parents are often the first people that children raise their concerns with the ongoing education and support for parents is a critical part of growing a wellbeing ecosystem around students and schools.

Evidence has shown that parents' recognition that their child has a problem strongly influences whether the young person receives helps (Sayal et al., 2010). Parents, however, report difficulty in knowing whether or not their child's behaviour warrants attention from a mental health professional and as a result may delay seeking help (Boulter & Rickwood, 2013). There is a general lack of information and education for parents of teenagers about the early warning signs of mental health issues and how to undertake mental health first aid in the community (Jorm et al., 2007). Following the National Mental Health Commissions strategic approach of investing in services for prevention and early intervention for young people self-help and non clinical online support are increasingly preferred (National Mental Health Commission, 2014). However broader community support and communication is required to inform and support parents to work closely with service providers and schools to support young people. Iyarn fits well with this preventative health strategy and also has potential to educate parents along with students. Many parents (61% in the Reachout study) rely on informal sources of information in the early stages of their help-seeking journey for their child. They may talk to other parents, to friends and family and often use the internet to source information (Cairns et al., 2019). In terms of seeking help at school the results were very mixed with 40% of parents saying they were likely or extremely likely to talk to a teachers, while 39% said the were unlikely to do so (Cairns et al., 2019). Parents from diverse cultural backgrounds were more likely to indicate they would handle the issue on their own or with help from friends and family (Zwaanswijk et al., 2003).

What are the potential issues around parental consent?

In the same study young people reported their relationships with their parents changing during high school from being a close relationship in Year 7 where they were reliant on their parents for support. Then in year 8 & 9 many reported experiencing tension with their parents as they explored their sense of identity separate to the family group. This continued into Year 11 & 12 when some young people reported shutting out their parents and taking them for granted as they turn to their own peers for support and advice et al., 2019). One strategy that has been found effective in communicating with teenagers is validating their feelings and asking questions rather than trying to solve the problem or criticise their behaviour (Cairns et al., 2019). Parental consent has been identified as a significant barrier for young people considering engaging with digital mental health services with on study with teenagers with eating disorders citing concerns about privacy and their parents not understanding enough about mental health. Over one half of potential participants stated they would not take part if parental consent was required (Cavazos-Rehg et al., 2020).

Young people interviewed felt strongly that a website for parents which could help them understand what they were going through would be valuable to encourage them and prevent them being alarmist (Cairns et al., 2019). Research on how parents have responded

support their children's mental health have demonstrated some shifts in willingness of parents to engage in digital mental health interventions, however there is still significant reluctance and preference for face to face treatment with health professionals (Linardon et al., 2021).

There are ongoing concerns about privacy and confidentiality of data in the broader community. With the proliferation of self-help and wellbeing apps, many having been implemented on limited budgets, users are right to be concerned about their wellbeing and mental health data being poorly secured and misused. A 2019 study of 61 mental health apps found nearly half had no privacy policy to inform users about how their data might be used (Parker et al., 2019). Shifts in practices since the introduction of the European GDPR have promoted the interests of consumers and the protection of privacy as a high priority. Iyarn has a clear and well described privacy policy on its website (Iyarn, 2022).

What are the UX/design implications lyarn?

Design Implication	lyarn status	Comment
Students actively involved in co-design of platform		Involvement in expression of segments. Wider input in design, or implementation unclear
Clear messaging around privacy and confidentiality		Priority area*
Ability for students to hide or show comments when reviewing past entries		Consider this feature for future
Ability for students to modify colours and look and feel		Consider this feature for future
Include one click buttons to request support from counsellor or teacher		Priority area
Include links to self-help resources in platform		Potentially integrating from resources bank developed for emails
Information for parents about their children's use of lyarn and links to reliable resources for parents such as Reachout		Increase information for parents as introduction to lyarn and blog posts
Enabling customisation of segments for students		Currently available with school support

*lyarn may wish to create a simple 'duty of care' document for teachers, parents, and young people to understand policies and obligations in interaction with the tool, and may take some inspiration from the reachout model: <https://schools.au.reachout.com/articles/reachout-duty-of-care-framework>

What are potential implications of these findings for iyarn?

This table is intended to provide an overview summary of the evidence synthesis, mapping the key takeaways to the driving questions.

Explanatory note.

 = strength of evidence, with 3*  indicating very strong evidence (e.g. from systematic reviews, meta-analyses, and multiple robust randomised control trials); 2* indicating multiple experimental or quasi experimental designs; and 1* other studies such as observational or correlational work.

 is used to indicate a positive effect found, or supportive evidence.

 is used to indicate a negative effect found, or non-supportive evidence.

 is used to indicate the evidence is unclear or/and underexplored or/and cannot be addressed using quantitative research.

This approach is informed by van der Bles et al.'s discussion (n.d.)

Driver	Evidence	Comment
What are key concerns for 12-15 year age group, including around privacy?	  	General research on the key concerns for young people aged 12-15 has a strong foundation, however given the rapid changes with issues such as climate disruption and COVID-19 this research needs to be constantly reviewed and updated, particularly with regards to the impact on wellbeing and mental health. There is some research on the concerns and perspective of young people in using wellbeing and mental health apps, however specific evidence regarding students experience of issues such as privacy and confidentiality in self-monitoring apps in schools is very limited.
What are the key considerations for parents in giving consent to their children engaging with digital wellbeing and mental health programs in school.	  	Limited research could be found regarding parents considerations of consent, confidentiality and this could potentially be an important area for iyarn to understand given parent consent is essential for students to use the platform at school
How can shared resources and information between parents, teachers and students help to build relationships to support student mental health		Program based approaches (across school communities, with a systematic implementation) are well supported, however the role of technologies and use of checkin apps to foster these has not been well explored yet.

Area of exploration and future evaluation for lyarn:

Issue	Implication
There is a lack of research and evidence of students experience of using wellbeing tools such as lyarn in a school setting Exploring students' perspective of using wellbeing, self-monitoring tools in a school setting in particular with regards to privacy, trust and impact on help seeking behaviour could be valuable	Additional research and evidence of students' experience could contribute to considerations of how to develop the tool to continue to meet the needs of students within a school setting. It could also inform the use of the platform by young people outside of a school setting.
The role of parents in supporting young people's mental health and wellbeing in programs run within school time has limited research available	This research could be valuable to understand any potential barriers to consent from parents as well as providing a coordinated approach to support for young people across their networks

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Chapter 6

An evidence informed checkin wheel: Identifying wellbeing factors

6.1 Background

This section addresses the following questions in the iyarn model, through evidence synthesis, resource creation and mapping, and resources for stakeholders, through evaluation of models of wellbeing and behavioural change, existing resources for young people, and design research regarding wellbeing apps.

1. “What are the most important factors in [wellbeing]?”
2. “What is the role of individual targeted, vs group targeted, vs general support for mental health in schools?”
3. “How can shared resources, including email templates, support knowledge about values? Including between teachers and parents.”

6.2 Wellbeing factors

6.2.1 Background

Work was undertaken to align iyarn with evidence-based models of wellbeing, to identify the key *factors* that constitute wellbeing, and their relationship to the *segments* that users checkin on in the iyarn tool.

Three principles can underpin segment focus

1. Conceptual: They should be relatable, identifiable, and distinct (ideally mutually exclusive), e.g. sport & exercise overlap
2. Research: Supported by research as being important for young people, and aligned with the wider theoretical grounding of the iyarn tool
3. Practical: How often they're currently used, with your existing secondary user base (build on what you have)

Initial analysis indicated a top 8 most used segments, with some overlap with an existing iyarn wellbeing wheel:

Top 8	Sleep	Friends	School	Mental health	family	exercise	happiness	learning	—
Student wellbeing	Sleep	Friends	school	Mental health	—	activity	—	learning	homework

9-46: Health Sport Self Care Energy Hobbies Nutrition Social Work Relationships Wellbeing Growth Homework Spirituality Personal Development Activity Challenge Trust Mindfulness Holidays Pets Mental Health Community Gratitude Romance Gym Organisation People Savings Love Giving Back Friends/Family Contribution Teamwork Job Help Healthy Body Comfort Zone. Wheel of life is: school; finance & money; health & fitness; family & friends; fun & recreation; personal growth; community.

In order to provide an evidence-based tool for supporting young people's wellbeing, we need a clear understanding of what factors underpin wellbeing, and what models of change would support improvements in wellbeing.

6.2.2 Mapping iyarn segments to wellbeing factors

Based on this initial mapping, we analysed a set of wellbeing models linked to iyarns conceptual model, and used with young people, to identify key factors to map to iyarn segments for an evidence-informed wellbeing wheel as in 6.2.2.

What's in this document

Document prepared by: UTS research team, led by Clara Mills

For: iyarn research partners

On: Updated May 30th 2022

Purpose: In order to provide an evidence-based tool for supporting young people's wellbeing, we need a clear understanding of what factors underpin wellbeing, and what models of change would support improvements in wellbeing. This document does two things:

1. It is intended to map the existing iyarn segments (which express factors and in some cases items or components within factors), to established models in the evidence base.
2. It is intended to give an overview of how theory can inform practical interventions in a tool such as iyarn (e.g., through teacher resources, automated emails, reflection prompts, representation of data over time, etc.).

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Wellbeing factors, and Resilience and Wellbeing in Schools

There is increasing consideration in education policy at both a national and state level about how to support the wellbeing, resilience and mental health of students in Australian schools. Research on the effectiveness of these programs in schools have found both universal and targeted interventions in school settings but argued that 'Enhancing youth engagement in these programs is necessary if program adherence is to be improved' (Werner Seidler et al., 2017).

Many of these programs focus on a positive psychology approach based on work by Seligman (2002), Noble & McGrath (2012) and others. This approach, known increasingly as 'positive education', focuses on 'The empirical study of human wellbeing, strengths and resilience to negative life events and the conditions that allow individuals, groups and organisations to flourish' (Noble & McGrath, 2012).

These programs aim to build self-esteem, wellbeing and the ability to 'bounce back' from difficult experiences. The focus of these programs is primarily on developing individual skills and social and emotional competencies as well as communication skills.

Three principles underpin the definition and selection of factors/segments

1. **Conceptual:** They should be distinct (and ideally mutually exclusive), e.g., sport & exercise overlap, while 'activity' might mean physical activity, or being busy
2. **Research:** Supported by research as being important for young people (and alignment with iyarn theoretical grounding in values-based education)
3. **Practical:** How often they're currently used, with your existing secondary user base (build on what you have)

We have reviewed the existing iyarn segments and descriptions; the [NSW wellbeing framework](#)ⁱ; and two evidence-based widely used frameworks: PERMAH and 5 Ways.

Framework	iYarn student wellbeing	PERMAH	5 ways to wellbeing	Proposed segment / factor
Overview	<p>More context needed for the prompts in many segments to ensure:</p> <ul style="list-style-type: none"> (1) each student interprets the question in the same way. (2) there is an understanding of normal fluctuations in mood, motivation, academic performance and sleep. 	<p>The PERMAH model presents a set of building blocks which can contribute to 'flourishing' in an individual's life:</p> <ul style="list-style-type: none"> • P – Positive Emotions • E – Engagement • R – Relationships • M – Meaning • A – Accomplishment • H – Health 	<p>New Economics Foundation (NEF) commissioned by UK Government to develop a set of evidence-based mental health concepts and actions that could improve the wellbeing of the UK's whole population ⁱⁱ. Has been adopted in various settings including schools, workplaces and healthcare internationally, including in Australia.</p> <ul style="list-style-type: none"> • Connect • Be Active • Take Notice • Keep Learning • Give <p>The framework provides an evidence-base for focusing on each pillar and a list of actions to strengthen each one.</p>	-
Friends	<p>"Are you feeling supported by your friends and being a good friend to yourself?"</p> <ul style="list-style-type: none"> • Subjective - <ul style="list-style-type: none"> ◦ different definitions of support ◦ what constitutes being a good friend to yourself? 	<p>The PERMAH pillar 'Relationships' aligns very closely with the iYarn friends segment – however, considers relationships more broadly to include family and other relationships, as well as friendships.</p> <p>The PERMAH model emphasises that building relationships with others an "innate need" and that "satisfying, positive relationships are created when we feel supported and cared about and feel socially integrated with others".</p>	<p>'Connect'</p> <p>The Framework distinguishes between two types of social relationships which are both important to "build and maintain wellbeing".</p> <ul style="list-style-type: none"> • Strong and deep relationships (e.g., friends and family) take time to develop and provide "support, enjoyment, encouragement and meaning". • Broad relationships are more "superficial" relationships with the community and wider world, which "provide a sense of familiarity, connectedness, self-worth/position in community" ⁱⁱⁱ. 	<p>Friendship and connection.</p> <p>Relationships (PERMAH) /connect (5 ways): iYarn segments: Friends, family, Social, relationships, trust, pets, community, romance, people</p>

Framework	iYarn student wellbeing	PERMAH	5 ways to wellbeing	Proposed segment / factor
Mental Health	"Are you feeling good at the moment?" • Subjective- ○ could be feeling good/bad for a variety of reasons that are not necessarily indicative of a mental health concern. • Describing this segment as 'mental health' may cause students to downplay negative feelings due to stigma, and/or conflate not feeling 'good' at all times with mental illness.	The 'Positive Emotions' Pillar of the PERMAH Framework is fairly closely aligned to the prompt from iYarn's Mental Health segment: recommending that positive emotions should be pursued and maximised for lasting wellbeing via talents, strengths and positive connections. However, PERMAH appears to frame positive emotions as a pursuit or product of activities and relationships rather than a baseline – therefore, it does not suggest that a student must feel positive emotions at all times in order to be mentally healthy.	'Take Notice' is the most closely related to mental health in 5 Ways – though this pillar instead focuses on practising mindfulness. This pillar promotes activities such as breath work, meditation and 'walking on the slow side'.	Self-care Positive emotion (PERMAH) take notice (5 ways): Happiness, Self Care, Energy, wellbeing, mindfulness, Mental health, Could also be 'emotional wellbeing'. Self-care emphasises not only positive emotion but more on the 'take notice' and act side.
School	"Are you enjoying school at the moment?" • Subjective - ○ could be enjoying/not enjoying school for various reasons e.g., bullying, one specific class or the stage of one course atm.	The PERMA pillar of 'Accomplishment' – "making progress towards realistic goals gives us a sense of accomplishment and pride and pushing ourselves beyond our comfort zones gives us opportunities to thrive and grow" ^{IV} – may be most reflective of the iYarn segments 'homework', and school. There is likely to be variation in this (particularly homework) across age groups..	'Give'	Learning and school Accomplishment (PERMAH) and keep learning (5 ways): School, learning, homework, work, organisation, job,
Homework	"Are you managing your homework and not feeling like you are getting behind?" • Factual – though does not discern the why behind the answer.			

Framework	iyarn student wellbeing	PERMAH	5 ways to wellbeing	Proposed segment / factor
Learning	"Do you feel like you are learning new skills and growing as a person?" • Learning new skills and growing as a person not necessarily synonymous	PERMA may re-envise 'learning' to align with their pillar Engagement (or 'flow'): the "blissful immersion... in an activity or pastime that you are passionate about or have talent in". ^{vi} In light of PERMA, the iYarn prompt may be re-phrased to focus on the student's level of engagement (passion) with the activity e.g., "Do you feel like you are participating in activities that you enjoy and are passionate about?" Is there a danger of this enabling fixation on video games/tv at this age?	'Keep Learning' The Five Ways Framework has a similar approach to the concept of learning as the iYarn wheel: it recommends that individuals should make a habit of learning new skills and exposing themselves to new thoughts in order to gain insight into life, ourselves and the world around us". ^{vii} Though it is implied, there does not appear to be explicit reference to growing as a person – instead 5 Ways focuses on impacts to personal health and wellbeing.	Growth, challenge, and your passions Accomplishment/Engagement (PERMAH) and keep learning (5 ways): Hobbies, Activity, growth, personal development, challenge, comfort zone
Activity	"Are you being active daily, walking, exercising or playing sports?" • Factual – however, no metric placed on what 'active' means (e.g., walking could be construed as walking to school) Though is it trying to be inclusive of students with disability?	The PERMAH pillar 'Health' incorporates exercise alongside nutrition, sleep and other healthy lifestyle factors. It may be worth adding a separate segment on nutrition to iYarn's standard student wellbeing wheel.	'Active' The Five Ways to Wellbeing Framework emphasises that whilst physical activity is good for physical and emotional health, it should also be enjoyable. It recommends starting simple and focusing on an activity that you enjoy in order to integrate it into your routine. ^{viii}	
Sleep	"Are you getting at least 7-9 hours of restful sleep at the moment?" ○ Definition required of 'restful' sleep?	As stated above, the PERMA pillar 'Health' incorporates sleep alongside nutrition, and exercise among other healthy lifestyle factors. Consideration to these lifestyle factors may impact sleep, and overall health. However, considering the importance of sleep for learning ^{ix} and emotional wellbeing ^x , particularly among adolescents, I believe it makes sense to keep Sleep as a separate segment whilst adding a separate segment on nutrition.		Healthy body. Intersects with 'be active' (5 ways) and 'health' (PERMAH), and the iyarn segments: Sleep, exercise, Health, Sport, Nutrition, gym, healthy body, digital diet/tech use.

Framework	iYarn student wellbeing	PERMAH	5 ways to wellbeing	Proposed segment / factor
No equivalent iYarn section	•	<p>'Health' – as stated above, no segment considering nutrition.</p> <p>'Meaning', under the PERMAH framework, refers to the belief that life has purpose or value, can refer to "feeling connected to something bigger than ourselves" (e.g., faith, humanitarian) and that "engaging in activities that help you feel valuable and that are beyond the simple pursuit of pleasure or material wealth is critical to living a fulfilling and happy life". However, this may not be as relevant to the years 7 to 9 age group due to a relative lack of control over their daily life.</p>		<p>Giving back and community</p> <p>Meaning (PERMAH) and give (5 ways): Spirituality, gratitude, love, giving back, contribution, teamwork, help,</p>

Summary of factors

Based on the PERMAH and 5 ways summary, we propose a wheel as below. There are two things to consider

1. It is best to avoid 'double barrel' prompts (i.e., "and"), because these can be confusing and result in lack of clarity over which prompt is being probed
2. However, prompts should also be descriptive and 'stand alone'. Thus, e.g. "take notice" may not be transparent without further descriptors.

We should also consider how proposed factors align with the specific issues students & schools highlight, and if that alignment happens at the segment level, or if there might be ways to e.g. specifically target "friendship" or "family" over one period, while keeping within 'connection' for both.

	Recommendation	Iyarn segments covered (*= in top 8, +=in student wellbeing wheel)	PERMAH	5 ways	
Healthy body / be active	Sleep*+, exercise* Health, Sport, Nutrition, gym, healthy body, tech use/digital diet	Health	Be active	Healthy body	
Friendship and connection	Friends*+, family*, Social, relationships, trust, pets, community, romance, people, mentors, coaches, team participation, social support.	Relationships	Connect	Social emotional health	
Self-care, awareness, and positive emotion	Mental health*+, Happiness*, Self Care, Energy, wellbeing, mindfulness,	Positive emotion	Take notice	Self care	
Learning and school	School*+, learning*+, homework+, work, organisation, job,	Accomplishment	Keep learning	School learning	
Growth, challenge and passion	Activity+, Hobbies, growth, personal development, challenge, comfort zone	Engagement	Keep learning	Personal development	
Giving back and community	Spirituality, gratitude, love, giving back, contribution, teamwork, help, Savings, holidays,	Meaning	Give	Community	

NOTE: Lockie indicated many schools are interested in 'school' as a distinct thing, as in 'how students feel about school', independent of their attitudes towards learning or personal development.

- ⁱⁱ Paula Robinson, *Practising Positive Education: A Guide to Improve Wellbeing Literacy in Schools ; Research, Models and Activities to Assist Educators, Practitioners and Families*, 2nd ed. (Positive Psychology Institute Pty Ltd, 2018), 79.
- ⁱⁱⁱ Royal Melbourne Hospital, 'Connect', 5 Ways to Wellbeing, n.d., <https://5waystowellbeing.org.au/5-ways/connect/>.
- ^{iv} Robinson Ph.D, *Practising Positive Education: A Guide to Improve Wellbeing Literacy in Schools*, 77.
- ^v ReachOut, 'Give', *Understanding Wellbeing*, n.d., <https://schools.au.reachout.com/articles/give>.
- ^{vi} Robinson, *Practising Positive Education*, 77.
- ^{vii} ReachOut, 'Keep Learning', *Understanding Wellbeing*, n.d., <https://schools.au.reachout.com/articles/keep-learning>.
- ^{viii} Royal Melbourne Hospital, 'Active', 5 Ways to Wellbeing, n.d., 5 Ways to Wellbeing, Active, <https://5waystowellbeing.org.au/5-ways/be-active/>.
- ^{ix} R Sharman and G Illingworth, 'Adolescent Sleep and School Performance – the Problem of Sleepy Teenagers', *Current Opinion in Physiology* 15 (2020): 23–28.
- ^x S Lin et al., 'Positive and Negative Emotions: Differential Associations with Sleep Duration and Quality in Adolescents', *Journal of Youth and Adolescence* 47, no. 12 (2018): 2584–95.

Section 6

6.2.3 Segment prompts

How can iyarn draw on existing activators or reflection prompts to support checking in?

The xlsx has begun to map reflection prompts to segments. Below, we have identified wording from existing wellbeing checkin systems on the 5 Ways to Wellbeing Aus and Reach Out websites, as well as a look back at the ACT and SDT theory, and made some early suggestions re potential segment descriptors/question prompts and follow-up questions under each sub-area.

(1) Segment Descriptors/ Question Prompts

	Sub-area	Existing iYarn prompt	<u>5 ways to wellbeing quiz</u>	<u>Reach Out Wellbeing Quiz</u>	Potential segment descriptors/question prompts ¹
Healthy Body/Be Active	General		Q5: "I've had energy to spare..."		<ul style="list-style-type: none"> "Am I feeling physically well and making healthy choices for my body?" i.e., getting restful sleep, eating nutritious foods, getting exercise and spending time outdoors, and using technology in a balanced and purposeful way.
	Exercise	"Are you being active daily, walking exercising or playing sports?"		Q6: What's your activity level? a) keeping active; b) not doing as much as usual; c) tired, not enjoying activities; d) feeling unwell, avoiding activities	<ul style="list-style-type: none"> "Am I being active daily, and in ways that I enjoy?" e.g., by walking, exercising, playing sports or another activity that suits my needs/preferences
	Nutrition				<ul style="list-style-type: none"> "Am I regularly eating well and feeling energised?"
	Sleep	"Are you getting at least 7-9 hours of restful sleep at the moment?"		Q5: How are you sleeping? a) normally; b) trouble sleeping; c) restless and disturbed; d) sleeping too much or too little.	<ul style="list-style-type: none"> "Do I feel that I am getting a good amount of restful sleep at the moment?" recommendation: 7 – 9 hours
	Tech use				<ul style="list-style-type: none"> "Do I spend too much time using digital devices?"
Friendship & Connection	General		Q4: "I've been feeling interested in other people..." Q9: "I've been feeling closer to other people..." Q12: "I've been feeling loved..."	Q7: How social are you? a) feeling connected; b) staying in more than usual; c) annoyed with everyone; d) avoiding people and isolated.	<ul style="list-style-type: none"> "Are the relationships in my life (friends, family, peers and/or wider community) helping me to find enjoyment and feel supported?" "Do I feel socially and emotionally supported?" Who do I trust to go to for information/ fun/ affection/ love etc? "Am I being a good friend to the important people in my life?" e.g., am I supporting my friends/siblings etc.

	Friends	"Are you feeling supported by your friends a being a good friend to yourself?"			<ul style="list-style-type: none"> • "Am I enjoying spending time with my friends and feeling supported by them?"
	Family				<ul style="list-style-type: none"> • "Am I feeling supported by your family?"
	Communication				<ul style="list-style-type: none"> • "Do I feel comfortable and capable of expressing myself to those around me?"
Self-care, awareness & positive emotion	General	"Are you feeling good at the moment?"	Q1: "I've been feeling optimistic about the future..."	What's your outlook? a) positive, b) overwhelmed, c) feeling hopeless, d) depressed or suicidal thoughts	<ul style="list-style-type: none"> • "Am I comfortable and content with my mindset/outlook on life at the moment?"
	Self care & positive emotions		Q3: "I've been feeling relaxed..." Q14: "I've been feeling cheerful..."		<ul style="list-style-type: none"> • "Am I making time to do the things that make me happy, and feel relaxed? e.g., listening to music/spending time with friends • "What helps me to relax?" • "Am I self-compassionate?"
	Mindfulness & wellbeing		Q7: "I've been thinking clearly..."		<ul style="list-style-type: none"> • "Do I feel like I have been able to focus and clearly engage with my thoughts and feelings?" • "Do I need help to understand my emotions?" • "Are my thoughts helping me?"
	Self-awareness, confidence & identity		Q8: "I've been feeling good about myself..." Q10: "I've been feeling confident..." Q11: "I've been able to make up my own mind about things..."		<ul style="list-style-type: none"> • "Have I been feeling confident and good about myself and my capabilities?" • "Do I believe in myself?"
	Mental health & resilience		Q6: "I've been dealing with problems well..."	What's your stress level? a) coping well; b) worried, nervous; c) very nervous, panicky; d) really anxious, panic attacks	<ul style="list-style-type: none"> • "Do I generally feel calm, and capable of taking on life's challenges?" • "Am I able to bounce back when something goes wrong or does not go the way I had hoped?"
Learning & school	General	"Are you enjoying school at the moment?"		4) How are you working? a) motivated and kicking goals; b) putting things off, forgetting stuff; c) unmotivated, not working well; d) can't get anything done.	<ul style="list-style-type: none"> • "Do I generally feel motivated and engaged in my learning?" • "Am I feeling capable and motivated in my learning?"
	Workload & Organisation	"Are you managing your homework and not feeling like you are getting behind?"			<ul style="list-style-type: none"> • "Am I managing my homework and not feeling like I am getting behind?"
	Exam Stress & Other Causes				<ul style="list-style-type: none"> • "Am I feeling stressed, anxious, or overwhelmed by a major assignment or upcoming exam?" • "What goals are important to me right now?"

Growth, Challenge & Passion	General	"Do you feel like you are learning new skills and growing as a person?"	Q13: "I've been interested in new things..."		<ul style="list-style-type: none"> "Do I feel motivated and challenged?"
	Hobbies				<ul style="list-style-type: none"> "Do I have hobbies or other interests that I am passionate about?" "What do I love to do in my spare time and am I doing it regularly?" "What do I do for fun?"
	Growth, Challenge & Personal Development				<ul style="list-style-type: none"> "Am I challenging myself to try new things and develop new skills?"
	Motivation & Passion				<ul style="list-style-type: none"> "Am I engaging in activities that inspire and motivate me?" "Are there any goals that I want to work toward?"
	Sense of Accomplishment				<ul style="list-style-type: none"> "Do I feel a sense of pride and accomplishment in my work or the interests I am pursuing?" "Are there any goals that I want to work toward?"
Community/Giving Back			Q2: "I've been feeling useful...."		<ul style="list-style-type: none"> "Do I feel proud of my contributions to my community*, and that I am giving back where I can?" *you may have many communities including your school, class, family, local and global communities, as well as any interest or religious groups you may belong to.
	Community, teamwork & love				<ul style="list-style-type: none"> "Do I understand how my community contributes to my life and my wellbeing?"
	Giving back & contribution				<ul style="list-style-type: none"> "Do I feel like I am giving back to my community, in the ways that I can?" "Do I volunteer?" "Can I raise money with my classmates?" "Have I given my gift of my time to someone?"
	Gratitude				<ul style="list-style-type: none"> "What do I feel grateful for?"
	Spirituality				<ul style="list-style-type: none"> "Is my spirituality important to me?" If so, "am I making enough room for my spiritual needs in my life?"

6.3 Wellbeing intervention designs

In order to provide an evidence-based tool for supporting young people's wellbeing, we need to understand (1) how we can design interventions that use the tool effectively in the wider system; and (2) that are grounded in evidence around maintaining and improving wellbeing; and (3) that builds on the wealth of existing resources.

This document does three things:

1. Gives an overview of some theories of change and motivation and their implications for design
2. It flags some design features for interventions and how these might be drawn on, and evaluated, in the tool (see also the xlsx)
3. It maps some existing resources for identifying needs and evaluating impact (see also the xlsx)

What's in this document

Document prepared by: UTS research team, led by Clara Mills

For: iyarn research partners

On: May 30th 2022

Purpose: In order to provide an evidence-based tool for supporting young people's wellbeing, we need to understand (1) how we can design interventions that use the tool effectively in the wider system; and (2) that are grounded in evidence around maintaining and improving wellbeing; and (3) that builds on the wealth of existing resources.

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Theories of motivation and change

iyarn is informed by Values based Education and Acceptance and Commitment Therapy (ACT). Values based education practices focus on the values clarification, diffusion, acceptance, behavioural activation and exposure (Trindade et al., 2016). Working within an ACT framework requires that values and value-aligned behaviour are identified and measured. Typically, this occurs over time, with identification of important values and barriers to valued living, and assessment of whether they are living according to their identified values (Hayes et al., 2012; Trindade et al., 2016). An inquiry into the role of values-based education in schools was undertaken in Australian schools 'Giving Voice to the Impact of Values Education' (Hamston et al., 2010). It has been argued that values embedded within the learning context play a vital role in determining the quality of the educational experience (Clement, 2010; Lovat, 2010, 2017; Toomey, 2010).

Self-determination theory (SDT) is a theory of motivation that has evolved over the past three decades (Deci & Ryan, 2000, 2013). SDT is a theory of personality and motivation based on 3 innate psychological needs (competence, autonomy and relatedness) to achieve higher levels of performance, wellbeing and persistence of task. SDT is an approach to human motivation driven by the assumption that humans are inherently proactive, have the potential to master their inner forces (drives and emotions) and the external forces (environment). SDT assumes that in order for a person to thrive, they must meet three basic psychological needs of competence, autonomy, and relatedness (CAR). SDT focuses on people's struggle to feel greater self-ownership of motivated behaviour; and explains how authorities and practitioners can best motivate their clients to enable them to internalise suggested behaviours and self-regulate them.



Acceptance & Commitment Therapy	Self-Determination Theory
<p>Both ACT and SDT are considered 3rd wave, "process-oriented" behavioural theories which focus on developing internal resources to support ongoing self-regulation and behavioural change (Ryan, 2021). They are associated with:</p> <ul style="list-style-type: none"> • mindful awareness - they investigate internal processes and consider awareness "a foundation for improved self-regulation". • integrative emotion regulation – focus on understanding the meaning of emotional reactions, rather than "down-regulating" or "reframing" negative emotion. • autonomous treatment – taking a person-centred approach which respects the patients' own perspectives, values and context, and supports them to pursue "self-endorsed or autonomous motivations". • motivation - these theories do not presume the patient is motivated to change, but instead "conceptualise both motivation and resistance as part of the change process". • basic psychological needs <p>Acceptance & Commitment Therapy (ACT) is an "evidence-based contextual cognitive-behavioural intervention which is designed to foster greater cognitive flexibility" and teach people to "compassionately embrace their internal experience for all that it is while also focusing on building repertoires of constructive behaviours that are values oriented" (Jason B. Luoma et al., 2017, p. 2). ACT considers suffering to be common to all, not just individuals experiencing diagnosable mental health conditions (Fumito et al., 2020, p. 72).</p> <p>ACT seeks to foster six central points of psychological flexibility which Russ (2019) has categorised under three functional units:</p> <ul style="list-style-type: none"> • Be Present – flexibly paying attention to and engaging in here-and-now experiences <ul style="list-style-type: none"> ◦ Contact with the Present Moment - paying attention to the present moment by "broadening, narrowing, shifting or sustaining" focus as necessary. ◦ Self-as-Context – "a transcendent sense of self, which is able to notice thoughts and feelings from an observational perspective" (Samuel et al., 2021, p. 4). • Open Up – observing thoughts and feelings objectively, accepting them for what they are, and giving them space to "come and go of their own accord". <ul style="list-style-type: none"> ◦ Defusion – detaching from thoughts, images and memories and observing them objectively so that they can "guide" but not "dominate" (Harris, 2019, p. 6). ◦ Acceptance – accepting "unwanted private experiences" (e.g., emotions, thoughts, urges, memories etc.) and allowing them "to come and stay and go as they choose" (Harris, 2019, p. 7). • Do What Matters – "initiating and sustaining life-enhancing action" (Harris, 2019, p. 9). <ul style="list-style-type: none"> ◦ Values – "desired qualities of physical or psychological action" i.e. "how we want to behave on an ongoing basis" (Harris, 2019, p. 7) 	<p>Self-Determination Theory (SDT) focuses on the intrinsic and extrinsic motivators which guide behaviour. Under SDT:</p> <ul style="list-style-type: none"> • Intrinsic or autonomously motivated behaviour is activated by interest/sense of meaning: "research shows that people who are autonomously motivated to pursue goals have greater goal attainment and improved wellbeing" (Robinson, 2018, p. 67). • Extrinsic or controlled motivation is activated by external pressures i.e., something you 'should' do, will be reward for doing (or punished for not doing). • SDT also encapsulates Basic Needs Theory which suggests that competency, autonomy and relatedness are basic psychological needs which must be addressed to achieve "wellbeing and optimal performance" (Robinson, 2018, p. 67).

Acceptance & Commitment Therapy	Self-Determination Theory
Theory of motivation and change	
<p>Both ACT and SDT emphasise “self-endorsed or autonomous motivations” which are “reliably associated with greater engagement, behavioural persistence, as well as more positive experience” (Ryan, 2021, p. 376).</p> <p>See above +</p> <ul style="list-style-type: none"> Choice Point – the point where an individual must choose between an ‘away’ or ‘towards’ action i.e., acting in a way that contributes toward or moves the individual further ‘away’ from their desired values/outcomes. Harris (2019) emphasises that categorisation of an action isn’t fixed, and that it depends on the effect of, and motivation behind, that action (e.g., watching TV to avoid a necessary activity v. to engage with things you enjoy) (Harris, 2019, pp. 9–16). <p>The ‘Choice Point’ is used to demonstrate/frame:</p> <ol style="list-style-type: none"> how daily choices contribute towards and should be values-based how being “hooked” by negative thoughts and feelings can create a negative cycle: when an individual chooses an ‘away’ action in an effort to temporarily alleviate negative feelings this ultimately feeds these feelings by moving them further ‘away’ from their values. Individuals can use core processes under ‘Be Present’ and ‘Open Up’ to “unhook” themselves from the power of these negative feelings and enable themselves to chose ‘towards’ actions. 	<p>As above, SDT proposes that framing tasks through intrinsic motivation supports improved goal attainment and wellbeing (Robinson, 2018, p. 67).</p>
Intervention theory and examples	
<p>ACT and SDT recommend techniques which are more “empowering”, “autonomy supportive” and “relational” (e.g., listening, reflecting, empathising and facilitating), rather than pursuing pre-determined, theory-directed targets (e.g., teaching, training, shaping and rewarding) (Ryan, 2021, p. 376). As a result, resources should not be overly prescriptive but instead provide a foundation for paired exercises which allow students to clarify their own values/motivations and develop mindfulness and emotional regulation skills.</p> <p>Emails. Educational resources and reflective exercises could be delivered via email, but must be clear and simple enough for students to understand with limited guidance. Pilot program delivered by Samuel et al (2021) found that students benefited from more straightforward content and revision exercises (Samuel et al., 2021, p. 11).</p> <ul style="list-style-type: none"> Psycho-educational resources can be linked, but should not be overly prescriptive – if possible, pair with revision exercise. This could include information on: <ul style="list-style-type: none"> what emotions are, how to define them (names/scaling) and distinguish between 	<p>Emails.</p> <ul style="list-style-type: none"> Psycho-educational resources should be relevant to students’ experiences (to satisfy relatedness), straightforward (competence) and not overly prescriptive (autonomy). Reflection exercises should be paired with education resources so that students can develop their competence. These exercises should not be overly prescriptive, allow students to work in their own way and apply their own values/motivations (autonomy) (Fumito et al., 2020).

Acceptance & Commitment Therapy	Self-Determination Theory
<ul style="list-style-type: none"> ○ values and their purpose (Fumito et al., 2020). ● Reflection exercises will be essential for the delivery of a person-centred therapy that requires the individual to clarify and act on their own values. This could include exercises which: <ul style="list-style-type: none"> ○ develop mindfulness skills (e.g., meditation exercises) and defusion techniques (e.g., "Having a Thought v. Being a Thought") (Fumito et al., 2020). ○ clarify values e.g., distinguish between parts of life "created by another person" (parents/school/ friends) and parts of life "created by themselves" (Fumito et al., 2020). ○ Identify values-consistent behaviours <ul style="list-style-type: none"> ▪ Fumito et al (2020) determined that writing about values-consistent behaviour would be too difficult for adolescents and instead provided a list of 42 verbs for participants to choose from (Fumito et al., 2020, p. 73). ○ Develop implementation plans for acting in alignment with values (Fumito et al., 2020). <p>One-to-one conversation The above could be delivered through one-to-one interactions with a member of staff. However, the results from the YouthCOMPASS trial intervention indicated that face-to-face interventions may be less impactful for adolescent boys, than remote interventions (Lappalainen et al., 2021, p. 2).</p> <p>Class activity Universal, school-based ACT programmes that provide non-targeted interventions have been found to be very effective, particularly for building resilience and preventing mental health issues (Samuel et al., 2021, p. 3). Additionally, they reduce stigma and foster a positive, social approach to emotional acceptance and value-driven behaviour.</p> <p>Some examples include:</p> <ul style="list-style-type: none"> ● The DNA-V model, developed for use with adolescents (Samuel et al., 2021, p. 8). ● Your ACT Auntie videos which were developed specifically for school children as part of the InTER-ACT program (Samuel et al., 2021). ● YouthCOMPASS web-intervention, which is comprised of 5 modules divided into an introduction and three different levels including a variety of resources (text, video), and reflection exercises. Students engaged with the program independently, but had access to asynchronous communication with a coach if they had any queries. 	<p>One-to-one conversations can support relatedness by allowing students to ask questions, and receive feedback from a trusted adult. They can also provide improve autonomy support if the supporting staff member is able to responsively moderate content to suit the desires and perspective of each student. Having the option, rather than the requirement, for one-to-one conversation supports competence and autonomy (Hsu et al., 2019, p. 2161).</p> <p>Class activity Class-based activities can provide an opportunity for students to work together, supporting relatedness and social support (Hsu et al., 2019, p. 2161). However, class-like environments may be less autonomy supportive.</p>

Acceptance & Commitment Therapy	Self-Determination Theory
Efficacy	
<ul style="list-style-type: none"> Mindfulness interventions – there is strong evidence for improvement across a diverse array of student outcomes (e.g., “resilience, concentration, emotional regulation and academic performance”) (Samuel et al., 2021). <p>“The focus within ACT on clarification of personal values, with the aim of creating a rich, satisfying and meaningful life, is also inherently empowering for young people, representing a refreshing departure from dominant educational (and broader societal), narratives privileging achievement and the competitive pursuit of goals and targets.” (Samuel et al., 2021, p. 5).</p> <ul style="list-style-type: none"> Evidence of efficacy in adults substantial – review of 20-meta analysis found it had transdiagnostic effectiveness, though was less effective than targeted approaches (e.g., CBT) for specific issues” (Samuel et al., 2021, p. 4). Multiple instances of successful application of ACT in school-based settings: <ul style="list-style-type: none"> Meta-analysis found that it was more effective than usual treatment and no treatment for anxiety and depression, among other issues – again less effective than targeted CBT (Samuel et al., 2021, p. 4). ACT-based web-interventions for adolescents has been found to be a “viable early intervention for preventing mental health problems in adolescents” (Lappalainen et al., 2021). ACT found to reduce avoidance and hyperactivity even when delivered as a “low dose”, universal intervention (total 6 hours of bi-weekly group session) (Fumito et al., 2020). Evaluation of school-based ACT intervention developed for use in the UK found that: <p style="text-align: center;">it was important to use resources that were “specifically for young people” so that content was understood and students’ experiences were normalised (Samuel et al., 2021, p. 9)</p> 	

Acceptance & Commitment Therapy	Self-Determination Theory
▪ Useful to have materials that can be provided to parents	

How resources can be built into, and evaluated in, the tool?

- Email timing
 - One study found that emails scheduled to be delivered at fixed intervals over a period of time were “superior to as-needed participant initiated email support in a sample of participants with panic disorder” (Shim et al., 2017). Studies trialling other modes of delivery similarly found that fixed, scheduled interventions (phone-based, and face-to-face) were more effective than as-needed interventions for depression and anxiety but not social phobia.
- Email responsiveness/level of guidance
 - One study found “that the change of depression symptoms was not significantly different between groups receiving emails from a counsellor ($d = 1.00$) versus automated emails” (Shim et al., 2017).
 - Meta-analysis of studies comparing the efficacy of different modalities and levels of guidance for Internet-based Psychological Interventions (IPIs) found that “based on the available research, it is unclear whether adding guidance to IPIs is necessary to improve treatment adherence and outcomes” (Shim et al., 2017). However, the study further stated that the impact and utilisation of guidance in IPIs is mediated by:
 1. The specific mental health condition being treated e.g., citing Newman et al (2011) who found that self-guidance was more effective for the treatment of anxiety disorders, whilst therapist guidance is supportive for treating clinical levels of depression.
 2. The preferences and abilities of specific patients
 3. The “quality and navigability of the IPI”

ACT and SDT recommend techniques which are more “empowering”, “autonomy supportive” and “relational” (e.g., listening, reflecting, empathising and facilitating), rather than the use of pre-determined, theory-directed targets (e.g., teaching, training, shaping and rewarding). This suggests that the messaging and resources provided in intervention emails should be straightforward, but not overly prescriptive and instead provide a foundation for paired exercises which allow students to clarify their own values/motivations, and develop mindfulness and emotional regulation skills.

In addition, based on their review of mental health smartphone apps, Bakker et al (2016) recommend that individuals be provided with a range of activities that are actively engaging (as opposed to passive), including:

- **Activities that directly enhance mood improvement** (Mood Lifters - ML): these are behaviours which have been shown to directly improve mood, such as exercise and listening to music (Bakker & Rickard, 2018).
- **Behavioural Activation** (BA): encourages goal-setting and the planning of activities that will expose individuals to new opportunities and allow them to develop skills in order to (1) improve their sense of competence and self-efficacy; and (2) break cycles of avoidance and inactivity that perpetuate low moods, the reliance on mood-dependent behaviours and “play a key role in the development of anxiety, depression, and many other psychological disorders” (Bakker et al., 2016).
 - May be useful to categorise behaviours as routine, pleasurable or necessary to clarify the different motivators and benefits of engaging in them.

- Among Fogg's 3 factors for determining behaviour engagement (triggers, motivation and simplicity), Bakker et al (2016) argue that simplicity is the "most relevant" to selecting appropriate BA activities: as factors such as time, money, physical efforts, social deviance, and routine are likely to affect an app user's ability to engage.
- Further, Bakker et al (2016) recommends that it useful to pair BA with reflection exercises to encourage individuals to reflect on the benefits of engaging in the activity and "promote self-discovery".
- **Coping Skills Training (CS):** resources which support the development of coping skills are "the most direct way of improving self-efficacy", specifically Coping Skills Efficacy (CSE). CSE refers to "an individual's perceived ability to effectively cope with adversity and stress", and is associated with: reduced avoidance behaviours and "problematic maintenance cycles"; improved mental wellbeing; and reduced health impacts resulting from stressful events. Bakker et al (2016) also suggest that it is beneficial to support individuals to develop a varied repertoire of CS, to allow them to choose which strategies suit them best and improve their sense of choice and control which should, under SDT, "feed intrinsic motivation toward self-improvement".
- **Psycho-educational resources (PE):** "Psychoeducation, an integral part of CBT, presents clients with mental health information in an attempt to teach them about the psychological processes underlying their distress and inform them of resources available to manage it". The provision of PE resources was found to have preventative and community-level benefits: improving attitudes toward mental health issues and supportive behaviour among recipients.

Based on this theory, UTS suggests that, if possible, intervention emails should provide students with:

1. a selection of different resources (PE, BA, CS and ML) in order to (1) target different psychological processes and (2) allow each individual to choose the resources that suit their personal needs/preferences.
2. a set of reflective questions to accompany these resources, in order to support students to refine their own values, relate the information provided to their own context, develop their competence and reflect on the benefits of integrating any useful strategies into their routine.

Intervention Type	Acceptance & Commitment Therapy (ACT)	Self-Determination Theory (SDT)
Overarching Theory	ACT and SDT recommend techniques which are more “empowering”, “autonomy supportive” and “relational” (e.g., listening, reflecting, empathising and facilitating), rather than pursuing pre-determined, theory-directed targets (e.g., teaching, training, shaping and rewarding) (Ryan, 2021, p. 376). As a result, resources should not be overly prescriptive but instead provide a foundation for paired exercises which allow students to clarify their own values/motivations and develop mindfulness and emotional regulation skills.	
Emails	<p>Educational resources and reflective exercises could be delivered via email, but must be clear and simple enough for students to understand with limited guidance. Pilot program delivered by Samuel et al (2021) found that students benefited from more straightforward content and revision exercises (Samuel et al., 2021, p. 11).</p> <ul style="list-style-type: none"> • Psycho-educational resources can be linked, but should not be overly prescriptive – if possible, pair with revision exercise. • Reflection exercises will be essential for the delivery of a person-centred therapy that requires the individual to clarify and act on their own values. 	<ul style="list-style-type: none"> • Psycho-educational resources should be relevant to students' experiences (to satisfy relatedness), straightforward (competence) and not overly prescriptive (autonomy). • Reflection exercises should be paired with education resources so that students can develop their competence. These exercises should not be overly prescriptive, allow students to work in their own way and apply their own values/motivations (autonomy) (Hsu et al., 2019, p. 2161).
One-to-one	The above could be delivered through one-to-one interactions with a member of staff. However, the results from the YouthCOMPASS trial intervention indicated that face-to-face interventions may be less impactful for adolescent boys, than remote interventions (Lappalainen et al., 2021, p. 2).	One-to-one conversations can support relatedness by allowing students to ask questions, and receive feedback from a trusted adult. They can also provide improve autonomy support if the supporting staff member is able to responsively moderate content to suit the desires and perspective of each student. Having the option, rather than the requirement, for one-to-one conversation supports competence and autonomy (Hsu et al., 2019, p. 2161).

interventions have been found to be very effective, particularly for building resilience and preventing mental health issues (Samuel et al., 2021, p. 3). Additionally, they reduce stigma and foster a positive, social approach to emotional acceptance and value-driven behaviour.

- DNA-V model has been developed for use with adolescents (Samuel et al., 2021)
- [Your ACT Auntie](#) videos used in InTER-ACT program (Samuel et al., 2021).
- YouthCOMPASS web-intervention comprised of 5 modules divided into an introduction and three different levels including a variety of resources (text, video), and reflection exercises. Students engaged with the program independently, but has access to asynchronous communication with a coach if they had any queries.

for students to work together, supporting relatedness and social support (Hsu et al., 2019, p. 2161). However, class-like environments may be less autonomy supportive.

1)

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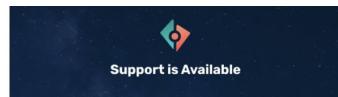
6.3.1 Resource mapping

At a basic level, this model might be implemented into the existing email structure (6.3.1) to present users with relevant resources based on their needs, using the structure:

- Learn (informational resources)
- Lift (intrinsic mood lifters, e.g. music and exercise)
- Develop (skills development resources)
- Plan (resources to plan/behavioural activation)
- Reflect (reflection prompts)

For example, the sample email below (6.3.1) shows (right) a current email structure, with (left) a proposed template for structured emails, and (middle) an example of how this might be applied to the ‘learning’ segment.

One proposal from the user interviews was to move the reflection questions higher in the order of resources, because these may provide useful prompts prior to students exploring (and perhaps ceasing to explore) the external resources.



Thank you for checking in. We're here to support you with resources chosen by your teacher, from organisations that work to help us all build wellbeing.
Based on your [X segment] check-in, some of these resources may be helpful to you.

You can choose which resources you want to use, to learn, lift, plan, develop skills, or reflect. As many factors contribute to [x segment], we've organised resources so you can choose which topic is most important for you:

- [Topic 1]
- [Topic 2]
- [Topic 3]
- [Topic 4]

If nothing here fits, or quite addresses the specific issues you are facing, you can reach out to [school counsellor] for advice at [contact details] or, if you prefer, sign up to [Headspace](#) where you can talk privately to professional counsellors over the phone or via webchat between 9am and 1am.

1) Topic 1

Resources (ideally showing a range of Learn; Lift; Plan; Develop; Reflect)

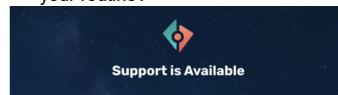
[Resource 1] – basic description (e.g., this resource is useful for x), medium

[Resource 2] – basic description, medium

[Resource 3] – basic description, medium

Reflection Questions

- Reflection Q 1
- Reflection Q 2
- Reflection Q 3
- **Standard Reflection Q:** Did these resources provide you with any strategies that you think would be helpful? If so, how would you apply them and/or integrate them into your routine?



Thank you for checking in. We're here to support you with resources chosen by your teacher, from organisations that work to help us all build wellbeing.
Based on your [Learning] check-in, some of these resources may be helpful to you.
You can choose which resources you want to use, to learn, lift, plan, develop skills, or reflect. As many factors contribute to [Learning], we've organised resources so you can choose which topic is most important for you:

- [Staying motivated]
- [Managing time]
- [Exam stress]
- [Work worries]

If nothing here fits, or quite addresses the specific issues you are facing, you can reach out to [school counsellor] for advice at [contact details] or, if you prefer, sign up to [Headspace](#) where you can talk privately to professional counsellors over the phone or via webchat between 9am and 1am.

1) Staying motivated

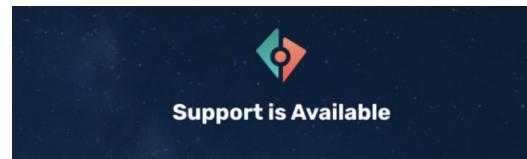
Resources (ideally showing a range of Learn; Lift; Plan; Develop; Reflect)

[Plan] – Use this [webpage] if you want to learn more about how perfectionism can impact motivation, and what you can do about this.

[Resource 2] – [only 1 in list against motivation specifically, although others in 'growth']

Reflection Questions

- What do I think about learning? Would I like to learn something new?
- What would I like to learn about? What interests me? What do I value? What would I find useful?
- What do I need to do to make learning something I look forward to?
- **Standard Reflection Q:** Did these resources provide you with any strategies that you think would be helpful? If so, how would you apply them and/or integrate them into your routine?



Thank you for checking in. We're here to support you with resources recommended by [REDACTED] College that might assist your relationships with friends.

Having a strong network of friends helps to increase our mental wellbeing.

Check out the following links:

- 7 simple ways to improve your relationships with family and friends
- Some helpful tips on how to handle arguments with friends and family
- Other resources from Relationships Australia
- Kids Helpline 1800 55 1800
- Headspace

How can we map existing resources to a model for iyarn?

We have mapped a range of resources to the segments identified, intervention structure, and cohort needs as in 6.3.1. We have developed a resource (xlsx) that maps resources from a range of sources including:

- ReachOut
- ‘reflection questions/prompts’ via APPLI and in other ‘5 ways’ resources, etc.
- Other resources targeted at young people and their wellbeing

The resource flags:

- Target group
- Context of delivery (individual, whole group, individually in a class)
- Purpose: Information, Lift, Activation, or Planning

segment ↑	Sub-Segment	Tag	Resource Name	Publisher	URL	A
Connect	Friendship	General	Friendships page	Reachout	https://au.reachout...	A
Connect	Friendship	Communication	How to tell you're...	Reachout	https://au.reacho...	A
Connect	Friendship	Conflict	The Mate Breaku...	Reachout	https://au.reacho...	A
Connect	Friendship	Conflict	How to forgive s...	Reachout	https://au.reacho...	A
Connect	Friendship	Loneliness	Loneliness - Merve	What's Up With ...	https://www.what... 1	
Connect	Friendship	Loneliness	Loneliness - Merve	What's Up With ...	https://www.what... 1	
Connect	Friendship	Bullying	About Bullying	Reachout	https://au.reacho...	A
Connect	Friendship	Bullying	Dealing with a to...	Reachout	https://au.reacho...	A
Connect	Friendship	Bullying	Ways to cope wit...	Reachout	https://au.reacho...	A
Connect	Friendship	Bullying	Ways to cope wit...	Reachout	https://au.reacho...	A

1–10 of 128 rows

Previous 1 2 3 4 5 ... 13 Next

Inclusion criteria:

- From a reputable source, either:
 - developed or recommended by experts
 - developed or recommended by trusted government agencies
- Relevant to context i.e., content was developed for, or is applicable to, school-aged children and adolescents/young adults/teachers/parents in Australia.

References:

- Robinson, Paula (2018), *Practising Positive Education: A Guide to Improve Wellbeing Literacy in Schools*, 2nd education, Sydney, Australia, Positive Psychology Institute.
- Harris, Russ (2019), *ACT Made Simple: An Easy-To-Read Primer on Acceptance and Commitment Therapy*, New Harbinger Publications
- Ryan, Richard M (2021), “A Question of Continuity: a self-determination theory perspective on ‘third-wave’ behavioural theories and practices”, *World Psychiatry*, no.3 p. 376 – 377

6.3.2 Needs identification and evaluation instruments

How can (1) needs of individual schools be identified; and (2) the impact of iyarn be evaluated, using validated measures?

A range of measures exists for understanding wellbeing factors, and their antecedents (or enablers/barriers) (for an excellent resource, see Bates & Boren, n.d., in addition to our other resources.). It is not clear how widely these are used by schools to understand and monitor their needs, however recent systematic review of measures of social emotional and behavioural screening instruments indicates that ‘useability’ (i.e., how feasible it is for a stakeholder to use the tool to achieve the intended goal) is under-reported, with a focus on technical validity, likely limiting use of these measures in multitiered support systems (Brann et al., 2022).

We have begun to map some of these resources to specific wellbeing segments, and their subfactors as below.

These may be used to both evaluate where a school might focus support, or/and assess impact of iyarn (e.g. through pre/post testing).

- Bates, M., & Boren, D. M. (n.d.). Assessing Wellbeing in Schools. 116. https://edtechbooks.org/pdfs/print/wellbeing/_wellbeing.pdf
- Brann, K. L., Daniels, B., Chafouleas, S. M., & DiOrio, C. A. (2022). Usability of Social, Emotional, and Behavioral Assessments in Schools: A Systematic Review From 2009 to 2019. *School Psychology Review*, 51(1), 6–24. <https://doi.org/10.1080/2372966X.2020.1836518>

segment ↑	Sub-area	Name	Description	Age	URL/Location	A
Connect	General	Child and Adoles...	Self-report, likert ...	12-18	https://img1.wsi...	F
Connect	General	Child and Adoles...	Self-report, likert ...	12-18	https://img1.wsi...	F
Connect	General	UCLA Loneliness...	Likert scale surv...	12-21	https://fetzer.org/...	F
Connect	General	UCLA Loneliness...		12-21	https://fetzer.org/...	F
Connect	General	UCLA Loneliness...	Produces scores...	12-21	https://fetzer.org/...	F
Connect	General	UCLA Loneliness...	: Intimate-o...	12-21	https://fetzer.org/...	F
Connect	General	UCLA Loneliness...	: Social- others	12-21	https://fetzer.org/...	F
Connect	Friends					
Connect	Family					
Connect	Communication/...	Adolescent Meas...	Self-report, likert ...	10-15	https://www.cca...	F

1–10 of 115 rows

Previous 1 2 3 4 5 ... 12 Next

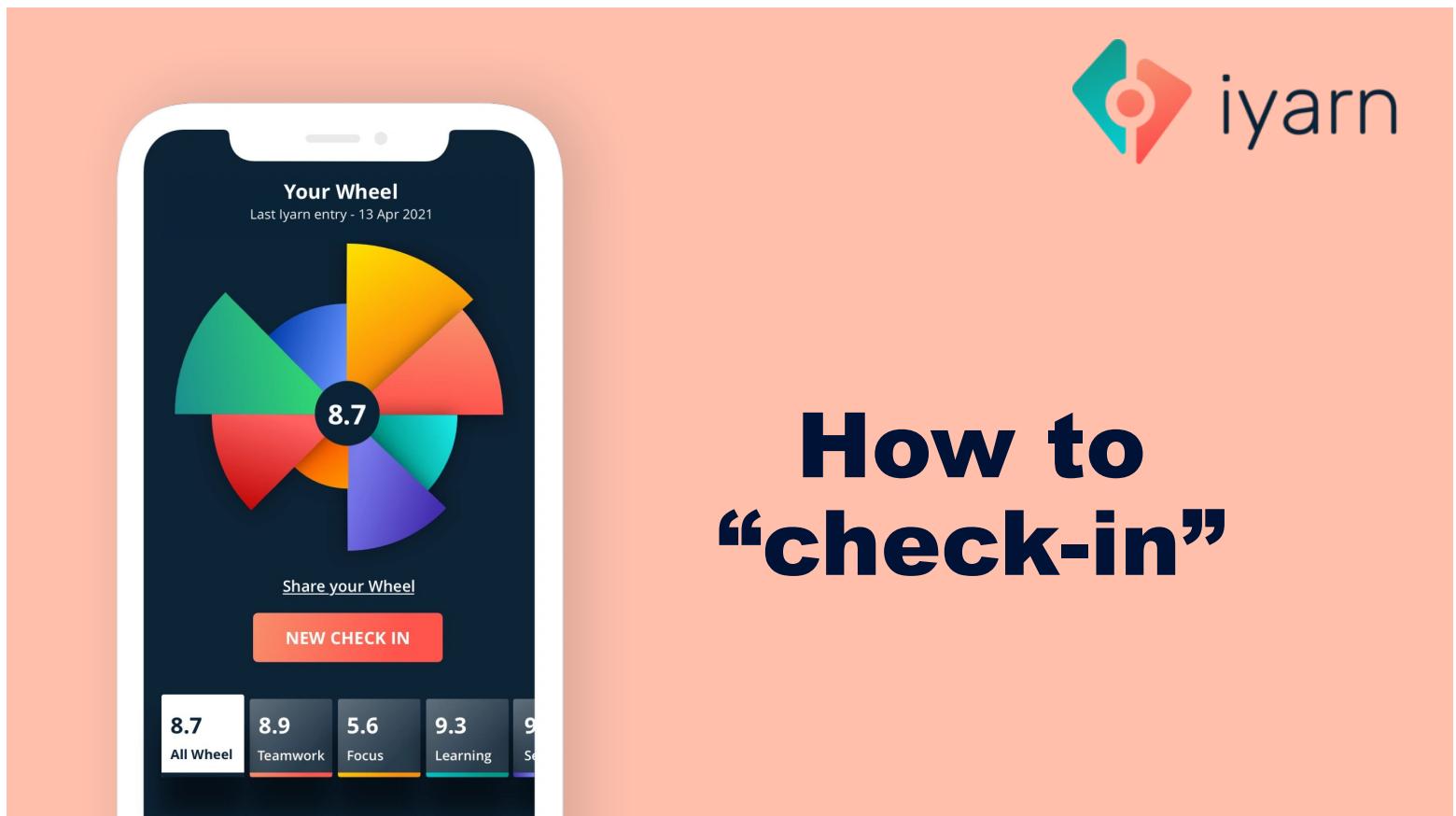
6.4 Teacher resources

Based on the research, two key stakeholder-oriented resources were created:

1. A classroom powerpoint resource, intended to introduce factors of wellbeing and the iyarn tool 6.4.1
2. A teacher guide which provides an overview of the background to iyarn and its use in classes. 6.4.2

These can be augmented with the resource mapping, both through integration into the tool e.g. via the emails, or/and through support for teachers to navigate the mapped resources to select resources and activities appropriate for their context.

6.4.1 Class resource



Your Wheel
Last iyarn entry - 13 Apr 2021

Share your Wheel

NEW CHECK IN

8.7 All Wheel	8.9 Teamwork	5.6 Focus	9.3 Learning	9.0 Self-care
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How to “check-in”

How we'll check



Checking in helps you to understand how you are feelings and connect to others. The iyarn tool helps you do this. It involves:

[ADAPT TO SCHOOL STRUCTURE]:

- Giving a rating on 6 questions about wellbeing, and a comment if you like
- Twice a week, during home-room time on Tuesdays and Thursdays
- Reflecting on how you're feeling and why; we'll use the tool and resources to help everyone build skills

Why check-in?



Checking in helps you to understand how you are feeling and connecting. You can talk to others or ask for help from your teacher, and access some resources through the tool.

It can help you to:

- Reflect on the different parts of your life and how you feel about them.
- Learn about the various factors that contribute to how you're feeling.
- Identify key learning by reflecting on your ratings over time and drawing on the resources to build your skills.

Why check-in?



Remember:

- **It can be normal for your ratings to fluctuate** in some segments for a variety of reasons (e.g., illness, a disagreement with a friend/family member, or an assignment you are particularly struggling with etc.) that happen in everyone's lives.
- **Setting goals can help** if you identify things you want to change. Use the checking reflections to think about specific goals. The resources help you learn, lift your mood, develop skills, and plan to meet your goals.

How will my check-in scores be used? iyarn



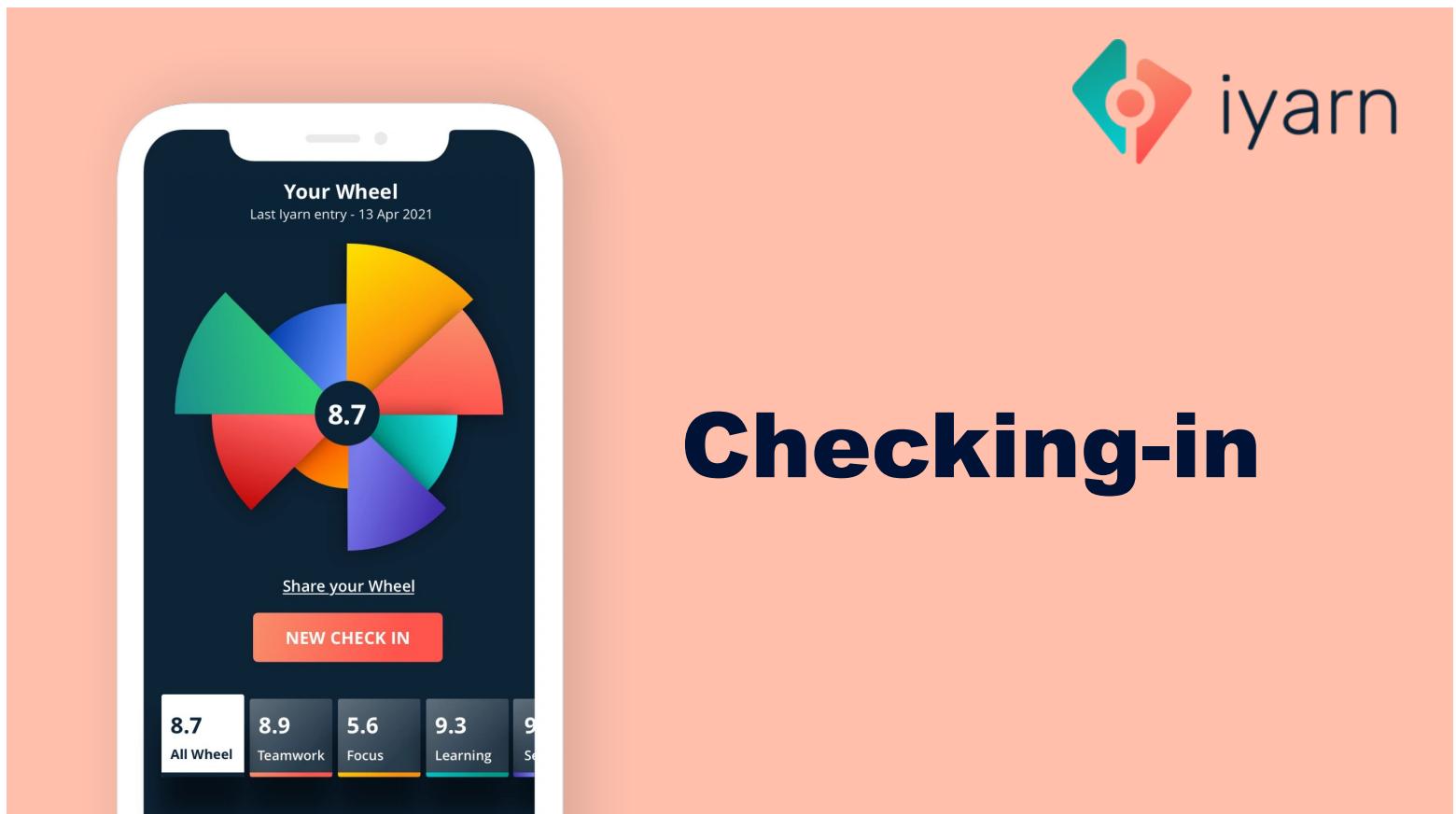
- Your check-in scores will be used to help your teacher identify areas where you may want additional support and resources that might help.
- [INSERT SCHOOL POLICIES RE ACCESS TO CHECK-IN SCORES]:
 - [e.g., when will a student's scores be flagged as requiring intervention]
 - [will any information be shared with parents] etc.

When checking-in



- [INSERT CHECK-IN CONTEXT AND ADAPT THESE POINTS FOR YOUR CONTEXT]:
- **BE HONEST WITH YOURSELF** – Check ins are intended to be a safe space for reflection. Consider how you're really feeling in relation to each of the segments.
- **RESPECT EACH OTHER** – Check ins are about our personal and shared values, people may want *privacy* to reflect and check in, and sometimes people might want to talk to a trusted friend about things.
- **LEAVE A COMMENT** – Comments can be really helpful to explain why a segment is high or low. This can be useful when looking back over your check ins, or when trying to find a way to get better or identify something that is holding you back.
- **TRY TO IDENTIFY A KEY LEARNING** – From each check in, try to identify at least one thing that you can learn from your scores and comments. For example: my score for “Sleep” was low this week, and that’s something that I can work on for next week.
- **CHECK IN REGULARLY** – Most people get more from checking in if they complete their check ins regularly. Using a regular time can help to make this a habit.
- **USE YOUR CHECK INS TO IDENTIFY HELPFUL MENTORS** – It can really help to have people you trust to talk with. As you identify a particular thing that you might want to develop your abilities, look for someone who can help with that thing.

Maybe it's a friend who has experienced something similar, or a teacher who can do what you'd like to do. Maybe it's someone older in your life.



Checking-in



Healthy Body/Be Active

Powerful relationship with mental (+ physical) wellbeing:

Create chemicals that can improve mood (e.g., endorphins)

Increase energy, concentration and confidence – helping you to thrive and pursue your goals!



Sleep



Nutrition

Work together

Improvements in one area can create improvements in another (e.g., eating well can improve sleep and give you the energy to exercise more!)

Require balance

(e.g., you can exercise too much, as well as too little; technology can help us connect & learn, but it's important to have offline moments too)



Exercise



Tech/Life balance

Can be fun

Exercising and eating well, in particular, can become hobbies, and a way of connecting with others. Technologies can also be part of this, as part of a healthy digital diet.



Healthy Body/Be Active



Sleep



Nutrition



Exercise



**Tech/Life
balance**

Try asking yourself:

- Do I feel like I am getting the right amount of restful sleep?
- Am I eating well and feeling energised?
- Am I being active regularly, and in ways that feel good and I enjoy?
- Do I spend too much time using digital devices?



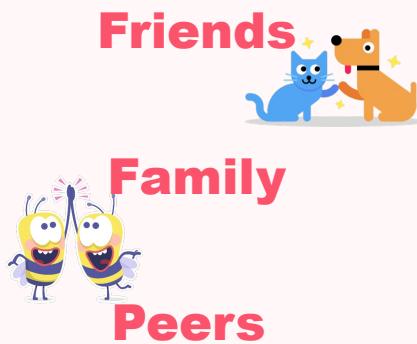
Friendship & Connection

Connection has a positive impact on wellbeing

Healthy relationships can provide support, encouragement, enjoyment, meaning and a sense of 'connectedness'.

Your relationship with yourself is important!

You spend all of your time with you, and can not expect all of your needs to be met by any single relationship with another person.



Everyone has different needs

Different people have different social needs and preferences – there is no 'golden standard' for the amount or types of relationships you should have in your life.

Relationships change and fluctuate

It can be normal for your friendships to fluctuate, go through natural transitions, good and not-as-good periods, and take time to develop and build.



Friendship & Connection

Try asking yourself:

Friends



Family



Peers

- Are my relationships contributing to my sense of wellbeing (e.g., am I having fun? Do I feel supported?)
- Am I being a good friend to myself?
- Am I being good friend to the people in my life (e.g., am I supporting my friends/siblings etc.?)

Self-care, Awareness & Positive Emotion



Engaging in activities that make you happy (e.g., listening to music) can improve physical, social and emotional health!

Practising mindfulness and paying attention to the present moment - e.g., by meditating, doing yoga or gratitude journaling – can support emotional awareness and wellbeing.

Self-Care & Positive Emotion



Emotional Awareness



Mindfulness



Observing your thoughts and feelings objectively, learning about their evolutionary roots, and accepting them for what they are can help you to better understand yourself and your values, and cope with life's challenges.

Self-care, Awareness & Positive Emotion

 iyarn

Self-Care & Positive Emotion



Emotional Awareness



Mindfulness



Try asking yourself:

- Am I taking time to relax and do things I enjoy (e.g., having a bath, listening to music)?
- Am I listening to myself?
- Do I need help to understand my emotions?
- Am I taking notice of the world around me?



Learning & School

Learning can build confidence

Learning can improve your knowledge, thinking skills and capability to do what is important to you! This can make you feel more confident and help you better connect with others.

Learning can help you learn about yourself!

What you learn and do at school can help you to understand what you want to do with your life, and develop the skillsets needed to actually do it.

Learning interests



Workload



Exam stress

People learn about different things

Different individuals have different interests when it comes to learning and time management. Staying focused and interested all the time can be hard!

So, if you are feeling frustrated and unmotivated by schoolwork, it may be that trying something new, or going back to an old interest will help.



Learning & School

Learning interests



Workload



Exam stress

Try asking yourself:

- Am I feeling stressed and overwhelmed by schoolwork, assignments or an upcoming exam?
- Do I think I feel confident managing my workload?
- Am I feeling capable and motivated in my learning?



Growth, Challenge & Passion

Goal Setting can help you grow and improve your confidence

Working toward realistic goals in areas that matter to us can challenge us to move beyond our comfort zones and develop new skills, expose us to opportunities that allow us to thrive and grow, and improve our self-esteem and sense of accomplishment.



Goal Setting

Self-Development

Challenge

Passion & Hobbies

It can be hard to figure out what you are passionate about

Whilst some people are exposed to and, therefore, find the activities that they are passionate about early on in life, others are not as lucky. If you can not think of an activity like this in your life, that does not necessarily mean you “lack passion” but that you should keep searching for it by trying out lots of different activities where you can.



Hobbies and passions can contribute purpose and meaning to our lives

Engaging with activities that we are passionate about (e.g., art, music, sport, coding, volunteering etc.) can bring us innate satisfaction or ‘flow’, and contribute to our sense of meaning and purpose in life.



Growth, Challenge & Passion



Goal Setting

Self- Developmen t

Challenge

Passion & Hobbies



Try asking yourself:

- What am I passionate about?
- Am I engaging in activities that inspire and motivate me?
- Am I challenging myself to try new things and develop new skills?
- Are there any goals I want to work toward?



Giving Back & Community

Giving back to others also gives to yourself

Giving back is associated with a number of individual benefits, including positive emotions, improved self-esteem and feelings of competence

Giving back can improve your connections with others

Giving back is also associated with supporting trust and social bonding.

Gratitude



Reciprocity

Giving Back



Spirituality

Community is important for your wellbeing

Your place in your community and the 'broader' relationships in your life (e.g., with peers, neighbours, or team members) can support your sense of familiarity, connectedness and self-worth. These relationships may even grow into friendships, or provide you support in times of crises.



Giving Back & Community

Gratitude



Reciprocity

**Giving
Back**



Spirituality

Try asking yourself:

- What do I feel grateful for?
- Do I understand how my community contributes to my life and wellbeing?
- Do I feel like I am giving back to my community, in the ways that I can?

6.4.2 Teacher handbook

iYarn Classroom Instruction Pack**Contents**

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1 Before Checking-in

Before beginning the check-in process, teachers will need to explain:

1. the purposes of checking-in;
2. what the check-in data will be used for; and
3. any classroom rules surrounding checking-in.

It will likely be beneficial to provide at least a basic summary of each of these points – in particular, (1) the purposes of checking-in – at the beginning of each check-in, even if the class has heard this before, to ensure that they are front of mind.

1.1 The purpose of checking-in

Checking-in should not be framed as *just* a means for the school or teacher to support student wellbeing, but a tool that the students can use to check-in with themselves, and:

- reflect on different parts of their lives and how they feel about them;
- learn about the various factors that contribute to their wellbeing;
- access resources that will help them to address any issues and develop skills that they can use to support their own wellbeing throughout their lives.

In addition, teachers should remind students that it can be normal for their ratings to fluctuate on some segments due to a variety of contextual factors (such as illness, short-lived conflicts with friends or short-term setbacks) that are a part of everyone's lives, but that reduced ratings – particularly if they are consistent – *may* also indicate that there are problems in their life that they may want to address, or habits they may want to change. The accompanying reflection questions and activities can support students to understand this distinction, and develop the skillsets to understand and approach such issues in the future.

1.2 The use of check-in data

Whilst the level of detail required here will likely vary depending on the age of your cohort, teachers should outline the basics of the school's policies regarding the use of the iyarn check-in data. This will help students to feel comfortable enough to provide genuine answers during check-in.

Relevant policies may include, for example:

- when a student's ratings may be flagged as requiring an intervention; or
- whether any information will be shared with parents.

1.3 Classroom expectations for checking-in

Teachers should lay out the basic ground rules for how they expect students to behave during the check-in process. Whilst this may be different for every classroom, it may be useful to have some shared expectations around:

- Expectations of privacy:
-

- Respect for others, whether they wish to or do not wish to discuss check-in information;
- Reflection and creating a safe environment for reflection, whether as part of whole class time or in students own time
- Openness to asking questions, and being knowing where to find further information and help.
- Explain parental involvement (if any)

2 Checking-in

The iyarn student wellbeing check-in wheel comprises a set of segments grounded in research evidence, and models of wellbeing. The wheel comprises segments that incorporate a number of different factors, and may be interpreted differently by different individuals. It is important for teachers to explain each segment and what is included within them to the class as they check-in.

It may also be beneficial to provide a basic summary of how each segment – and significant sub-area – contribute to wellbeing, as this will help to guide student reflection, likely lead to more accurate scoring, and improve wellbeing literacy.

Note: the teacher may wish to modify the summary below to better suit their cohort – for example, simplifying language for younger cohorts, or providing different examples that reflect the specific context of the school.

(1) Healthy Body/Be Active

Overview

The ‘Healthy Body/Be Active’ segment encompasses the major physical needs and processes that support wellbeing, including:

- Sleep
- Nutrition
- Exercise
- Tech use

Contribution to wellbeing

Whilst each of these factors has clear impacts on your physical health, they have also been shown to have a powerful relationship with your mental wellbeing, by: (1) creating chemical reactions that can positively affect mood (for example, the endorphins released through exercise) and (2) enhancing your capacity to thrive and pursue your goals (for example, by improving concentration and energy).ⁱ

Further, figuring out how to exercise and eat well regularly in a way that you enjoy or value can lead to the development of lifelong hobbies and skills, and can be the foundation for social activities.

It is important to note that all of these factors:

- require balance (e.g., issues can be created by under-exercising *and* by over-exercising)
- often work in tandem with each other, so that improvements in one area can support improvements in another, and vice versa (e.g., eating well by, say, reducing caffeine intake can improve sleep, which can in turn give you more energy and motivation to exercise and eat well, a health digital diet can improve sleep patterns, and so on).

When checking-in

When checking-in you could ask yourself:

- do I feel that I am getting the right amount of restful regular sleep?
- am I regularly eating well and feeling energised?
- am I being active regularly, and in ways that I enjoy?
- do I spend too much time using digital devices?

(2) Friendship & Connection

Overview

This segment focuses on the positive impacts healthy and supportive social relationships can have on wellbeing, including your relationships with your friends and family.

Contribution to Wellbeing

Social relationships can contribute to wellbeing in a number of ways: by providing support and encouragement, information, enjoyment, meaning, and a sense of ‘connectedness’.ⁱⁱ

Whilst for many these social relationships are an innate need, different people have different social needs and preferences, and there is no ‘golden standard’ for the amount or types of relationships you should have in your life. Further, relationships can often fluctuate temporarily, go through natural transitions, or take time to develop and build.

It is also important to note that your relationship with yourself is important, and you can not expect all of your needs to be met by any single relationship.

When checking-in

When checking-in you could ask yourself:

- Are my social relationships contributing to my sense of wellbeing (e.g., am I having fun? Am I feeling supported?)
- Am I being a good friend to myself?
- Am I being a good friend to the important people in my life (e.g., am I supporting my friends/ siblings etc)?

(3) Self-Care, Awareness & Positive Emotion

Overview

This segment focuses on the various habits and thinking patterns that can impact emotional wellbeing. This encompasses a range of areas, including:

- Self-awareness, and understanding your thoughts and emotions
- Practising mindfulness and taking notice of your own thoughts and the world around you.

Contribution to Wellbeing

The above factors can work together to positively impact on your emotional wellbeing, and your capacity to cope with the issues that arise in life:

- **Self-care and Positive Emotions** – engaging in regular activities that elicit positive emotions (such as, listening to music) is associated with improvements to physical, social, and psychological health, and is considered a, “fundamental building block for cultivating resilience...and life satisfaction”.ⁱⁱⁱ
- **Self-awareness and emotional understanding** – observing thoughts and feelings objectively, learning about their evolutionary and environmental roots and accepting them for what they are, can help you to better understand yourself and any issues you may be facing. Developing this skillset can help you to clarify your own strengths, values and motivations, so that they can guide your behaviour; and improve your capacity to cope with future issues that may arise in life.
- **Practising mindfulness** – the practice of mindfulness has been associated with a range of positive benefits, including supporting self-awareness and the experience of positive emotion.^{iv} Whilst there are a number of different approaches to mindfulness – such as meditation, yoga and practicing gratitude – in essence, it involves paying attention to the present moment and ‘taking notice’ of both internal and external stimuli.

When checking-in

When checking-in you could ask yourself:

- Am I making time to do the things that make me happy and feel relaxed (e.g., listening to music/spending time with friends)?
- Am I listening to myself?
- Do I need help to understand my emotions?
- Are my thoughts helping me?

(4) Learning & School

Overview

The Learning & School segment focuses on:

- How you are feeling about your classes, your workload, and any stress or anxiety you may feel surrounding assignments and exams; as well as

- Your attitude towards learning in general, and the different ways that you can approach learning and work that may best suit you.

Contribution to Wellbeing

Research shows that learning can not only improve our knowledge, thinking skills and capability, but can positively impact on self-confidence, help us to clarify what matters to us in life and lay the foundation for social connection. What you learn and do at school can help you to understand what you want to do with your life, and develop the skillsets needed to actually do it.

However, different individuals have different styles and preferences when it comes to learning, time, and energy management. So, if you are feeling frustrated and unmotivated by schoolwork, it may be that there is a different learning, time or energy management technique that you could use.

When checking-in

When checking-in on this segment, you should ask yourself:

- Am I feeling stressed, anxious or overwhelmed by regular schoolwork, major assignments, or an upcoming exam period?
- Am I feeling capable and motivated in my learning?

(5) Growth, Challenge & Passion

Overview

This segment focuses on your personal development, including:

- challenging yourself and growing as a person
- your passions and hobbies.
- any goals you may have for yourself.

Contribution to Wellbeing

Engaging with activities that we are passionate about can bring us innate satisfaction or 'flow' and contribute to our sense of enjoyment, meaning and purpose in life. For example, this may include art, music, sport, coding and/or volunteering.

Further, progressing toward realistic meaningful goals in areas that matter to us can challenge us to move beyond our comfort zones and develop new skills, expose us to opportunities that allow us to thrive and grow, and improve our self-esteem, self confidence, and sense of accomplishment.^v

Whilst some people are exposed to and, therefore, find the activities that they are passionate about early on in life others take longer to do so. If you cannot think of an activity like this in your life, that does not necessarily mean you lack passion but that you should keep searching for it by trying out lots of different activities where you can.

When checking-in

When checking-in on this segment, you should ask yourself:

- what am I passionate or enthusiastic about?
- Am I engaging in activities that inspire and motivate me?
- Am I challenging myself to try new things and develop new skills?
- Are there any goals I want to work toward?

(6) Giving Back & Community

Overview

This segment focuses on your role in your communities – for example, your class and school, any sports or hobby groups you may be a part of, your local or religious communities, and your place in the wider world. It covers issues such as:

- Giving back to your communities
- Gratitude
- Spirituality

Contribution to wellbeing

Giving back is associated with a number of individual benefits, including positive emotions, improved self-esteem and feelings of competence, as well as supporting trust and social bonding.

Whilst your place in your community, and the ‘broader’ relationships in your life, can support your sense of familiarity, connectedness and self-worth, as well as supporting you in times of crises.

When checking-in

When checking-in, you could ask yourself:

- Do I understand how my community contributes to my life and wellbeing?
- Do I feel like I am giving back to my community, in the ways that I can?
- What do I feel grateful for?

3 After Checking-in

Ultimately, how the teacher responds to low ratings will be up to the individual policies of each school, and state/national guidance and legal obligations.

However, we have provided some suggestions below as to how teachers could respond (1) if an individual rating is low, and (2) if classroom ratings are low. Of course, in some cases teachers may wish to discuss with a student to checkin on their wellbeing and ask if they'd like further support.

Section 4 of this pack provides further detail on implementing interventions, the theory behind our suggestions, and instructions on how to use the iyarn resources table.

3.1 If an individual's rating is low

The way a teacher wishes to respond to a low rating may vary depending on the segment in question: for example, a low rating on the 'Friendship & Connection' segment may need a more sensitive response than required for a low rating on the 'Growth, Challenge & Passion' segment.

However, across all segments it may be useful* to determine which specific sub-area within the segment is troubling the student, so that they can provide them with resources that meet their needs.

*Note: a general email template has been provided under Section 4.3.1 which can help teachers to provide students with resources under multiple sub-areas in cases where they have not or can not specify the specific issue.

There are a number of ways that the teacher may wish to do this; however, the prompts laid out in Section 2 and the Reflection Questions (RQ) provided in the iyarn resources table may be useful to guide this discussion.

3.2 If classroom ratings are low

Appropriate responses to low classroom ratings may vary according to the segment and sub-area in question: for example, low ratings on 'Learning & School' could be addressed by modifications to teaching style or providing instruction on time or energy management techniques, whereas low ratings on 'Healthy Body' could be addressed by providing a lesson on nutrition or embedding a physically active segment into regular classroom activities. Some changes may be related to external factors such as the lead up to exams.

However, across all segments there may be a range of specific causal factors, and teachers may wish to use other surveys or/and their knowledge of the context in considering which issues are most appropriate for the individual or class to target responses. There are a number of ways that this may be done, for example:

- Facilitating a class discussion or other in class activities around the segment

- Setting up a feedback box in the classroom etc.

4 Interventions

4.1 Theory

4.1.1 ACT and SDT Overview

Acceptance & Commitment Therapy (ACT) and Self-Determination Theory (SDT) recommend techniques which are “empowering”, “autonomy supportive” and “relational” (e.g., listening, reflecting, empathising and facilitating), rather than the use of pre-determined, theory-directed targets (e.g., teaching, training, shaping and rewarding).

Both are “process-oriented” behavioural theories which emphasise the development of internal resources and skills which can be used to support ongoing emotional self-regulation and behaviour change.^{vii} As such, they promote:

- **autonomous and intrinsically motivated treatment** – taking a person-centred approach which respects the individual’s own perspectives, values and context, and supports them to pursue “self-endorsed or autonomous motivations”. This has been demonstrated to produce “greater engagement, behavioural persistence, as well as a more positive experience”.^{viii}
- **integrative emotion regulation** – understanding the meaning of emotional reactions, rather than just “down-regulating” or “reframing” negative emotion.
- **mindful awareness** – investigating internal processes and developing awareness as “a foundation for improved self-regulation”.
- attending to **basic psychological needs** – under SDT, ‘competency’, ‘autonomy’ and ‘relatedness’ are considered basic psychological needs which must be addressed to achieve “wellbeing and optimal performance”.^{vix} In a school setting, feelings of competency may be supported by allowing students demonstrate their understanding, see their progress and encouraging students to continue working on developing their skills (e.g., by providing hints rather than solutions). A student’s need for autonomy can be addressed by allowing them to make choices and work in their own way. Whilst, the need for relatedness can be satisfied by framing or modifying learning material so that it is relevant to the students’ context, being responsive to student questions and by facilitating interaction between classmates.^{ix}

4.1.2 Implications for delivering interventions

The above suggests that interventions should not be overly prescriptive but instead provide a foundation which, in an age appropriate way, support students to:

- understand their emotions, thought processes and behaviours;
- clarify their own values and motivations; and
- develop internal resources and skills which they can use to support their own wellbeing throughout their lives.

Further, students should be provided with a range of different resources to suit their own needs, preferences and learning styles. Based on this, and the recommendations of Bakker et al (2016), the iyarn resources spreadsheet categorises the resources provided under five headings reflecting their intended impact (see Section 4.2.2). Teachers are encouraged,

where possible, to provide students with at least one resource which falls under each of these headings.

4.2 Using the iyarn resource spreadsheet

4.2.1 Filtering

The iyarn spreadsheet is designed to allow users to filter for appropriate resources under each of the 6 segments of the student wellbeing wheel.

Filter	Description
Sub-area	This column categorises each resource by the major sub-areas within each section (e.g., for 'Healthy Body' sub-areas would include exercise, sleep, nutrition and tech use).
Tag	This column allows the user to further refine the subject matter they are interested in by tagging resources by their specific subject (e.g., caffeine).
Publisher	This column allows resources to be filtered by a preferred publisher (e.g., ReachOut versus Headspace).
Age	These columns allow the user to filter resources by age group. Resources have been tagged as 'all ages' unless they are considered:
Age - Lower	specifically inappropriate for younger audience: in this case, the youngest appropriate age group would be indicated in 'Age – Lower'.
Age – Upper	not of interest or challenging enough for older audiences: in this case, the oldest appropriate age group would be indicated in 'Age – Upper'.
Use	This column categorises each resource by their ideal mode of use: <ul style="list-style-type: none"> • 'student solo' – resources which are best provided to students for them to read and engage with in their own time (e.g., through an email intervention); • 'solo-together' – resources that can be worked on individually in a class-based setting; and • 'class' – resources that can be used for group activities in a classroom setting.
Resource Impact	This column categorises resources by their intended impact – Learn : Psycho-Education (PE), Lift : Mood Lifter (ML), Plan : Behavioural Activation (BA), Develop : Coping Skills (CS), Reflect : Reflection Questions (RQs). Details of the different impact categorisations are provided in Section 4.2.2 below.
Medium	This column categorises resource by their medium e.g. article versus video.

The spreadsheet uses Excel's basic 'Sort & Filter' option: to filter options under each heading: (1) click on the drop-down arrow; (2) de-select 'Select All'; and (3) select the options you wish to filter for.

4.2.2 Resource Impact Categorisation

The iyarn spreadsheet uses a modified form of the categorisation outlined by Baker et al (2016) to allow teachers and students to filter for different types of resources. These are:

- ❖ **Learn: Psycho-educational resources (PE):** resources which provide information which allow individuals to develop a better understanding of wellbeing and the various components which underly it. The PE resources provided in the spreadsheet are in some cases general, but are in many cases linked to specific topics (e.g., family conflict, the benefits of sleep etc).
Bakker et al (2016) additionally found that the general provision of PE resources had preventative and community-level benefits: improving attitudes toward mental health issues and supportive behaviour among recipients.^x
- ❖ **Lift: Mood Lifters (ML):** resources that encourage behaviours which have been shown to directly improve mood, such as exercise and listening to music.^{xi}
All-purpose Mood Lifters can be found in the 'Self-care, Awareness & Positive Emotions' resource set, under the 'Relaxation', 'Mindfulness' and 'Self-care' tabs.
- ❖ **Plan: Behavioural Activation (BA):** resources which encourage goal-setting and the planning of activities to expose individuals to new opportunities, and allow them to develop skills. In theory, this will help the individual to: (1) improve their sense of competence and self-efficacy; and (2) break cycles of avoidance and inactivity that perpetuate low moods, reliance on mood-dependent behaviours that, "play a key role in the development of anxiety, depression, and many other psychological disorders".^{xii}
Bakker et al (2016) recommends that it may be useful to pair BA with reflection exercises to encourage individuals to reflect on the benefits of engaging in the activity and "promote self-discovery".^{xiii}
- ❖ **Develop: Coping Skills Training (CS):** resources which support the development of coping skills. According to Bakker et al (2016), this is "the most direct way of improving self-efficacy", specifically Coping Skills Efficacy (CSE). CSE refers to "an individual's perceived ability to effectively cope with adversity and stress", and is associated with: reduced avoidance behaviours and "problematic maintenance cycles"; improved mental wellbeing; and reduced health impacts resulting from stressful events.
Bakker et al (2016) also suggest that it is beneficial to support individuals to develop a varied repertoire of CS, to allow them to choose which strategies suit them best and improve their sense of choice and control which should, under SDT, "feed intrinsic motivation toward self-improvement"^{xiv}, and persistence on task.
- ❖ **Reflect:** The iyarn resource spreadsheet also includes a number of **Reflection Question (RQ)** sets which can be used to help students:

- distinguish between problems or unhelpful behaviours that can be addressed, and the ordinary setbacks that are a part of everyone's lives;
- understand their own strengths, goals, values and ambitions, and assess whether their behaviour aligns with them;
- develop skills which will allow them to better understand their emotions and manage issues in the future.

In addition, these questions may be useful for further filtering for resources that will be most useful for their specific circumstances.

4.3 Email Interventions

The theory outlined in Section 4.1 suggests that the messaging and resources provided in intervention emails should be straightforward, but not overly prescriptive and instead provide a foundation for paired exercises which allow students to clarify their own values and motivations, and develop internal resources and skills which they can use to support their own wellbeing throughout their lives.

Based on this theory, it is recommended that, where possible, intervention emails should provide students with:

1. a selection of different resources (Learn, Lift, Plan, Develop / PE, BA, CS and ML) in order to (1) target different psychological processes and (2) allow each individual to choose the resources that suit their personal needs/preferences.
2. a set of Reflection Questions (RQ) to accompany these resources, to support students to refine their own goals, values, and ambitions that relate the information provided to their own context, develop their competence, and reflect on the benefits of integrating any useful strategies into their routine.

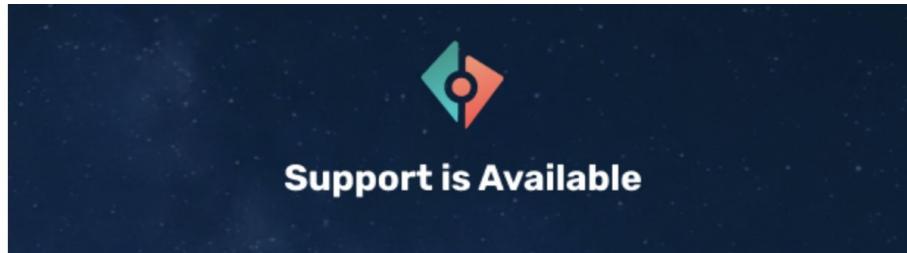
Iyarn should filter these by age group and segment, and email modifications may be provided as automated suggestions to teachers, rather than directly to students.

Teachers and students may find it helpful to include a range of resources using the categories above.

- ❖ Learn: learn more about wellbeing from these resources
- ❖ Lift: these are things that may lift your mood
- ❖ Plan: these are ideas to help you think about your goals and make steps to meet them
- ❖ Develop: these resources give you strategies and skills to cope
- ❖ Reflect: these prompts help you checkin with yourself; you can use them before you checkin, and afterwards

A sample email is provided below which teachers can modify to suit any segment/sub-area and to include the resources they have selected as appropriate for the specific student.

4.3.1 Sample Email



Thank you for checking in. We're here to support you with resources chosen by your teacher, from organisations that work to help us all build wellbeing skills.

Based on your [X segment] check-in, some of these resources may be helpful to you.

You can choose which resources you want to use, to learn, lift, plan, develop skills, or reflect. As many factors contribute to [x segment], we've organised resources so you can choose which topic is most important for you:

- [Topic 1]
- [Topic 2]
- [Topic 3]
- [Topic 4]

Under each heading there are a variety of resources for you to choose from: look through the resources that interest you and see what works best for you.

If nothing here fits, or quite addresses the specific issues you are facing, you can reach out to [school counsellor] for advice at [contact details] or, if you prefer, sign up to [Headspace](#) where you can talk privately to professional counsellors over the phone or via webchat between 9am and 1am.

1) Topic 1

Resources (ideally showing a range of Learn; Lift; Plan; Develop; Reflect)

[Resource 1] – basic description (e.g., this resource is useful for x), medium

[Resource 2] – basic description, medium

[Resource 3] – basic description, medium

Reflection Questions

- Reflection Q 1
- Reflection Q 2
- Reflection Q 3

- Standard Reflection Q: Did these resources provide you with any strategies that you think would be helpful? If so, how would you apply them and/or integrate them into your routine?

2) Topic 2

Resources

[Resource 1] – basic description (e.g., this resource is useful for x), medium

[Resource 2] – basic description, medium

[Resource 3] – basic description, medium

Reflection Questions

- Reflection Q 1
- Reflection Q 2
- Reflection Q 3
- Standard Reflection Q: Did these resources provide you with any strategies that you think would be helpful? If so, how would you apply them and/or integrate them into your routine?

3) Topic 3

Resources

[Resource 1] – basic description (e.g., this resource is useful for x), medium

[Resource 2] – basic description, medium

[Resource 3] – basic description, medium

Reflection Questions

- Reflection Q 1
- Reflection Q 2
- Reflection Q 3
- Standard Reflection Q: Did these resources provide you with any strategies that you think would be helpful? If so, how would you apply them and/or integrate them into your routine?

4) Topic 4

Resources

[Resource 1] – basic description (e.g., this resource is useful for x), medium

[Resource 2] – basic description, medium

[Resource 3] – basic description, medium

Reflection Questions

- Reflection Q 1
- Reflection Q 2
- Reflection Q 3
- Standard Reflection Q: Did these resources provide you with any strategies that you think would be helpful? If so, how would you apply them and/or integrate them into your routine?

4.4 Class-based interventions

Universal, class-based interventions have been found to be effective for building resilience and provide a buffer against mental ill-health, as well as reducing stigma and encouraging informed discussion of wellbeing issues within the class.^{xv}

However, as outlined in Section 4.1 above, ACT and SDT indicate that, where possible, it is important for teachers to ensure that activities:

- are straightforward^{xvi} but not overly prescriptive, allowing room for students to work in their own way and apply their own values/motivations^{xvii}
- provide an opportunity for students to demonstrate their understanding of the subject matter and apply it to their own context. For example, using paired reflection questions in-class or providing them as take-home activities.

Further, relating learning material directly to the context of the students can improve their engagement.^{xviii} Teachers may do this by modifying the examples provided in activity instructions so that they specifically relate to their class's context (as has been suggested in Section 2 for the explanation of iyarn segments).

When a class checks-in, cohort ratings could be used with iyarn to recommend the most relevant resources, based on the model described above.

- ⁱ 5 Ways to Wellbeing AU, *Be Active*, <https://5waystowellbeing.org.au/5-ways/be-active/>
- ⁱⁱ Royal Melbourne Hospital, 'Connect', 5 Ways to Wellbeing, n.d., <https://5waystowellbeing.org.au/5-ways/connect/>.
- ⁱⁱⁱ Alexander, Rebecca, Oriana R Aragón, Jamila Bookwala, Nicolas Cherbuin, Justine M Gatt, Ian J Kahrilas, Niklas Kästner, et al. "The Neuroscience of Positive Emotions and Affect: Implications for Cultivating Happiness and Wellbeing." *Neuroscience and biobehavioral reviews* 121 (2021): 221
- ^{iv} 5 Ways to Wellbeing Australia, *Be Aware*, <https://5waystowellbeing.org.au/5-ways/be-aware/>
- ^v Robinson, Paula (2016), p. 74
- ^{vi} Ryan (2021) p. 376
- ^{vii} Ryan (2021) p. 376
- ^{viii} Robinson, 67.
- ^{ix} Hui-Ching Kayla Hsu, Cong Vivi Wang, and Chantal Levesque-Bristol, 'Reexamining the Impact of Self-Determination Theory on Learning Outcomes in the Online Learning Environment', *Education and Information Technologies* 24 (2019): 2161.
- ^x Bakker and Rickard, 'Engagement in Mobile Phone App for Self-Monitoring of Emotional Wellbeing Predicts Changes in Mental Health', 10–11.
- ^{xi} David Bakker and Nikki Rickard, 'Engagement in Mobile Phone App for Self-Monitoring of Emotional Wellbeing Predicts Changes in Mental Health: MoodPrism', *Journal of Affective Disorders* 227 (1 February 2018): 9, <https://doi.org/10.1016/j.jad.2017.11.016>.
- ^{xii} David Bakker et al., 'Mental Health Smartphone Apps: Review and Evidence-Based Recommendations for Future Developments', *JMIR Mental Health* 3, no. 1 (1 March 2016): 10, <https://doi.org/10.2196/mental.4984>.
- ^{xiii} David Bakker et al., 'Mental Health Smartphone Apps: Review and Evidence-Based Recommendations for Future Developments', *JMIR Mental Health* 3, no. 1 (1 March 2016): 10, <https://doi.org/10.2196/mental.4984>.
- ^{xiv} David Bakker et al., 'Mental Health Smartphone Apps: Review and Evidence-Based Recommendations for Future Developments', *JMIR Mental Health* 3, no. 1 (1 March 2016): 10, <https://doi.org/10.2196/mental.4984>.
- ^{xv} Samuel et al., 'Developing the Content of a Brief Universal Acceptance and Commitment Therapy (ACT) Programme for Secondary School Pupils: InTER-ACT', 3.
- ^{xvi} Samuel et al., 'Developing the Content of a Brief Universal Acceptance and Commitment Therapy (ACT) Programme for Secondary School Pupils: InTER-ACT', 11.
- ^{xvii} Hui-Ching Kayla Hsu, Cong Vivi Wang, and Chantal Levesque-Bristol, 'Reexamining the Impact of Self-Determination Theory on Learning Outcomes in the Online Learning Environment', *Education and Information Technologies* 24 (2019): 2161.
- ^{xviii} Hui-Ching Kayla Hsu, Cong Vivi Wang, and Chantal Levesque-Bristol, 'Reexamining the Impact of Self-Determination Theory on Learning Outcomes in the Online Learning Environment', *Education and Information Technologies* 24 (2019): 2161.

It's important to note that the guidance given here is about general check-ins with the iyarn tool. Expert guidance should be sought/established processes followed for any specific needs. Specifically, any disclosures made (verbally or in the comments) should refer to existing guidance e.g. <https://reporter.childstory.nsw.gov.au/s/> and <https://gdhr.wa.gov.au/guides/what-to-teach/dealing-with-disclosures>

Chapter 7

User research

7.1 Background

A scenario based approach was used to focus the research, and engage with stakeholders via interviews. These scenarios help us to focus in on key issues that arise (1) out of the existing evidence base, and (2) in practice. The scenarios are intended to:

1. help map out how iyarn ‘works’ to achieve its impact,
2. to explore this with teachers, to understand how they would use the tool, what existing resources they make use of that could be incorporated into the tool, and where there are gaps in the tool
3. in a second round of interviews, to revisit the scenarios once support resources are piloted, to evaluate their potential

In addition to scenarios, the teacher interviews made use of other open questions, and a brief survey to explore their existing mental health or wellbeing awareness.

A feature of the design approach adopted is that the emergence of the literature, and its mapping to a change model for the tool/implementation should be considered in the design and execution of subsequent phases (which may also indicate need to review further literature, or/and revise the model). As such, the exact nature of the scenarios selected for semi-structured interview was iterated, and shaped to address the particular foci of the emerging work. This process was informed by both the existing tool and its user journey(s), and literature including work using or describing scenarios, and research using other methods such as survey instruments to probe particular drivers of change.

7.1.1 Research ethics in Australia

- Ethics required for any research involving human participation, this is done at a university level

- Independent schools can approve access directly to researchers with ethics approval (they are gatekeepers). Public schools require a separate state level application. Catholic may require diocese level approval.
- The process sets out what we'll do and why, who will participate, and how we'll recruit them
- The UTS research team sought and gained HREC approval, allowing us to recruit (ETH22-6948)

7.2 Approach

Participants were invited to take part in two semi-structured interview via video conferencing software one in Phase 1 and Phase 3 of the research. We invited >15 teachers, and interviewed ~7 (each twice) for interviews between 45-60 minutes (interview 1), and ~30 minutes (interview 2).

The interviews were recorded via video conferencing software, and transcribed in part, with prior permission of the participants.

Phase 1 Interviews

Semi-structured interviews via video conferencing software with teachers about their current use of the iyarn platform, their current practices with regards to student health and wellbeing and what resources they currently use and find valuable. They will be asked about what their current practices are to support health and wellbeing in the classroom and how they would respond to support individual students if needed.

A series of pre-prepared scenarios grounded in use of the tool were presented to the teachers and their response to these scenarios was documented.

Phase 2 Interviews

These semi-structured interviews again took place via video conferencing software using online prompts. Teachers were invited to review draft resources. They will be asked for their feedback on these changes and for any other suggestions or comments. Teachers were asked to review the content of a number of support resources and give their feedback and comments.

7.3 Round 1 interviews

The round 1 scenarios used are shown 7.3.

Iyarn Teacher Interview Scenarios

Scenario 1a: Setting up iyarn wheel for general class wellbeing support

You are setting up an iyarn wheel for a new class for regular check-ins. How do you decide what segments to choose? Would you use one of the default wheels (see templates) or customise a new one? If you choose one of the default templates below, why did you choose that one?

The screenshot shows the iyarn website's 'Templates' section. At the top, there is a navigation bar with the iyarn logo, an 'UPGRADE' button, 'Templates' (which is highlighted in red), 'Dashboard', 'Hello Simon', and a user icon. Below the navigation, the word 'Templates' is displayed in a large, bold, black font. A sub-instruction reads: 'Make life easier and start off a wheel using one of our pre-filled templates, you can edit it in settings once you create any of these.' The page then lists four template options:

- Wheel of Life**: A check-in for you as a student to encourage balance in your life, at school and at home. There are many variations of the Wheel of Life, so feel free to modify this wheel to suit you.
- Student Wellbeing**: A general weekly wellbeing check-in for high school students yrs 7-12.
- Student Performance**: Check in on student performance is ideal for monthly reflection on their development this year.
- Teacher Wellbeing**: This teacher check in is useful for year group co-ordinators to do monthly teacher check-ins.

Each template card features a small thumbnail image and a 'Template Details' button with a dropdown arrow.

Wheel of Life

A check in for you as a student to encourage balance in your life, at school and at home. There are many variations of the Wheel of Life, so feel free to modify this wheel to suit you.

Template Details

Private
Private allows you to invite peers to join, you will be able to see the results of everyone who joins.

Segments
There are 7 segments that you will evaluate from 1 - 10

School
Finance & Money
Health & Fitness

Family & Friends
Fun & Recreation
Personal Growth

Community

USE TEMPLATE

Student Wellbeing

A general weekly wellbeing check-in for high school students yrs 7-12

Template Details

Private
Private allows you to invite peers to join, you will be able to see the results of everyone who joins.

Segments
There are 7 segments that you will evaluate from 1 - 10

Friends
School
Mental Health
Homework

Activity
Learning
Sleep

USE TEMPLATE

Student Performance

Check in on student performance is ideal for monthly reflection on their development this year

Template Details

Private
Private allows you to invite peers to join, you will be able to see the results of everyone who joins.

Segments
There are 5 segments that you will evaluate from 1 - 10

Grades
Stress Management
Extracurricular

Homework
Performance

USE TEMPLATE

If you decide to create a customised one what segments would you choose and why? Would you engage students to help select segments? If so how would you do this? What do you think are the most important segments for tracking students' wellbeing and resilience?

Wheel Name

Segments

Description

Settings

Complete

Create New Wheel

2 What segments do you want your wheel to include?

Segment Name * 0/40

Or select segment from this list:

<input type="checkbox"/> Career	<input type="checkbox"/> Health	<input type="checkbox"/> Self Care
<input type="checkbox"/> Challenge	<input type="checkbox"/> Hobbies	<input type="checkbox"/> Service
<input type="checkbox"/> Children	<input type="checkbox"/> Holidays	<input type="checkbox"/> Sex
<input type="checkbox"/> Community	<input type="checkbox"/> Job	<input type="checkbox"/> Sleep
<input type="checkbox"/> Contribution	<input type="checkbox"/> Learning	<input type="checkbox"/> Social
<input type="checkbox"/> Debt	<input type="checkbox"/> Love	<input type="checkbox"/> Social Groups
<input type="checkbox"/> Development	<input type="checkbox"/> Mental Health	<input type="checkbox"/> Spirituality
<input type="checkbox"/> Energy	<input type="checkbox"/> NFP	<input type="checkbox"/> Sport
<input type="checkbox"/> Environment	<input type="checkbox"/> Nutrition	<input type="checkbox"/> Volunteering
<input type="checkbox"/> Family	<input type="checkbox"/> People	<input type="checkbox"/> Wellbeing
<input type="checkbox"/> Exercise	<input type="checkbox"/> Personal Development	<input type="checkbox"/> Work
<input type="checkbox"/> Finances	<input type="checkbox"/> Pets	<input type="checkbox"/> Trust
<input type="checkbox"/> Friends	<input type="checkbox"/> Philanthropy	<input type="checkbox"/> Unity
<input type="checkbox"/> Giving	<input type="checkbox"/> Relationships	<input type="checkbox"/> Leadership
<input type="checkbox"/> Growth	<input type="checkbox"/> Savings	<input type="checkbox"/> Teamwork
<input type="checkbox"/> Gym	<input type="checkbox"/> School	<input type="checkbox"/> Mindfulness
<input type="checkbox"/> Happiness	<input type="checkbox"/> Romance	<input type="checkbox"/> Culture

Total segments: 0/13
min 3, max 13

BACK NEXT STEP

How often would you use iyarn for check-ins and/or class discussions? (Eg. Once a day, once a week, whenever they want to?)

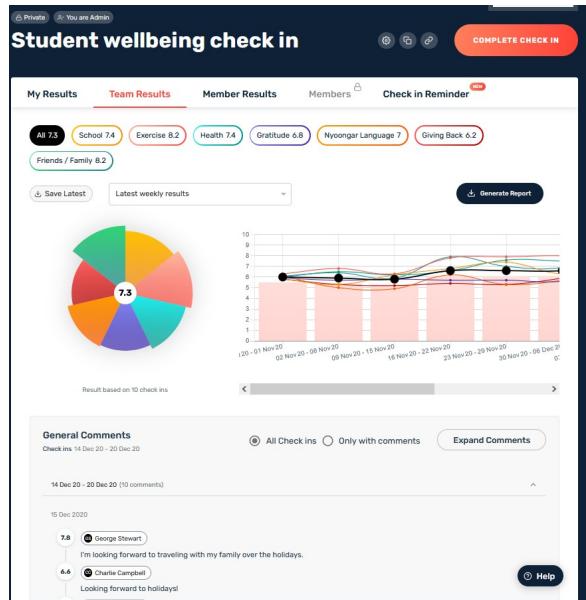
How would you introduce/describe iyarn to your students? Do your students have input on choosing the segments?

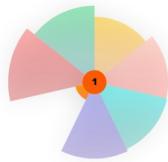
Scenario 1b – Setting up iyarn for focused student support

You are working with a group of students with behavioural issues at school and/or mental health challenges. How might this influence your set up of the wheel? Would this change how you use iyarn? If so how?

Scenario 2a: Changes to class wellbeing

You notice that your class averages for overall wellbeing have dropped over the past few months and want to try to understand what is happening. What would you do? How would you start a conversation within the class? How might you use iyarn for this?



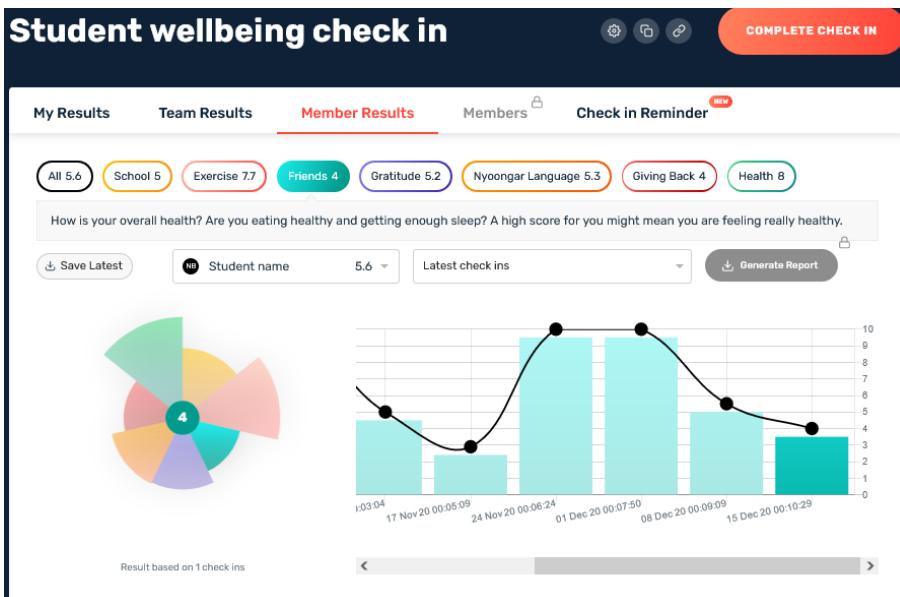


Result based on 1 check ins



Scenario 2b: Changes to individual student wellbeing

You notice that one of your students' responses and scores for the 'friends' segment has fallen dramatically over the past few weeks.



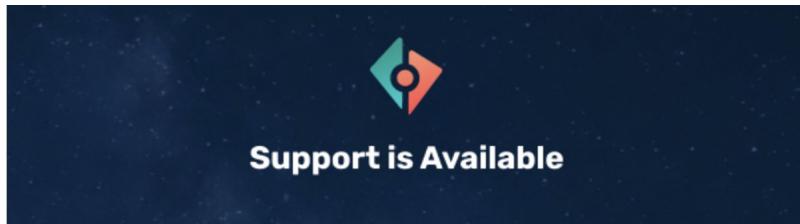
What would be the threshold for you to intervene? How might you approach this? What action might you take? How would you start a conversation with the student? How might you use iyarn?

You notice that one of your student's responses and scores for the 'family' segment are always low and the student appears distressed in class. What would be the threshold for you to intervene? How might you approach this? What action might you take? How would you start a conversation with the student? How might you use iyarn?

Do you use the comments feature in iyarn for students to write notes with their login in each segment? If so do your students use this feature? How prepared do you think students are to share how they are feeling in the platform? Do you notice any privacy concerns with the comments feature?

Scenario 3a – Support resources for students

You have the option to add a feature where students will receive an email with support resources if their score falls below a certain level. See sample email below.



**Thank you for checking in. We're here to support you
with resources recommended by [REDACTED]
College that might assist your relationships with friends.**

Having a strong network of friends helps to increase our mental wellbeing.

Check out the following links:

- [7 simple ways](#) to improve your relationships with family and friends
- [Some helpful tips](#) on how to handle arguments with friends and family
- [Other resources](#) from Relationships Australia
- [Kids Helpline](#) 1800 55 1800
- [Headspace](#)

What score thresholds would you consider as appropriate to send a support email to students? For example if their score falls below 2 or 3 out of 10 in any segment at any time? If their score is lower than 5 out of 10 over multiple check-ins?

What sort of support resources do you think might be most suitable for students? What sort of follow up do you think students might need along with support resource links?

Does it help to identify crucial moments (both positive and challenging) that support intervening?

Have you had any feedback or comments from your students on iyarn? In your experience do students seem to find in helpful with wellbeing?

The overall findings are summarised in 7.3.



Iyarn Phase 1 Teacher Survey and Interviews Preliminary results

Iyarn Teacher Survey

May 2022

Research Participant profiles

6 participants

Years of experience: 2-18

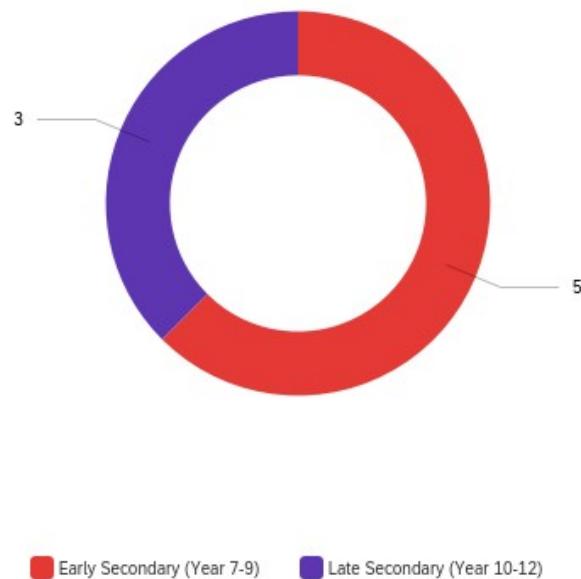
Roles: Varied teaching across subjects, with year group leadership roles

Headline findings

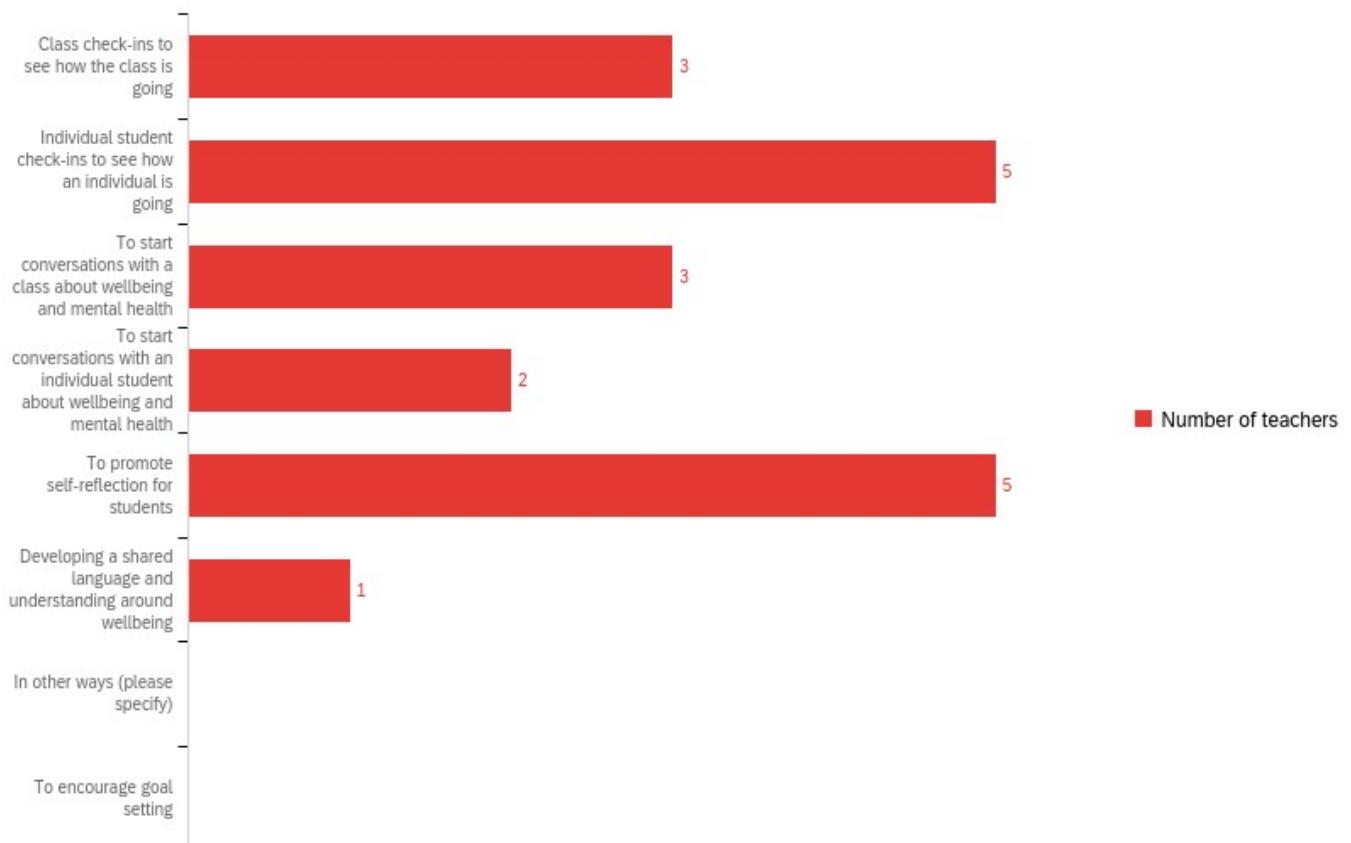
- Areas for further support/training: Understanding and responding to whole class iYARN information (4 mention), and to individual information (2 mention).
- Ways tool is used vary with individual and class support, and some schools using a whole-school approach. Paths for intervention also vary somewhat, with the year leads (head of year) being most common path.
- Participants mentioned different 'thresholds' for intervention:
 - Significant drops (is there an automatic flag for this?)
 - <=3 for intervention
 - <5 for a conversation
- Schools are using custom emails.
- Desired resources include:
 - activities,
 - integration with school system eg for counsellor referral.
 - Note the tension around linking to some external resources which may 'see it as bigger problem than it is'.

What year level of students have you used the iyarn platform with?

Q2 - What year level of students have you used the iyarn platform with?



How have you used iyarn in your school? (select multiple answers if relevant)



What do you see as the strengths of using iyarn as a platform?

What do you see as the strengths of using iyarn as a platform?

Key points

- Simple and easy to use
- Data to offer support, start conversations
- Self-reflection and managing own mental health

What do you see as the challenges or weaknesses of using iyarn as a platform?

What do you see as the challenges or weaknesses of using iyarn as a platform?

Key points

- Confidentiality for students and willingness to be honest
- Student engagement
- Teacher engagement and concerns (workload, disclosures)

Are there any features you would suggest to improve iyarn?

Are there any features you would suggest to improve iyarn?

Key points

- More ability to see & manage data
- Ways to make teachers more comfortable
- Tension between intrinsic value and possibility incentives and rewards may support use

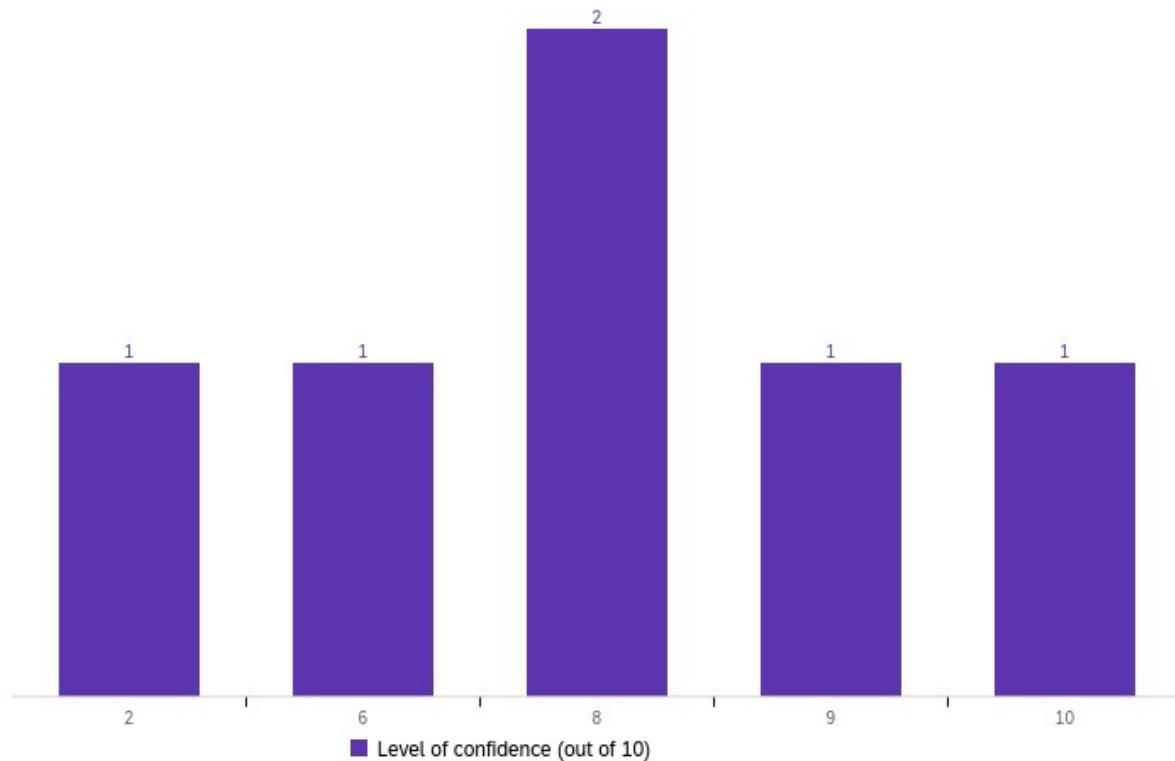
What potential for future use within your school do you see for iyarn?

What potential for future use within your school do you see for iyarn?

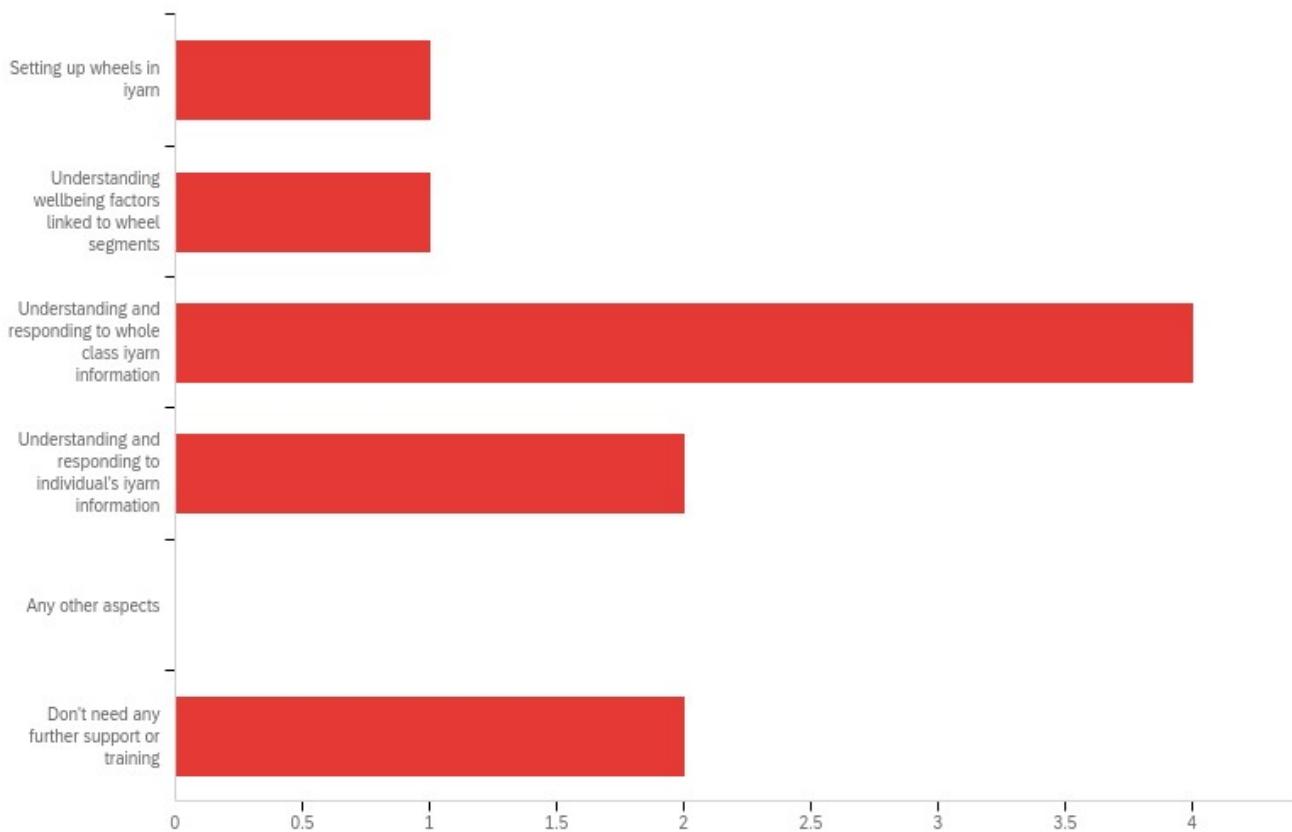
Key points

- Use across whole of school rather than specific year groups
- Target common issues amongst year groups
- Develop positive reflection habits and help seeking behaviour

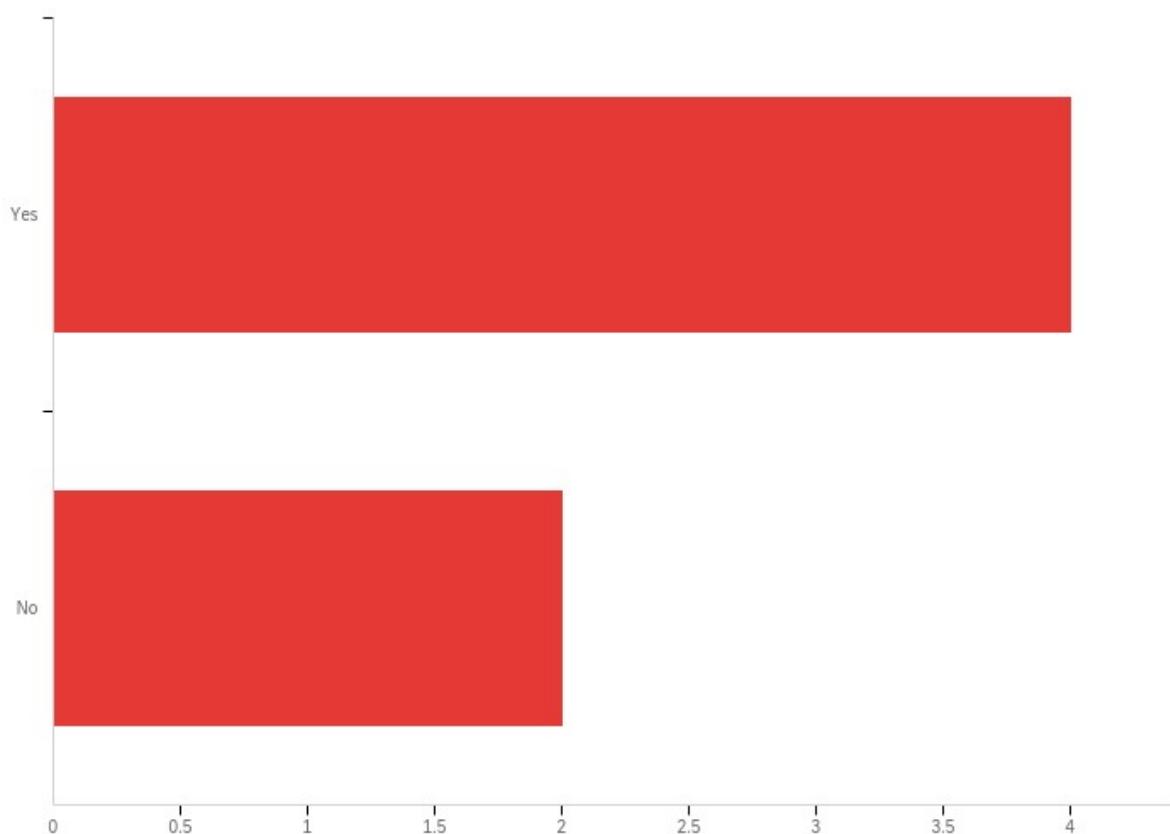
How competent do you feel using and discussing the iyarn platform on a scale of 1 (not very competent) to 10 (very competent)?



Are there any aspects of iyarn you would like further support or training in?



Have you received any training in positive education, positive psychology, wellbeing or mental health in your role?



If so what was the training and how useful did you find it?

If so what was it and how useful did you find it?

4 mentioned specific things:

- Mental health first aid
- Positive education (3 mention, 1 as one off event not impacting practice)
- Acceptance Commitment Therapy
- Various lifestyle approaches (yoga)
- Men's group
- Non-violent communication

Are there any wellbeing or mental health support resources or services that you have used in class or recommended students? If so what are they and how useful did you find them?

Are there any wellbeing or mental health support resources or services that you have used in class or recommended students? If so what are they and how useful did you find them?

Specific resources mentioned:

- Smiling Mind
- Beyond Blue
- Headspace
- R U OK
- School based resources (counsellor, library, chaplain, etc.)
- Internally developed resources (friendship, organisation, anxiety, stress, sleep, nutrition/exercise, and joy)
- Resilience doughnut

What are the protocols in your school if a teacher is concerned about a students' wellbeing or mental health? How does iyarn fit in with this protocol?

What are the protocols in your school if a teacher is concerned about a students' wellbeing or mental health? How does iyarn fit in with this protocol?

Specific processes:

- Speak to year group lead; use iyarn to show trends of concern; use iyarn in tandem with SEQTA (*has 'wellbeing' indicators based on behavioural events e.g. bullying, detention <https://seqta.com.au/watch-quick-tour-video-seqta-engage/>)
- Low score (<3) check up with the individual and make a plan, use comments and low scores to intervene directly, with year lead, and through offer of specialist support (Counsellor/psychologist)
- Teachers contact counsellor/psychology team directly, tool helps with early intervention
- Teacher notifies exec staff and wellbeing staff in writing and they recommend how to support the student.



Iyarn Phase 1 Teacher Interviews Preliminary findings

Scenario 1a: Setting up iyarn wheel for general class wellbeing support

You are setting up an iyarn wheel for a new class for regular check-ins.

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Default template first Then customize	Has used Student Wellbeing template. Then modifies for students individually	Default school template first. Maybe student wellbeing. Hasn't set one up previously.	Developed school default template in partnership with wellbeing team and psychologists. This wheel is used across the school	Uses default school template. Students had input into which segments are used.	Developed school default template in partnership with wellbeing team and psychologists. This wheel is used across the school

"The school was also very conscious of the fact that they didn't want this to become a very formalised check in. And I guess their biggest fear was, you know, what happens if a student said something, (if) they put three for friends or family and we don't check in with them and then something happens. You know, (are) we then accountable? And so we framed the questions very much on a self-reflection "

Scenario 1a: Setting up iyarn wheel for general class wellbeing support
How often would you use iyarn for check-ins and/or class discussions?

What segments do you think are the most relevant?

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Every couple of days in one on one catch ups	In pastoral care once a week on Wednesdays. Individually as needed	Give students option as a class; weekly, twice weekly or fortnightly	Checkins twice a week Tuesday and Thursday mornings	Checkins twice a week, every Tuesday and Friday. Very structured.	Checkins once a week or fortnight on Thursday mornings in home room
Segments: contribution, listening, finance, self-care, family, friends	Segments: exams, physical activity, nutrition, mindfulness, holidays, sleep	Segments: mental health, school and grades, family, exercise, health, friends, sleep	Segments: mental health & resilience, physical health, spirituality, sleep, safety, self -worth		Segments: help, sleep, stress, friends and family, gratitude, school

Range of individual + group uses

Segment priorities vary, some are factors others activities. Consistent with overall data.

Scenario 2a: Changes to class wellbeing

You notice that your class averages for overall wellbeing have dropped over the past few months and want to try to understand what is happening.

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Wellbeing conversations in class, role playing, fun activities	Talk to teachers about what could do if concerned about particular segment	Could use pastoral care session to bring in a speaker. Start a discussion with students	Run class on specific aspect with relevant activities, for example promoting gratitude	Might use a survey for the class to get some more information/perspectives. Then use this to start a conversation.	Get class to look back over class data and look for patterns. Discussion of this in class. Pair up to review scores

“It was kind of steady and then we had these huge little troughs in the time and we're like, that's interesting...So there's usually one or two weeks (during exams). Then one other girl was like, hey, hang on, it's the same for sleep, it drops off during that time. And I was like, interesting interesting. Let's talk about this. And then the girls were saying how they stay up late studying and they're stressing at night so they can't sleep as well.”

“You know in year 7, their gratitude was really low. So for a couple of weeks, we did gratitude activities through in our homeroom.”

Scenario 2b: Changes to individual student wellbeing

You notice that one of your students' responses and scores for the 'friends' segment has fallen dramatically over the past few weeks. What would be the threshold for you to intervene? How might you approach this?

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Look for significant changes or drops. Generally 3 or lower.	If score has dropped dramatically. Scores under 3	If score less than 5 or noticed a big drop would have a conversation.	Safety no. 1 priority. If student falls below 3 will intervene . If below 5 on any category would have conversation.	If safety or mental health falls below 3 will intervene.	Hard to have a threshold as each student will score differently. More looking if there is a significant drop.
Have a chat in a light-hearted way. Checking in with family	Follow up conversation to check in	Initially have conversation with student or ask if they want help to book session with counsellor	Would walk around in class and say I noticed your score had dropped. Have informal chat. Or a more private chat later on.	Check in and talk to student ask if they want an appointment with counsellor if continues to be low.	Would check in with student at recess or lunch

Scenario 3a: Support resources for students

You have the option to add a feature where students will receive an email with support resources if their score falls below a certain level. See sample email below.

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Doesn't use email follow up	Have developed customized emails for each segment	Uses emails compiled by school, sent if under 3 in any segment	Yes use email feature if student scores under 3 in any category gets email that has been compiled by school	Uses emails compiled by schools, sent if under 3 in any segment	Don't use email feature. Think could be beneficial for younger students

“And we we very much try to shift all the responsibility to students rather than saying we're gonna track you and we make that a very clear distinction. It's more, we're here to provide support when needed. But we are not going to be, you know, watching every single students, individual check-ins”

“Would love to know (if students open emails), but yeah, we don't know. We don't know if they open the email. I guess a barrier that we email (is not) the primary form of communication we use”

Scenario 3a: Support resources for students

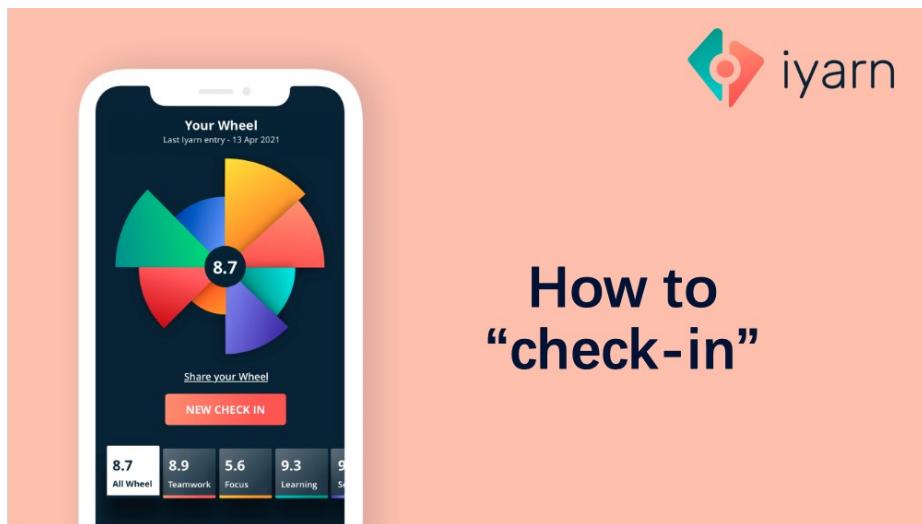
What sort of support resources do you think might be most suitable for students? What sort of follow up do you think students might need along with support resource links? What sort of support resources might be useful for teachers in working with iyarn? Does it help to identify crucial moments (both positive and challenging) that support intervening?

Have you had any feedback or comments from your students on iyarn? In your experience do students seem to find in helpful with wellbeing?

Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6
Fun activities like Kahoots quizzes				Be good if intergrated with school systems eg can direct message a counsellor	Big fan smiling minds Wouldn't want to link to beyond blue or kids help line in email as student may see it as being bigger problem than it is

7.4 Round 2 interviews

The round 2 scenarios used are shown 7.4. 7.4 provides an overview of the user study and its findings.

Iyarn Teacher Interview Round 2 - ScenariosScenario 1: Using Iyarn classroom instruction pack

Please take some time to browse through the Iyarn Classroom Instruction Pack slide deck before we meet if you have time (Iyarn Classroom Instruction Pack.pptx)

The standard segments explained in this presentation are based on research aggregating different models and frameworks for wellbeing for young people (eg. NSW Wellbeing Framework, PERMAH, 5 Ways to wellbeing) to create 6 standard segments

- Healthy Body/Be Active
- Friendship and Connection
- Self-Care, Awareness & Positive Emotion
- Learning & School
- Growth, Challenge & Passion
- Giving Back & Community

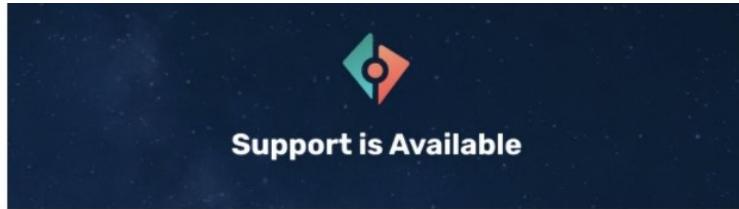
If you were using these standard segments would a resource like this be useful to introduce lyarn to your class?

If you are using your own customised segments does it look like something you could modify for use with your classes?

Do you have any feedback on the structure, language, content visuals or anything else?

Scenario 2: Student support email

One of your students has been struggling with *Friendship and Connection* and has been rating this segment under 5 during the check-ins for a few weeks. The student receives the following automated email with some suggested resources and ideas



Good work for checking in on Iyarn!

You are getting this email because we noticed you have been rating yourself a bit lower on *Friendships and Connection* lately.

Here are some resources and ideas for things to think about to support you. If you are feeling worried about this please reach out and talk to someone such as a friend, a family member or a teacher. Or you can access a list of confidential support services [here](#).

Please choose which topic is most relevant for you

- Problems with friends
- Problems with family
- Feeling lonely or disconnected

Problems with Friends

[Understanding friendships](#) (the good, the bad and the ugly) - LEARN

An article from *Reachout.com* about how to maintain your good friendships, work through a bad friendship and deal with the tough times.

[How to tell your friend they have hurt you](#) - PLAN

An article from *Reachout.com* with some tips on what you can do if you feel hurt by how your friend is behaving or treating you.

[The Mate Breakup: 6 ways to make sure you're okay when a friendship ends](#) - DEVELOP

This article from *Reachout.com* has tips for how to cope with a friend breakup, including investing in hobbies/other friendships, taking a break and de-escalating, and talking it through.

[Feeling lonely and isolated](#) - LEARN and PLAN

This short animation and article from *What's Up with Everyone* talks about how everyone feels lonely some of the time and some things you might try to put things in perspective.

Here are some questions to help you think about challenges with friendships

- What does it mean to be a good friend?
- What sort of friends make me feel good about myself?
- What sort of friendships feel more toxic or bad for me?
- Who is one person I might talk to about what is going on and ask for some support?

Did these resources provide you with any strategies that you think would be helpful? If so, how might you apply them and/or integrate them into your routine?

How effective do you think this kind of email might be for supporting a student?

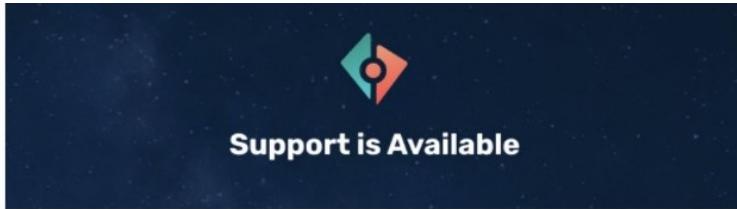
We have identified resources into different impact categories; Learn (Psycho-Education), Lift (Mood Lifter), Plan (Behavioural Activation), Develop (Coping Skills) and Reflect (Reflection Questions). Is this something that might be useful to label for students and/or teachers?

Do your students regularly receive and read emails from the school?

Do you have any feedback on the structure, content, language of this sample email? Is there anything else you would like to add or leave out?

Scenario 3: Teacher activity suggestions

You notice your class averages on the *Learning and School* segment have dropped in the few weeks leading up to exams. You receive an automated email with some suggested resources and classroom activities from lyarn.



It appears your classes ratings for *Learning and School* have been a lower than usual lately.

Here are some ideas for resources and activities for the classroom that might help support students.

Please choose which topic is most relevant for your class

- Motivation
- Workload and organisation
- Exam stress & other crunch periods

Exam stress and other crunch periods

The following website and resources contain suggestions and activities for students for dealing with stress during exams and other crunch periods. These can be adapted for individual or group-based classroom activities.

Exam stress - LEARN

A bunch of resources from Reachout.com including tips, articles and videos on how to deal with exam stress

5 Steps to study success – LEARN and PLAN

This infographic and tips list from Reachout.com gives you some suggestions of strategies for coping during exams and crunch times

How to manage your time – PLAN

Some actionable advice on time management for example goal setting, limiting distractions, taking breaks, setting a finishing time etc.

Perfectionism - LEARN and PLAN

A light-hearted look at perfectionism and how we can put so much pressure on ourselves with a short animation and notes from whatsupwitheveryone.com

Possible reflection questions for coping with stress during exams and at crunch times

1. What are the things that help me to destress?
 2. How might I break things down into smaller chunks so that it seems more doable?
 3. What is the worst thing that could happen if I don't do as well as I might like to?
 4. How can I try to find balance (sleep, exercise, friend time, down time) during stressful periods?
-

How helpful do you think this might be in supporting teachers?

Do you think you might use these resources and questions? If so how might you use them?

Do you have any feedback on the structure, content, language of this sample email? Is there anything else you would like to add or leave out?

Scenario 4 – Crisis support resources

You notice there is a new feature in lyarn with a link to crisis support services for students under their profile labelled 'Crisis Support'. See screen shot below

The screenshot shows the 'Support' section of the lyarn platform. At the top, there are tabs for 'Resources', 'Tutorial', and 'Crisis Support', with 'Crisis Support' being the active tab. Below these are three sub-tabs: 'Adult Support', 'Youth Support' (which is highlighted in blue), and 'Other Resources'. The 'Youth Support' section contains four entries:

- Kids Helpline**: Australia's only free, confidential 24/7 online and phone counselling service for young people aged 5 to 25. Phone number: 1800 551 800.
- Headspace**: Headspace National Youth Mental Health Foundation is funded by the Australian Government Department of Health. Phone number: 1800 650 890.
- ReachOut**: Platform connecting suicide prevention organisations and related sectors to translated evidence, current policy, local, state and national efforts and evidence-informed programs and services.
- Ourhead**: OurHerd is batyr's mental health storytelling app which empowers young people to use their collective voices to create actionable change.

A 'Help' button is located at the bottom right of the 'Youth Support' section.

Is this something that you think is useful in the lyarn platform? Would you want to customise it in any way for your classes or students?

Iyarn Teachers Surveys and Interviews – Research Findings

Research participant profiles

7 participants

Years of experience: 2-18 years

Roles: Varied teaching across subjects, with year group leadership roles. Teachers, head of years and school psychologists

Number of terms using Iyarn: 1-8 terms (mean of 4 terms)

Use of Iyarn with school years: Year 7-10 – 5 participants, Year 11 & 12 – 4 participants

Key Findings

- Iyarn being used to promote self-reflection, for class and individual check-ins and to start conversations about wellbeing
- Strengths of Iyarn: simple and easy to use, not time consuming, access to data
- Challenges with Iyarn: getting teacher and student engagement, lack of customisation
- Suggested features and functionality: more ability to view and manipulate data across demographics, classes and years, activities for teachers to adapt in class
- Areas for further support/training: Understanding and responding to whole class Iyarn information and to individual information
- Ways tool is used vary with individual and class support, and some schools using a whole-school approach. Paths for intervention also vary somewhat, with the year leads (head of year) being most common path.
- Participants mentioned different 'thresholds' for intervention:
 - Significant drops (is there an automatic flag for this?)
 - <=3 for intervention
 - <5 for a conversation
- Schools are using custom emails. Most schools communicating with students via email. Some using SEQTA.
- Desired resources include:
 - activities,
 - integration with school system e.g. for counsellor referral.
 - Note the tension around linking to some external resources which may 'see it as bigger problem than it is'.
- Different implementation with younger years (7&8) and older years (9-12). Older students greater customisation by students and less regular check-ins
- Focus on building healthy habits and routines of check-ins and self-reflection for younger years (7&8)
- Most schools using Iyarn in home room or pastoral care rooms, check-ins at beginning of day. Usually little time available (10-15 mins) and competing needs)Eg, notices, room changes)
- Support resources including Iyarn Instruction Kit and automated email to students very positive feedback, email to teachers mixed response
- Framing of use of Iyarn for students around self-awareness and self-care, not as a means of monitoring or tracking

- Staff concerns about accountability and duty of care if don't pick up on a student struggling
- Teacher and head of year buy-in and engagement crucial to student engagement
- Consider opportunities to engage with parents
- Data from lyarn used as evidence to request additional resources for wellbeing and mental health in classrooms
- Potential to use lyarn as preparatory tool for students in peak stress periods (E.g. Exams) to track patterns and encourage coping skills and accessing support resources

Iyarn Teacher Survey Results

How is Iyarn being used in schools?

When asked to respond to the question of how Iyarn is used in their school the most common response was for to promote self-reflection (6 mentions), followed by individual check-ins (5 mentions), to start a conversation with a class about wellbeing (4 mentions), for class check-ins (4 mentions), to start conversations with individual (2 mentions) and for developing a shared language around wellbeing (1 mentions).

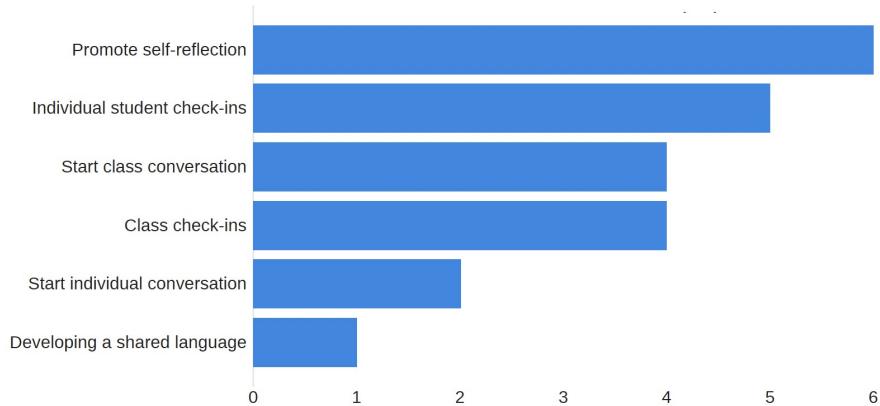


Figure 1 Iyarn use in schools

What do teachers and wellbeing staff see as the strengths of Iyarn?

- Great interface and teacher view
- Simple and easy to check-in, not time consuming
- Tracks data over time in an easy way
- Allows for student reflection
- Easily adaptable to individual or class needs
- Ability for students to check-in without need to verbalise it
- Data on important issues and year group picture of health
- Gaining student data so we can offer appropriate support
- Allowing students to track and manage their own mental health
- Having evidence to demonstrate challenge areas (e.g. sleep, exam stress) and justify resources to run activities around these areas to support students

What do teachers and wellbeing staff see as the challenges or weaknesses of Iyarn?

- (Not) being able to incorporate resources for students to access
- Students can be afraid to be honest as it is attached to their name
- Getting buy-in from students that this for them, not for us to follow up
- Students not fully engaged with tool or engaging meaningfully (2 mentions)

~~Buy in from teachers and concerns about additional workload~~

What features would teachers and wellbeing staff suggest to improve iyarn?

- More ability to manage data (E.g. male vs female, comparisons across classes and year groups, top 10 or 20 students of each categories)
- Incentives and rewards that encourage students to keep checking in (2 mentions)
- A way to easily scroll between students' ratings and names in alphabetical order
- A way to group students, for example grouping 10 most 'at risk' students in the year and being able to scroll through results
- Sets of activities for teachers to adapt and use in class for different segments E.g. sleep, exam stress

"I think a lot of kids are driven by goals/outcomes/rewards and maybe the app could incorporate some kind of reward system once completed. It could even be something entertaining for them to watch on the app once they complete it. Or a token they get each check in which adds up (incentive based) and the group celebrates after one month/one term of checking in." (iyarn user, teacher)

What do teachers and wellbeing staff see at the potential for future use in their schools for iyarn?

- Rolling it out school-wide
- Using it for heads of years to check-in regarding student wellbeing
- Using it for lower secondary school Year 7-9 to develop positive reflection habits and help seeking behaviour
- To initiate conversations about wellbeing targeting common issues amongst year groups

How competent to teachers and wellbeing staff feel using iyarn and what further training might they need?

The level of competence ranged from a score of 2/10 to 10/10 with a mean score of 7.

Teachers reported wanting further support and training in understanding and responding to whole class data (5), responding to individual student's data (2), setting up wheels in iyarn (2) and understanding wellbeing factors (1).

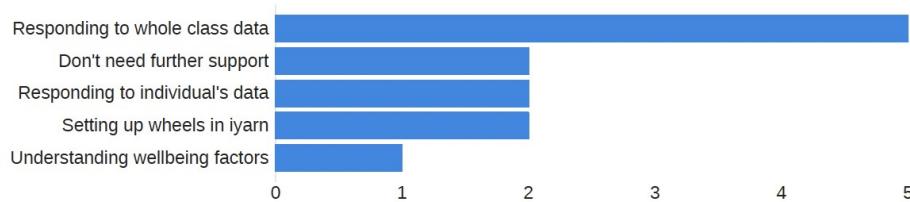


Figure 2: iyarn training needs

What training do teachers and wellbeing staff have in positive education, positive psychology, wellbeing or mental health?

Of the seven staff responding to the survey only four reported receiving training in these areas while three said they had none. The training they reported as finding useful included mental health first aid, positive education, positive psychology, Acceptance and Commitment Therapy, meditation and breathwork, Rites of Passage facilitator training and non-violent communication.

What wellbeing and mental health resources do teachers and wellbeing staff recommend for use with students?

The resources recommended by respondents for students included the following;

- Smiling Minds
- Beyond Blue
- Internal school resources (Eg. school chaplain, counsellor, library and study skills
- Headspace)
- R U OK
- Resources developed in-house on friendships, organisation, anxiety, stress, sleep, nutrition/exercise and joy
- Resilience doughnut

What are the protocols in schools if a teacher has a concern about a student's wellbeing or mental health and how does iyarn fit with this protocol?

The main protocols reported were as follows;

- Speak to head of year group; use iyarn to show trends of concern; use iyarn in tandem with SEQTA (*has 'wellbeing' indicators based on behavioural events e.g. bullying, detention <https://seqta.com.au/watch-quick-tour-video-seqta-engage/>)
- Low score (<3) or significant drop in scores check up with the individual and make a plan, use comments and low scores to intervene directly, with head of year, and through offer of specialist support (Counsellor/psychologist)
- Teachers contact counsellor/psychology team directly, tool helps with early intervention
- Teacher notifies exec staff and wellbeing staff in writing and they recommend how to support the student.

Iyarn Teacher Interviews – Round One

These interviews were conducted with six teachers and wellbeing staff via zoom with participants responded to a series of hypothetical scenarios as to how they use Iyarn in their classrooms and school. A summary of the responses and key insights are outlined below.

Scenario 1A: Setting up and Iyarn wheel for general class wellbeing and support

Wheel set up question

You are setting up an Iyarn wheel for a new class for regular check-ins. How do you decide what segments to choose? Would you use one of the default wheels (see templates) or customise a new one? If you choose one of the default templates below, why did you choose that one?

Participant	Response summary
1	Default template first, then customise as get more comfortable with the platform, customisation for students can promote self-efficacy
2	Uses Student Wellbeing template, then modify for students individually as needed for individual check-ins
3	Default school template first. Maybe Student Wellbeing template.
4	Developed school default template in partnership with wellbeing team and psychologists. This wheel is used across the school
5	Default school template. Students have input into which segments are used. Better for students to get used to platform before can have input into categories.
6	Developed school default template in partnership with wellbeing team and psychologists. This wheel is used across the school

Key insights

- Participants will use default school template if there is one
- Some participants work with students to develop segments to create more engagement and buy-in
- Perception that older students, year 9 and above, may be more engaged if they can select their own segments
- Student Wellbeing template considered second choice after any default school wheels

"And then when they really understand it, then you can then customize it from there, but having default, which you can see that it's used in other schools or states. It's comforting for both the teacher and the students to know that, hey, there's other kids and other classrooms that are using this exact same thing." (iyarn user, teacher)

Regularity of check-ins?

How often would you use iyarn for check-ins and/or class discussions?

Participant	Response summary
1	Every couple of days in one-on-one catch ups
2	In pastoral care once a week on Wednesdays. Individually as needed
3	Give students option as a class; weekly, twice weekly or fortnightly
4	Check-ins twice a week Tuesday and Thursday mornings
5	Check-ins twice a week, every Tuesday and Friday. Very structured. For older students Year 10-12 once a week, younger students twice a week.
6	Check-ins once a week or fortnight on Thursday mornings in home room

Key insights

- Individual and class use for check-ins
- Most common pattern was bi-weekly check-ins in home room class, followed by once a week
- Most ran check-ins on regular days and found integrating into class routine effective
- Younger students Year 7-8 more engaged with check-ins than older students

Most relevant segments in iYarn?

What do you think are the most important segments for tracking students' wellbeing and resilience?

Participant	Response summary
1	Contribution, listening, finance, self-care, family, friends
2	Exams, physical activity, nutrition, mindfulness, holidays, sleep
3	Mental health, school and grades, family, exercise, health, friends, sleep
4	Mental health & resilience, physical health, spirituality, sleep, safety, self-worth
5	No response
6	Help, sleep, stress, friends and family, gratitude, school

Key insights

- Most common responses were sleep (4 mentions), friends and family (3 mentions), exercise/physical health (3 mentions), school/grades/exams (3 mentions), mental health (2 mentions)
- Segment priorities vary, some are factors others activities. Consistent with overall data.

Scenario 1b – Setting up iyarn for focused student support

You are working with a group of students with behavioural issues at school and/or mental health challenges. How might this influence your set up of the wheel? Would this change how you use iyarn? If so how?

Participant	Response summary
1	Use check-in for one-on-one connection, initial self-reflection then go for a walk. Have a talk about what is hard, what are you looking forward to etc
2	Use iyarn for check in before individual meetings. Can look at results together in meeting or use as background reference before meeting. Focus more on mental health, family and friendships for these students.
3	Focus segments and ask questions around behaviour in the wheel. Ask how their behaviour might be affected by different things such as what's happening at home or sleep
4	Would use same segments
5	Consider setting up a daily check-in to be used alongside 'yellow card' (behaviour management strategy). Self-reflection first thing in the day with a mentor or teacher, 'how am I feeling today? What are my challenges going to be? How can I try to modify it?' Then again at the end of the day to self-reflect.
6	Would use same segments, it's a good way to stay on top of how students with more challenges are feeling

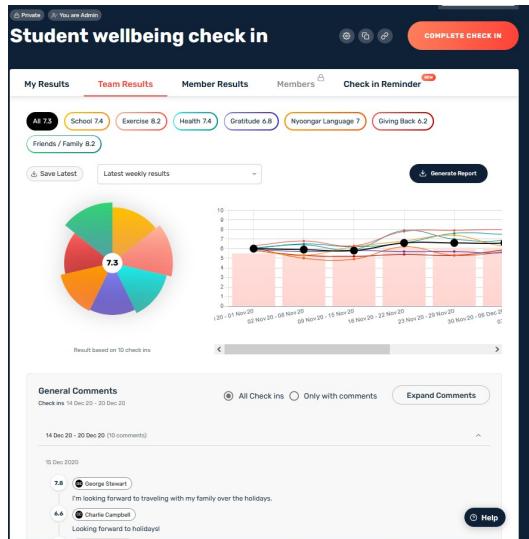
Key insights

- Potential to use iyarn alongside other school behaviour management tools to promote goal setting and self-reflection
- Some teachers suggest modifying segments for students with behavioural challenges, others suggest keeping them consistent with other students
- Useful as a tool to promote communication and connection with student about what is happening in their lives

"I found that that's helpful, because then sometimes when they get in front of you, and they forget about (it) or won't bring up, but you go 'Oh, remember...in your survey that you had mentioned this' and it would be a good kind of talking point."

Scenario 2a: Changes to class wellbeing

You notice that your class averages for overall wellbeing have dropped over the past few months and want to try to understand what is happening. What would you do? How would you start a conversation within the class? How might you use iyarn for this?



Participant	Response summary
1	Wellbeing conversations in class, role playing, fun activities
2	Provide resources to teachers to support particular segments
3	Could use pastoral care session to bring in a speaker. Start a discussion with students
4	Run class on specific aspect with relevant activities E.g. promoting gratitude. Informal conversations with whole class about issues E.g. friendship
5	Might use a survey for the class to get some more information/ perspectives. Then use this to start a conversation. Use students with high scores to do a case study and share their experience.
6	Get class to look back over class data and look for patterns. Discussion of this in class. Pair up to review scores, highest and lowest.

Key insights

- Some activities used by teachers to respond to lower ratings in one segment might be to invite in a guest speaker, running an activity with a specific focus, sending an anonymous survey to get more information, getting class to review data and look for patterns, pairing up to compare highest and lowest rated segments.

Most classes discussed were using 'yarn in home or 'pastoral care' rooms in the University of Technology Sydney where time with students is generally limited to 10-15 minutes. Teachers Centre for Research on Education in a Digital Society (CREDS) Institute for Public Policy and Governance (IPPG) TD School

have a lot to cover including notices, room changes etc can be difficult to find time for check-ins. And to find time to follow up with students.

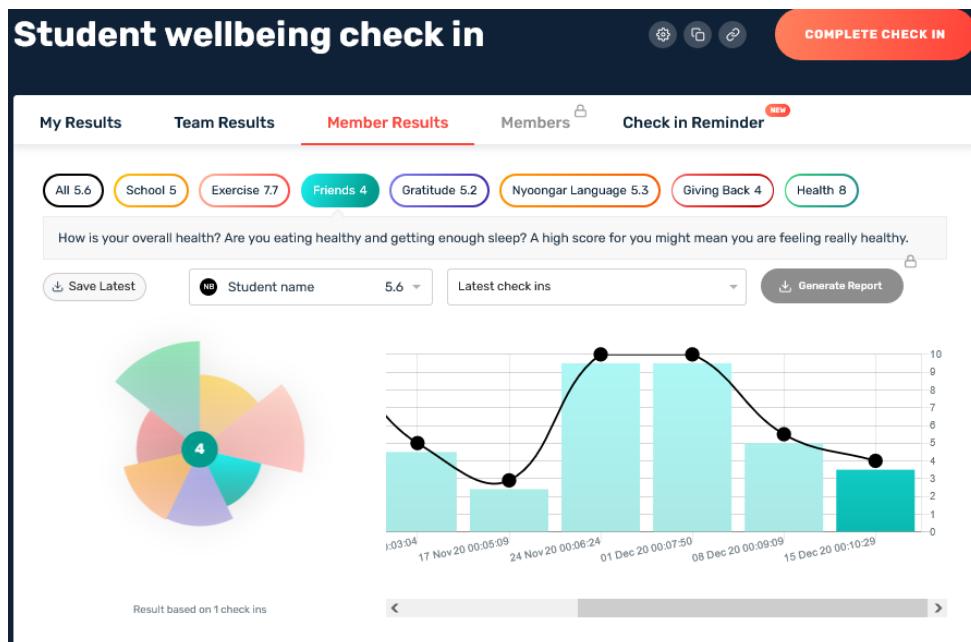
- There may be a longer session approx. one hour once a week with the class, often class plan is pre-planned across the year so not a lot of flexibility for teachers to customise according to class needs. Content may be scheduled by head of year in advance.

"It was kind of steady and then we had these huge troughs in the time and we're like, that's interesting... So there's usually one or two weeks (during exams). Then one other girl was like, hey, hang on, it's the same for sleep, it drops off during that time. And I was like, interesting...let's talk about this. And then the girls were saying how they stay up late studying and they're stressing at night so they can't sleep as well." (lyarn user, teacher)

"You know in year 7, their gratitude was really low. So for a couple of weeks, we did gratitude activities through in our homeroom." (lyarn user, teacher)

Scenario 2b: Changes to individual student wellbeing

You notice that one of your students' responses and scores for the 'friends' segment has fallen dramatically over the past few weeks. What would be the threshold for you to intervene? How might you approach this?



Threshold for intervention

What would be the threshold for you to intervene?

Participant	Response summary
1	Look for significant changes or drops. Generally 3 or lower.
University of Technology Sydney	Has dropped dramatically. Use rating of 0-6 so if drops below 2.
Centre for Research on Education in a Digital Society (CREDS)	
Institute for Public Policy and Governance (IPPG)	
TD School	

3	If score less than 5 or noticed a big drop would have a conversation.
4	Safety is number 1 priority. If student falls below 3 will intervene. If below 5 on any category would have conversation.
5	If safety or mental health falls below 3 will intervene.
6	Hard to have a threshold as each student will score differently. More looking if there is a significant drop.

Key insights

- Scanning for a drop in regular rating as some students may rate higher or lower than others
- Generally scores <5 are considered to keep an eye on (unless student regularly rates lower for that segment) or <3 would trigger a conversation or intervention
- Particular categories such as safety and mental health may be used to monitor need for intervention E.g. if these <3 teacher or head of year will intervene

"However, if they were consistently on a 9 or you know a higher score and then it dropped. If it went from a 9 to a 6 or even a 5. Then I would probably just have the again in informal conversation if I could. If I wasn't comfortable breaching that subject with them or I didn't know the student that well I would refer it to the head of year and would just highlight that concern and say this is what I've noticed happening over the last few weeks. Just letting you know, are you able to follow up?" (lyarn user, teacher)

Types of individual intervention

How might you approach this (individual intervention)?

Participant	Response summary
1	Have a chat in a light-hearted way. Checking in with family
2	Follow up conversation to check in
3	Initially have conversation with student or ask if they want help to book session with counsellor
4	Would walk around in class and say I noticed your score had dropped. Have informal chat. Or a more private chat later on.
5	Check in and talk to student ask if they want an appointment with counsellor if continues to be low.
6	Would check in with student at recess or lunch

Key insights

- Some teachers walk around while students checking in and talk to them about their rating, depending on the category the student has flagged as low or high. For example, if it is a less personal subject such as sleep or exercise the teacher might ask in front of other students. For other segments such as mental health or family and friends they would approach in a break where there is more privacy.
- Preferred follow up approach is an informal chat and check-in with student as a first step, offering to set up a meeting with the school counsellor
- Using check-ins as a way to build relationships
- Focus also on positive ratings as a way to spark conversation and get to know about student's lives outside of school

"So if they are feeling unsafe in a situation and the feeling threatened if they're feeling like they are, you know, not safe with people around or in the environment for whatever reason, we want to know about it and that that's a critical one for us that we would follow up." (iyarn user, teacher)

"You know, or why? Why was it a 10? Like what? What's happened? What's good in your life at the moment? So for me, it was a good opportunity to build on those relationships." (iyarn user, teacher)

"I've had 25 to 30 opportunities to go and chat with students and 50% of them are fine. 50% have been able to really help and guide in the right direction. Often it's not me. I'm just like, hey, I'm gonna get you a spot with the counsellor." (iyarn user, teacher)

Use of comments in iyarn

Do you use the comments feature in iyarn for students to write notes with their login in each segment? If so do your students use this feature?

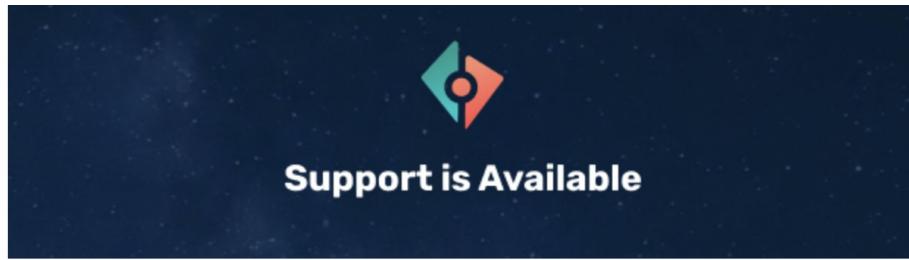
Participant	Response summary
1	Use comments to encourage further reflection details of what might be affecting their scores that week. Asking 'have you noticed anything different to last week?'
2	Some students use comments regularly and when they do it is quite helpful for me, as gives a bit more information
3	Yes useful to have more information about what might be motivating behaviour
4	Had comments enabled however lot of students did not use comments. Teachers find comments very useful, some have said it is compulsory and incentivise students to use them eg. giving chocolates and treats for those consistently using them as positive reinforcement. Younger years more likely to use comments, year 7 & 8
5	Use comments and stresses importance of self-reflection not for teachers to check
6	Uses comments and sometimes when they have a bit more time will write a question up on the board as ask students to respond in the comments about a particular segment. Other times it just has to be a quick check-in.

Key insights

- Comments feature considered very useful by teachers as provides more insights and information into ratings
- Mixed response from students to using comment feature, some teachers observed younger year groups Year 7 & 8 more likely to use comments
- Some teachers using incentives to get students to comment more

Scenario 3a – Support resources for students

You have the option to add a feature where students will receive an email with support resources if their score falls below a certain level. See sample email below. What score thresholds would you consider as appropriate to send a support email to students?



Thank you for checking in. We're here to support you with resources recommended by [REDACTED] College that might assist your relationships with friends.

Having a strong network of friends helps to increase our mental wellbeing.

Check out the following links:

- [7 simple ways](#) to improve your relationships with family and friends
- [Some helpful tips](#) on how to handle arguments with friends and family
- [Other resources](#) from Relationships Australia
- [Kids Helpline](#) 1800 55 1800
- [Headspace](#)

Participant	Response summary
1	Don't use email follow up
2	Have developed customized emails for each segment
3	Uses emails compiled by school, sent if under 3 in any segment
4	Yes use email feature if student scores under 3 in any category gets email that has been compiled by school
5	Uses emails compiled by schools, sent if under 3 in any segment
6	Don't use email feature. Think could be beneficial for younger students

Key insights

- Rating of <3 on any segment used to trigger email to student on that category
- Ability to edit and customise emails is considered important
- Some schools use email regularly to communicate with students whereas others use it very rarely
- Potential to integrate with other school systems requested for example ability to click on button and book a meeting with the counsellor from the email

"And we very much try to shift all the responsibility to students rather than saying we're gonna track you and we make that a very clear distinction. It's more, we're here to provide support when needed. But we are not going to be, you know, watching every single student, individual check-ins" (lyarn user, teacher)

"Would love to know (if students open emails), but yeah, we don't know. We don't know if they open the email. I guess a barrier that we email (is not) the primary form of communication we use." (iyarn user, teacher)

"I think the teachers were happy that something would go out. So, they're saying, you know, if I don't get a chance to get to it, then I know, at least something had gone out to the students." (iyarn user, teacher)

Feedback from students on iyarn

Have you had any feedback or comments from your students on iyarn? In your experience do students seem to find it helpful with wellbeing?

One teacher surveyed a year group to ask about engagement with the platform, of 178 students, 81% of students reported were finding it a good experience while 19% were not. In terms of honesty of responses 58% reported answering honestly all of the time, 35% most of the time and 6% said they were only doing it because they were made to. Teacher felt this was a realistic snapshot of engagement with iyarn in that year.

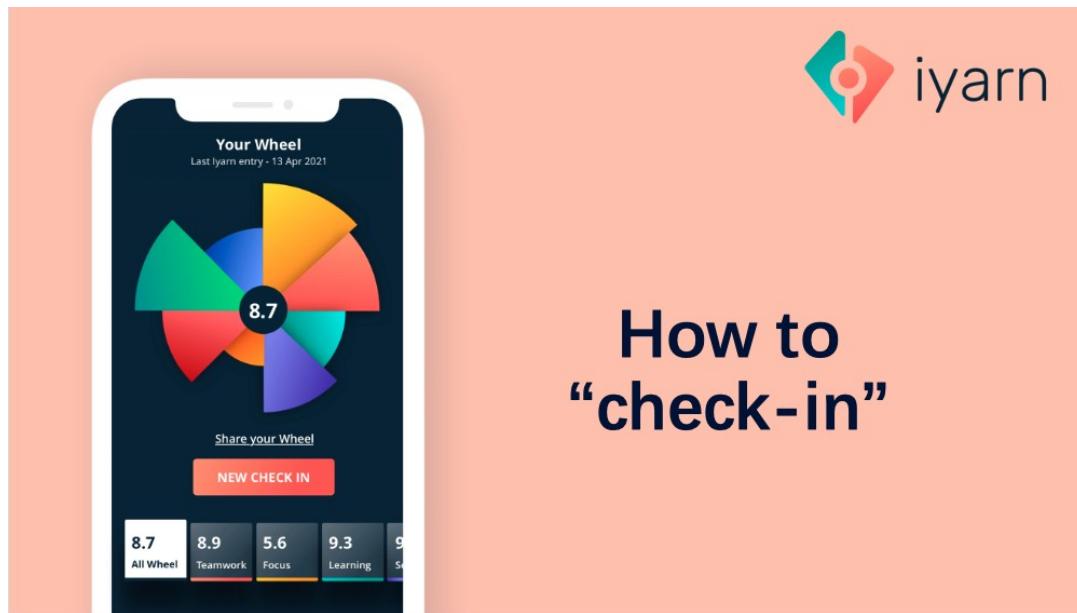
"So the younger groups that I had last year, generally it was quite positive. They would just come into class with the computers and just do it most of the time. They would remind me they'll just be like, oh, we're doing this. It's like, OK, great. And there'll be a there'd be one or two who just you'd say, oh, can you do check in and then just be a bit reluctant to do it, but they would" (iyarn user, teacher)

Iyarn Teacher Interviews – Round Two

The second round of interviews with teachers and school wellbeing staff using the Iyarn platform focused on support resources being developed as part of the research project. This provided a valuable opportunity to get teachers' input on these resources in order to design and develop them to best meet their needs and their students' needs.

Scenario 1: Using Iyarn classroom instruction pack

Would a resource like this be useful to introduce Iyarn to your class? If you are using your own customised segments does it look like something you could modify for use with your classes? Do you have any feedback on the structure, language, content visuals or anything else?



Teachers were asked to review the Iyarn Classroom Instruction Pack slide deck. The tool was developed for teachers and school staff to use as an introduction to Iyarn for students, which explains the purpose of checking in and the basics of how to use Iyarn. The standard segments referred to are the 6 standard segments recommended in section 6 of this report.

- Healthy Body/Be Active
- Friendship and Connection
- Self-Care, Awareness & Positive Emotion
- Learning & School
- Growth, Challenge & Passion
- Giving Back & Community

Participant	Response summary
1	Absolutely useful for teachers as gives a bit of info about each segment and something to think about for each. There is alignment of segments with

	school segments so could easily modify pack. Like visual style and cartoons, colours are good.
2	Loved it. Wish I had it when I was rolling out lyarn with my students. Segments are quite broad. Definitely could adapt slides, be pretty easy to change them. Pictures are good, keep it entertaining. Not too much information. Like the colours.
3	Wish I had this to launch at my school. Gets across the core idea really well, focus on self-reflection for students. Like segments. Like stickers. Good for students to get consistent message across classes.
4	Yes good it is designed for students to encourage them to see it as a tool for them, for self-awareness. Could adapt for school's segments. Visuals are good, could use for a poster to put on wall with main segments and questions.
5	Would be useful for teachers and help get their buy-in. One slide too text heavy. Good to have the segments. Would be good to give to parents too. Well thought through. Visuals good very school kid friendly.

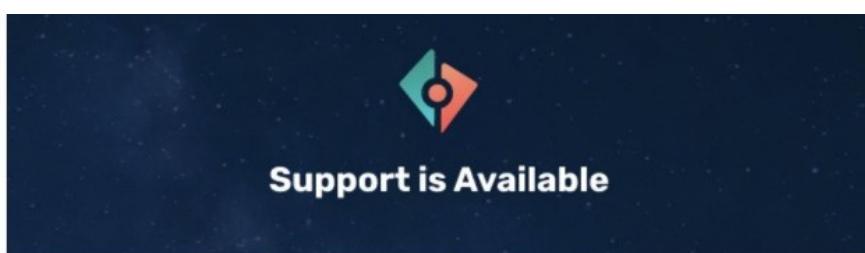
Key insights

- Instruction kit considered to be a useful introduction to lyarn for students and teachers, and potentially parents
- Design was considered age appropriate, fun and engaging
- All respondents felt they could adapt for use with their wheels in their school

"I like how each one's got two slides. So the first one sort of just saying what it is. And then the second one is like questions for the students to ask themselves, which I think is very helpful for some of them because I think some of them students were sort of struggle like, what does it mean? How do I judge myself on friendship and connection or whatever? So I think it's really good." (lyarn user, teacher)

Scenario 2: Student support email

One of your students has been struggling with Friendship and Connection and has been rating this segment under 5 during the check-ins for a few weeks. The student receives the following automated email with some suggested resources and ideas



Good work for checking in on lyarn!

You are getting this email because we noticed you have been rating yourself a bit lower on *Friendships and Connection* lately.

Here are some resources and ideas for things to think about to support you. If you are feeling worried about this please reach out and talk to someone such as a friend, a family member or a teacher. Or you can access a list of confidential support services [here](#).

Please choose which topic is most relevant for you

- Problems with friends
- Problems with family
- Feeling lonely or disconnected

Problems with Friends

[Understanding friendships](#) (the good, the bad and the ugly) - LEARN

An article from [Reachout.com](#) about how to maintain your good friendships, work through a bad friendship and deal with the tough times.

[How to tell your friend they have hurt you](#) - PLAN

An article from [Reachout.com](#) with some tips on what you can do if you feel hurt by how your friend is behaving or treating you.

[The Mate Breakup: 6 ways to make sure you're okay when a friendship ends - DEVELOP](#)

This article from [Reachout.com](#) has tips for how to cope with a friend breakup, including investing in hobbies/other friendships, taking a break and de-escalating, and talking it through.

[Feeling lonely and isolated](#) - LEARN and PLAN

This short animation and article from [What's Up with Everyone](#) talks about how everyone feels lonely some of the time and some things you might try to put things in perspective.

Here are some questions to help you think about challenges with friendships

- What does it mean to be to be a good friend?
- What sort of friends make me feel good about myself?
- What sort of friendships feel more toxic or bad for me?
- Who is one person I might talk to about what is going on and ask for some support?

Did these resources provide you with any strategies that you think would be helpful? If so, how might you apply them and/or integrate them into your routine?

How effective do you think this kind of email might be for supporting a student?

We have identified resources into different impact categories; Learn (Psycho-Education), Lift (Mood Lifter), Plan (Behavioural Activation), Develop (Coping Skills) and Reflect (Reflection Questions). Is this something that might be useful to label for students and/or teachers?

Do your students regularly receive and read emails from the school?

Do you have any feedback on the structure, content, language of this sample email? Is there anything else you would like to add or leave out?

Participant	Response summary
1	Think it's good, goes through different problems with friends then has information about it. Like self-reflection questions. Good prompting to reach out for support. Teachers would appreciate labels for resource categories (Eg. Learn, Plan, Develop). Could also be useful for students, could include in instruction kit. Majority of kids use email, some don't.
2	Always helpful for students to have resources. Resources suggested look good for teenagers. Not sure if categories useful for students (Eg. Learn, Plan, Develop). Only some students will look at emails, maybe about a third. Most students will be using SEQTA and will message teachers through that, would get more engagement with students that way.
3	Yes really useful. Be good to have a link to make an appointment with the counsellor. Good resources, reachout.com. Students don't receive many emails from school, usually use direct messaging system using SEQTA. Categories (Eg. Learn, Plan, Develop) could be useful for students, would need to be explained.
4	Certain groups could be powerful for especially younger years. Older students might just stop putting lower score if know getting an email. Might need to be more targeted for older students Eg. Body image. Categories useful for teachers but not for students (Eg. Learn, Plan, Develop). Email used for student communications.
5	Looks really good. Definitely the sort of thing we were aiming to do (providing resources for students). Like the self-reflection questions. Reliable resources that are kid friendly. Trying to empower kids. Categories (E.g., Learn, Plan, Develop) meaningful for teachers but not so much for students. Highlight resources with visual component (E.g. video, animation) as most appealing for students. Students regularly receive emails.

Key insights

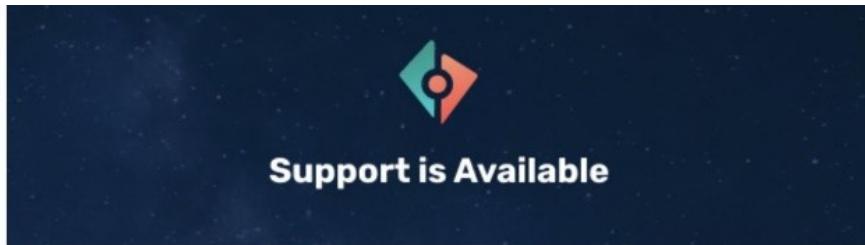
- All respondents see value in automated student email in particular like the self-reflection questions (2 mentions), quality and relevance of resources (3 mentions)
- Most students at these schools regularly receive emails from the school. Some schools use SEQTA for messaging students, would like to integrate Iyarn with this
- Mixed response on the value of resource type categories (E.g., Learn, Plan, Develop) for students. However most felt this would be valuable for teachers if it was explained in training.

"I think I like that that it kind of gives some information, give some resources to have a look at but then also kind of some reflection and thinking about who they could talk to a bit more about that." (Iyarn user, teacher)

"It's good for us to know that they are being sent things that they can just click on and look at in their own time." (Iyarn user, teacher)

Scenario 3: Teacher activity suggestions

You notice your class averages on the 'Learning and School' segment have dropped in the few weeks leading up to exams. You receive an automated email with some suggested resources and classroom activities from lyarn.



It appears your classes ratings for *Learning and School* have been a lower than usual lately.

Here are some ideas for resources and activities for the classroom that might help support students.

Please choose which topic is most relevant for your class

- Motivation
- Workload and organisation
- Exam stress & other crunch periods

Exam stress and other crunch periods

The following website and resources contain suggestions and activities for students for dealing with stress during exams and other crunch periods. These can be adapted for individual or group-based classroom activities.

Exam stress - LEARN

A bunch of resources from Reachout.com including tips, articles and videos on how to deal with exam stress

5 Steps to study success - LEARN and PLAN

This infographic and tips list from Reachout.com gives you some suggestions of strategies for coping during exams and crunch times

How to manage your time - PLAN

Some actionable advice on time management for example goal setting, limiting distractions, taking breaks, setting a finishing time etc.

Perfectionism - LEARN and PLAN

A light-hearted look at perfectionism and how we can put so much pressure on ourselves with a short animation and notes from whatsupwittheeveryone.com

-
1. What are the things that help me to destress?
 2. How might I break things down into smaller chunks so that it seems more doable?
 3. What is the worst thing that could happen if I don't do as well as I might like to?
 4. How can I try to find balance (sleep, exercise, friend time, down time) during stressful periods?
-

How helpful do you think this might be in supporting teachers?

Do you think you might use these resources and questions? If so how might you use them?

Do you have any feedback on the structure, content, language of this sample email? Is there anything else you would like to add or leave out?

Participant	Response summary
1	Fantastic, teachers are often unsure how to address wellbeing issues with students.
2	Looks really good. Great material for teacher to deliver. Resources look really good. Leave out the categories (e.g. Learn, Plan, Develop) doesn't add much.
3	Teachers are often aware if there are issues such as exam stress, may be useful or may not. Resources look more like they are for students. Teachers have limited time in home room.
4	Helpful for some teachers. Don't have a lot of time in home room, or control over longer sessions.
5	May or may not be useful for teachers. Better to have specific data in email, E.g. 10 out of 20 students experiencing increased stress. Giving the data can be really helpful. Make the purpose clearer in email as teachers may get defensive. Maybe opt in/opt out for teachers.

Key insights

- Mixed response from teachers on whether email to teachers would be useful, 3 positive, 2 unsure
- Would be more valuable if included or linked directly to class data and metrics
- Clarify purpose of email is to provide a curated list of pre-vetted quality resources as an option for teachers to share with students or use as a resource for developing activities and engagement
- Consider making an opt in feature with ability to opt out for teachers

"I think often our teachers, you know are saying we noticed these things but then (are) not really sure what kind of how to address it with students. So that's a really kind of simple way and the resources are right there for them. So that's great and give them some things that they can actually do with their, their classes as well." (lyarn user, teacher)

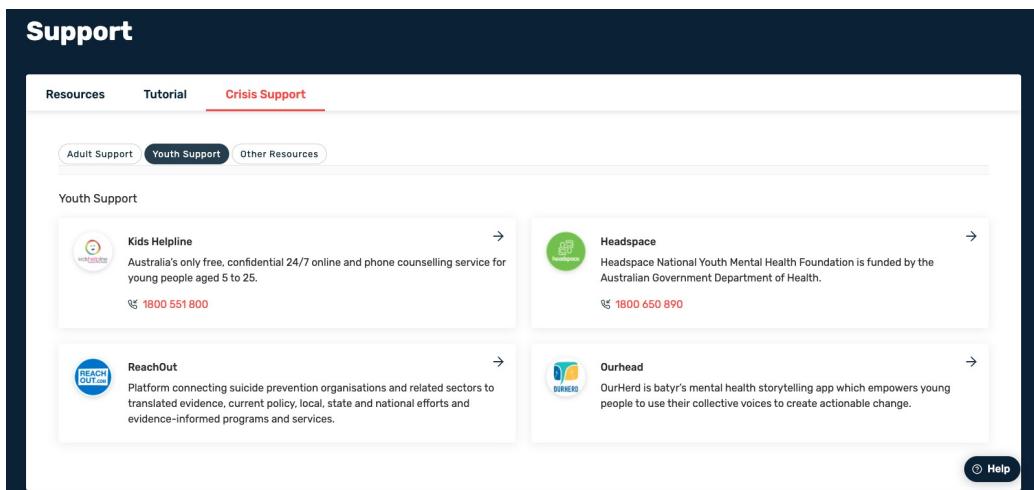
"I think if teachers were getting them all the time, then they're just gonna start to ignore them. But if it was only received one or two (times per term

when there were big changes in in their class ratings I think would be

really helpful. There is time in our form classes in the mornings for teachers to go through things like this so. They could easily click on one of those links and run through it with the class you know." (lyarn user, teacher)

Scenario 4 – Crisis support resources

You notice there is a new feature in lyarn with a link to crisis support services for students under their profile labelled 'Crisis Support'. See screen shot below



Is this something that you think is useful in the lyarn platform? Would you want to customise it in any way for your classes or students?

Participant	Response summary
1	Those resources look good. Would be good to be able to add school support resources in there too.
2	Definitely helpful and always good to have that information available for students. Be good to include ability to link through to school counsellor and book an appointment. Or a check in with your teacher or head of year.
3	Have support resources in SEQTA as well. Like to be able to customise. Ability to connect with head of year, school counsellor or chaplain.
4	Has good having standard links but be really good to customise. Eg. book an appointment with school psychologist. Good to normalise this seeking help.
5	Helpful to have. Consider two separate tabs one for in school hours support (Eg. Talk to teacher, Head of Year, make appointment with counsellor) and one for out of school hours support.

Key insights

- Crisis support page considered appropriate with relevant resources
- All teachers mentioned desire to customise and add links to in school resources and ability to directly message support within school such as home room teacher, head of year and school counsellor

Key themes and observations from teacher survey and interviews

Student age related differences in use of lyarn

- Older students (year 9-12) were reported as being less engaged and more blasé about doing regular check-ins.
- For older students (year 9-12) generally checking in once a week was considered more appropriate and for younger students twice a week.
- Older students perceived by teachers as more likely to know where to get help and access resources.
- Younger students (Year 7 & 8) considered to be more receptive to building a routine and habit checking in and self-reflection (**see report section 6**)
- Introducing lyarn to older students was considered more challenging.

"I want students going from year seven to year 12 to be able to grow in being able to look after themselves and seek the help that they need"
(lyarn user, teacher)

"I would say (it) is a pattern that we are seeing this year as well and the older groups are less willing to use the tool, but the younger groups are embracing it still." (lyarn user, teacher)

"We definitely want to continue with the younger years as the focus to try and establish the habits and so we thought if we can get them in (year) 7, 8 and 9. And when those year 7's becomes year 8's it's habit to year 9 and then what I hope is that when they get to year 10 and 11 the majority of them will continue those habits." (lyarn user, teacher)

Use of lyarn pre-emptively during peak stress periods

- Teachers commented on the regular rhythms for mental health, stress and wellbeing for students during the year E.g. anticipating exam periods and preparing mentally and emotionally for this.
- lyarn provides data and evidence to back up their observations and justify requests for additional resources to support student wellbeing
- Reflecting as a class on lyarn data allows reflection on patterns of stress and behaviour during term and year.
- Following on from this students encouraged to anticipate how they might need to apply coping mechanisms and access other support resources such as tutoring, homework and study centres etc.
- Potential to use lyarn for checking with students if they are in isolation or lockdown.

"And the idea is that we provid(e) a few more fun events for students or ways to engage them. But when we have some data to back it up and say this year group, you can see that for exams they're getting (stressed). Here's what we'd like to do in this is the reason why." (lyarn user, teacher)

"We did start to see a little bit of a trend in the mental health towards the end of term started going down. And so I guess for us that was just confirming what we probably knew already, but it had a bit of data to back it up." (lyarn user, teacher)

"We've got a few kids now that have, you know, had to be home and isolating for a week and they're not seeing friends, not seeing teachers, that's probably a good opportunity to use it. Just to kind of check in with them so that you know, if they are kind of feeling okay." (lyarn user, teacher)

Use of lyarn for common wellbeing issues in year groups

- Teachers commented on regular areas of wellbeing concern with particular year groups and the potential to use lyarn to develop preventative strategies to help students reflect, develop understanding and capacity to deal with some of these issues.
- Some of the areas mentioned by teachers are listed below.
 - o Year 7 – making new friends, dealing with homework, dealing with change, time management, gratitude
 - o Year 8 & 9 – issues with friendships and relationship, sleep, body image, tech/device use
 - o Year 10-12 – Stress, time management, sleep, relationship issues

"It's definitely brought up issues. I found that like, all the year ten and elevens are struggling with sleep, you know, that sort of thing. So we met discussed it and then came up with some resources for the whole year group and then other year groups as well and offer that during lunch and recess time so that kids could come in if they were interested in getting some more information about sleep and good sleep habits and things like that." (lyarn user, teacher)

Use of lyarn as intervention to prevent crisis incidents

- Teachers noted potential for use of lyarn to prevent potential incidences resulting from student mental health episodes
- General preventative benefits of check-ins and self-awareness for student mental health

"I think we probably only had a couple of incidences last year where students did record low scores for safety. I think there was only one that we were unaware of and someone (was) falling into a bit of a mental health episode. And so we were actually able to provide support and I guess put them in the right direction of the psychologist." (lyarn user, teacher)

"That's probably the strength of lyarn is the preventative. It's a preventative tool. So if they can recognize that they haven't really been sleeping or

something's up, we need to just get a little bit of extra help." (lyarn user, teacher)

lyarn as a support for managing student behaviour

- One teacher suggested potential to combine use of lyarn with processes in place aiming to improve student behaviour. For example when student is on a 'yellow card' (which is signed by sponsor in morning and teachers in each class) student could also do an lyarn check-in with a sponsor in the morning and flag which periods they think might be challenging and set some goals for them. Then do an lyarn check-in at the end of the day to see how they went and reflect on this. Integrating self-reflection and goal setting through lyarn with behavioural processes.
- Using morning check-ins to facilitate communication between sponsor with subject teachers and flag student's concerns and prepare accordingly

"Hey I could write down my what I'm nervous about. It might be science period 6 because I know like I've had a run in with that teacher and if I was to say that early enough I could then maybe let the teacher know that, hey, they're coming in. They're really trying to work hard today. They're bit nervous about this class. Can we set something up for them?" (lyarn user, teacher)

Importance of head of year and teacher engagement

- The level of engagement and willingness of head or year and teachers to use lyarn impacts effectiveness of the implementation.
- The support of the head of year can be an important factor in getting buy in from teachers, may also be impacted by relationships between head of year and teachers.

"I think initially (the senior students) were quite interested in it and willing to give it a go. And the person that was in charge of that year group and the teachers that were actually delivering it to the students were less optimistic about how useful it was. So we found that that was a big barrier to success was the buy-in of the teachers that would be using that tool or providing the tool to students." (lyarn user, teacher)

"Our experience has been so much of this relies on the enthusiasm of the teacher, so much of it is, is about delivery. They're all pretty tech savvy (teachers) like they'll understand the technical side of things, but if you get someone that's kind of like just going through the motions, it's going to be for the kids, they'll just say there's something else they have to do." (lyarn user, teacher)

Teachers' concerns about workload and responsibility

- Some teachers and head of year staff reported staff concerns about extra workload and implications around duty of care and responsibility in relation to using lyarn.

"I think they (teachers) are worried that if you know, if they forget to check for something and the student had a one on their safety or their mental health was really low and then they self-harmed at school, would they be

held accountable because they didn't check in on the iyarn?" (iyarn user, teacher)

"Before the training, there is immediate backlash about it's just adding another thing and fair enough, like we are incredibly busy. There's been ongoing conversations about the workloads at the school and there is a few teachers who are kind of say some say no, we don't wanna take on more, and that has been a bit of a sticking point for some teachers." (iyarn user, teacher)

"The school was also very conscious of the fact that they didn't want this to become a very formalised check in. And I guess their biggest fear was, you know, what happens if a student said something, (if) they put three for friends or family and we don't check in with them and then something happens. You know, (are) we then accountable? And so we framed the questions very much on a self-reflection "(Teacher, iyarn user)

Engaging parents with Iyarn

- A number of teachers referred to the possibility of using resources (including Iyarn Instruction Kit and email to students) to engage with parents with Iyarn. For example sending the instruction kit to parents when requesting consent for student to use Iyarn at school.
- One respondent working with Aboriginal students stressed the importance of engaging with families

"It (instruction kit) is a good way of introducing it and I would even say that this would be something that would be great to provide to parents when it comes to getting consent. It's very well thought through. And it's pretty clear what they're trying to get out of it." (iyarn user, teacher)

"A lot of times parents are interested in what those resources so that would be a good group to include as well." (iyarn user, teacher)

"I don't think there are privacy concerns with the kids, but letting the parents know that we're doing this checking that, especially with the indigenous kids, there's a lot of sceptical folks out there that like, oh, hang on, why do you want this private information?" (iyarn user, teacher)

Student attitudes to privacy confidentiality

- In general teachers did not perceive that students had privacy concerns with rating and commenting in Iyarn and in general felt most students responded honestly
- Teachers reported that students' value the anonymity of rating and comments. Students don't want to be seen as 'snitches' but can notify teachers through their ratings and comments that may result in a teacher checking in with them in situations where they would not otherwise (see evidence synthesis)

"Cause the biggest fear is (being) called a snitch or something like that. I'm like, we're not an American prison system. I need to know and the way I find out and is by people letting me know. But something like this, they're not seen as coming up to me in the other students don't see them doing that. But then I bump into them and like, hey, let's talk about this and, you know, yeah. Like I said, a bit of anonymity" (lyam user, teacher)

Chapter 8

Proposed Directions for iyarn

A set of recommendations are presented below, drawing on the evidence synthesised, analysis of other tools and platforms available, expert input (from APPLI), and practitioner input (from teachers who use the tool).

These recommendations are intended to situate iyarn's connection to the evidence base at present, possible gaps/misalignment with this evidence, and opportunities to align and contribute to the evidence base.

8.1 Assumptions

The literature has a number of potential implications for iyarn development. However it is important to remember that any recommendations from literature are based on the specific aims and theories of change being evaluated and investigated in that literature. Iyarn adopts a different model to much of this literature, and therefore the recommendations are not directly transferable.

We have tried to provide these recommendations in a fairly agnostic form, so they are not contingent on specific implementation (and prioritisation), which is largely the remit of iyarn.

8.2 Recommendations

1. Teachers and schools are likely to use default options. By updating the wellbeing wheel to align with the evidence, young people are more likely to be engaged with segments grounded in wellbeing factors.
2. There is evidence, and there are established models, that provide key wellbeing factors, and models for use of apps to support wellbeing, intervention design for young peoples' wellbeing, and wellbeing in schools. Iyarn should provide access to the evidence synthesis that grounds it, to support its users with the tool, and develop shared models for change with partners.

3. UTS suggests that, if possible, intervention emails should provide students with: a selection of different resources (Learn: Psycho-Education (PE), Lift: Mood Lifter (ML), Plan: Behavioural Activation (BA), Develop: Coping Skills (CS), to which we add ‘Reflect’) in order to (1) target different psychological processes and (2) allow each individual to choose the resources that suit their personal needs/preferences
4. Consider approaches to integrate external resources, given user needs. (Easiest is simply providing filterable access to the resources in an interactive tool by segment; updating of the default emails to incorporate key resources and reflections based on segments should also be easy. Harder options would allow more customisation or dynamic access to these resources)
5. Iyarn should consider establishing an ongoing research evaluation, investigating the tool’s impact in schools. This should include use of validated instruments (survey tools) regarding targeted wellbeing factors or mindfulness and motivational drivers, to act as an external measure alongside the iyarn ‘scores’. Ongoing teacher and student interviews are also likely to be useful.

8.3 Key resources (collated from elsewhere, for reference here)

8.3.1 evidence-informed wheel

Based on 6

** Recommendation**	** Iyarn segments covered (*= in top 8, +in student wellbeing wheel) **	PERMAH5 ways		
Healthy body / be active	Sleep +, exercise Health, Sport, Nutrition, gym, healthy body, tech use/digital diet	Health	Be active	Healthy body
Friendship and connection	Friends +, family, Social, relationships, trust, pets, community, romance, people, mentors, coaches, team participation, social support.	Relationships	Connect	Social emotional health
Self-care, awareness, and positive emotion	Mental health +, Happiness, Self Care, Energy, wellbeing, mindfulness,	Positive emotion	Take notice	Self care
Learning and school	School +, learning +, homework +, work, organisation, job,	Accomplishment	Knept learning	School learning
Growth, challenge and passion	Activity +, Hobbies, growth, personal development, challenge, comfort zone	Engagement	Keep learning	Personal development
Giving back and community	Spirituality, gratitude, love, giving back, contribution, teamwork, help, Savings, holidays,	Meaning	Give	Community

8.3.2 Intervention design

Based on 6.3, and 5.1 we highlight the following key issues, alongside a need to support schools in the needs assessment, evaluation, and ongoing training regarding wellbeing 5.2.

The messaging and resources provided in intervention emails should be straightforward, but not overly prescriptive and instead provide a foundation for paired exercises which allow students to clarify their own values/motivations, and develop mindfulness and emotional regulation skills.

Both literature and teachers noted that often it isn't clear what to do with checkin information, and resources can be quite information heavy without providing strategies. We suggest drawing on Bakker et al's review of mental health smartphone apps, in which Bakker et al (2016) recommend that individuals be provided with a range of activities that are actively engaging (as opposed to passive), as below, using terms we have provided (Lift, Plan, Develop, Learn; to which we add 'Reflect'):

- **Lift: Activities that directly enhance mood improvement** (Mood Lifters - ML): these are behaviours which have been shown to directly improve mood, such as exercise and listening to music.[1]
- **Plan: Behavioural Activation** (BA): encourages goal-setting and the planning of activities that will expose individuals to new opportunities and allow them to develop skills in order to (1) improve their sense of competence and self-efficacy; and (2) break cycles of avoidance and inactivity that perpetuate low moods, the reliance on mood-dependent behaviours and "play a key role in the development of anxiety, depression, and many other psychological disorders".[2]
- **Develop: Coping Skills Training** (CS): resources which support the development of coping skills are "the most direct way of improving self-efficacy", specifically Coping Skills Efficacy (CSE). CSE refers to "an individual's perceived ability to effectively cope with adversity and stress", and is associated with: reduced avoidance behaviours and "problematic maintenance cycles"; improved mental wellbeing; and reduced health impacts resulting from stressful events. Bakker et al (2016) also suggest that it is beneficial to support individuals to develop a varied repertoire of CS, to allow them to choose which strategies suit them best and improve their sense of choice and control which should, under SDT, "feed intrinsic motivation toward self-improvement". [3]
- **Learn: Psycho-educational resources** (PE): "Psychoeducation, an integral part of CBT, presents clients with mental health information in an attempt to teach them about the psychological processes underlying their distress and inform them of resources available to manage it". The provision of PE resources was found to have preventative and community-level benefits: improving attitudes toward mental health issues and supportive behaviour among recipients.[4]

Based on this theory, UTS suggests that, if possible, intervention emails should provide students with:

1. a selection of different resources (Learn: Psycho-Education (PE), Lift: Mood Lifter (ML), Plan: Behavioural Activation (BA), Develop: Coping Skills (CS), to which we add ‘Reflect’) in order to (1) target different psychological processes and (2) allow each individual to choose the resources that suit their personal needs/preferences.
 2. **Reflect:** a set of reflective questions to accompany these resources, in order to support students to refine their own values, relate the information provided to their own context, develop their competence and reflect on the benefits of integrating any useful strategies into their routine.
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[1] David Bakker and Nikki Rickard, ‘Engagement in Mobile Phone App for Self-Monitoring of Emotional Wellbeing Predicts Changes in Mental Health: MoodPrism’, *Journal of Affective Disorders* 227 (1 February 2018): 9, <https://doi.org/10.1016/j.jad.2017.11.016>.

[2] David Bakker et al., ‘Mental Health Smartphone Apps: Review and Evidence-Based Recommendations for Future Developments’, *JMIR Mental Health* 3, no. 1 (1 March 2016): 10, <https://doi.org/10.2196/mental.4984>.

[3] David Bakker et al., ‘Mental Health Smartphone Apps: Review and Evidence-Based Recommendations for Future Developments’, *JMIR Mental Health* 3, no. 1 (1 March 2016): 10, <https://doi.org/10.2196/mental.4984>.

[4] Bakker and Rickard, ‘Engagement in Mobile Phone App for Self-Monitoring of Emotional Well-being Predicts Changes in Mental Health’, 10–11.

8.3.3 Key teacher insights

From 7

- Areas for further support/training: Understanding and responding to whole class iearn information (4 mention), and to individual information (2 mention).
- Ways tool is used vary with individual and class support, and some schools using a whole-school approach. Paths for intervention also vary somewhat, with the year leads (head of year) being most common path.
- Participants mentioned different ‘thresholds’ for intervention:
- Significant drops (is there an automatic flag for this?)
- <=3 for intervention
- <5 for a conversation
- Schools are using custom emails.
- Desired resources include:

- activities,
- integration with school system eg for counsellor referral.
- Note the tension around linking to some external resources which may ‘see it as bigger problem than it is’.

Ages and year groups different approaches, greater customisation as older Eg younger students more responsive to emails with resources

Building routine and patterns of behaviour in younger years

Teachers concerns about time to do checkins and check them

What do teachers and wellbeing staff see as the challenges or weaknesses of Iyarn?

- (Not) being able to incorporate resources for students to access
- Students can be afraid to be honest as it is attached to their name
- Getting buy-in from students that this for them, not for us to follow up
- Students not fully engaged with tool or engaging meaningfully (2 mentions)
- Additional workload for staff
- Not able to obtain relevant/useful data

What features would teachers and wellbeing staff suggest to improve Iyarn?

- More ability to manage data (Eg. male vs female, comparisons across classes and year groups)
- Incentives and rewards that encourage students to keep checking in (2 mentions)

‘I think a lot of kids are driven by goals/outcomes/rewards and maybe the app could incorporate some kind of reward system once completed. It could even be something entertaining for them to watch on the app once they complete it. Or a token they get each check in which adds up (incentive based) and the group celebrates after one month/one term of checking in.’ (Teacher, Iyarn user)

8.3.4 Key issues from evidence synthesis

You’ll see below that these recommendations (key issues largely highlighted in red) are reflected across the teacher work and wider analysis of the evidence.

Evidence synthesis 1: Checkin apps for wellbeing

What are the UX/design implications for high efficacy MH apps?

Research regarding the user interface and design of MH apps for young people is summarised below, alongside a preliminary assessment of iyarn against these key implications (note these are primarily from reviews of mobile apps).

Design Implication	Iyarn status	Comment
Automated tailoring (using self-report, self-monitoring, and prediction of which features users are likely to engage with)*		Less suitable in school context.
Reporting of thoughts, feelings, or behaviours: self monitoring to support emotional-self awareness and reflection. Keep self-reports structured in a simple interface to allow quick reporting*		Core function, with easy checkin model.
Allow user to see feedback-focused progress eg. Chart of moods/data*		Unclear status
Build in recommended activities, including: Activities that directly enhance mood (e.g. exercise, music); engage behavioural activation (setting goals, planning activities); provide coping skills training; give mental health information; with real-time engagement.*		Priority area
Link activities explicitly to the specific issues identified*		Priority area
Encourage nontechnology-based activities		(will be part of above responses)
Try to use internal rather than external triggers to engage, with a log of app use (promoting personal investment) to promote repeated engagement*		Explicitly in iyarn model to build student routine and culture. Requires evaluation over time.
Language to be simple, concrete, confident and hopeful*		Largely present, may need some framing around segments and support resources
Link to support services with optional 'Get help' 'Learn more' prompts*		Two features, (1) general support (as above) other is crisis support-to discuss.
Evaluate – use other measures, EMA, app use data, etc. to measure impact*+		See below

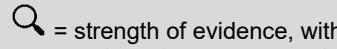
*Mental Health Smartphone Apps: Review and Evidence-Based Recommendations for Future Development, (Bakker et al., 2016), specifically targeted at MHapp development; Note their first 3 major recommendations: Use of CBT, addressing anxiety and low mood, and design for non-clinical populations are not covered here; crucially, the first is focused on use of an evidence-based framework – which iyarn has, albeit not CBT – the second is largely around clinical populations; the third is core to iyarn's approach.

+ Noting also the provisos, and limitations in systematic evidence syntheses thus far noted above, and in Punukollu and Marques (2019), who specifically reviewed evidence around apps for young people.

What are potential implications of these findings for iyarn?

This table is intended to provide an overview summary of the evidence synthesis, mapping the key takeaways to the driving questions.

Explanatory note.

 = strength of evidence, with 3* indicating very strong evidence (e.g. from systematic reviews, meta-analyses, and multiple robust randomised control trials); 2* indicating multiple experimental or quasi experimental designs; and 1 * other studies such as observational or correlational work.

is used to indicate a positive effect found, or supportive evidence.

is used to indicate a negative effect found, or non-supportive evidence.

is used to indicate the evidence is unclear or/and underexplored or/and cannot be addressed using quantitative research.

This approach is informed by van der Bles et al.'s discussion (2019)

Driver	Evidence	Comment
Do wellbeing check-in apps provide accurate information?		Realtime class integration improves the likelihood of ongoing engagement and thus positive wellbeing outcomes. Checkins suffer from safe measurement issues as other self-reports & issues around what the target constructs are.
Do wellbeing check-in apps support awareness and reflection?		self-monitoring or check-ins that take place in real-time and are based in the environment relevant to the behaviour or experience is more accurate and potentially effective (than reflecting afterwards for example).
Do wellbeing check-in apps supporting building routines?		Apps can support routines especially when integrated into other aspects of life (such as classroom routine and culture)
Do wellbeing check-in apps contribute to positive wellbeing outcomes?		Positive small effects, stronger for general wellbeing than specific disorders, with provisos in evidence as below
Do wellbeing check-in apps support teachers to support their students?		Combining online with face-to-face engagement supports iyarn's approach to classroom-based check-in practices.
What are the key concerns and preferences for young people in using check-in apps?		Area for ongoing exploration. Students value privacy and autonomy, must be seen in context of needs, and regulatory environment.

Area of exploration and future evaluation for iyarn:

Issue	Implication
There is a gap in the research in the area of using technology for regular check-ins in schools that focuses on wellbeing and resilience rather than behaviour management and mental health interventions. Monitoring for early support and intervention in mental health for students is another potential valuable application of the tool. There is an increasing demand for monitoring and responding to mental health challenges and development of wellbeing frameworks in schools (see reference above to Scottish and Australian examples).	iyarn should consider establishing an ongoing research evaluation, investigating the tool's impact in schools. This should include use of validated instruments (survey tools) regarding targeted wellbeing factors or mindfulness and motivational drivers, to act as an external measure alongside the iyarn 'scores'. Ongoing teacher and student interviews are also likely to be useful.
Teachers in most of the studies said they feel unprepared and undertrained to deal with monitoring wellbeing and mental health for their students (See Teacher Support for further details).	The priority UX area around support resources provides a useful step forward here, these resources must consider how teachers will interact with them and students as part of their efficacy.
A key recommendation in the literature is evaluation of any tool against its intended outcomes	

Chan et al (2015) reviewed guidelines for other types of health app, and provide a set of principles for patients and providers of primarily adult-clinical-population-focused mental health oriented apps; while this target group, and the specific app context is somewhat different, these may be informative. Verbatim, they are:

1. "Usefulness dimension
 - a. Validity and accuracy: Does the app work as advertised?
 - b. Reliability: Will the app consistently function from session to session?
 - c. Effectiveness: Is the app clinically effective—with demonstrated improved outcomes—for the target population, disease, or disability?
 - d. Time and number of sessions: What time is required for the user to derive some benefit from the app?
2. Usability dimension
 - a. Satisfaction and reward: Is the app pleasurable and enjoyable to use, or does it discourage repeat use?
 - b. Usability: Can the user easily—or with minimal training—use and understand the app?
 - c. Disability accessibility: Is the app usable by those with disabilities (e.g., incorporates screen readers for blind users, closed captions for the hard-of-hearing and deaf communities)?
 - d. Cultural accessibility: Does the app work effectively with the user's culture (as defined by factors such as ethnicity and language)?
 - e. Socioeconomic and generational accessibility: Does the app take into account socioeconomic status and the user's age, with potential implications for the user's digital health literacy?
3. Integration and infrastructure dimension
 - a. Security: Are the app's data encrypted on the device and/or in transmission? Are they anonymized, or do they contain personal health information? If so, what do they do?
 - b. Workflow integration: Does the app work within its user's workflow?
 - c. Data integration: Does the app share data with other apps, networks, and medical record systems?
 - d. Safety: Does the app take into account patient safety, such as suicidality or homicidality?
 - e. Privacy: Does the app contain a robust privacy policy addressing the type of information collected, rationale for collecting information, sharing of information, and user controls?"

Evidence synthesis 2: Teacher role and experience

What are the potential implications of research on teacher experience for iyarn?

The literature has a number of potential implications for iyarn development in terms of how to best support teachers' experience. However it is important to remember that any recommendations from literature may be influenced by the particular context of the study or research (school, country, pastoral care systems) and therefore some recommendations might not be directly transferable.

Teacher experience support	Iyarn status	Comment
Teacher input into the design and implementation of program	✓	Through consultation and research
Training for staff in using the platform with sample data, case studies, and AV resources, reflecting real world school scenarios	⌚	Some case studies & video training available on website. Develop 'what if' scenarios for what to/not to do.
Support from colleagues, school administration and community	⌚	Unclear status, likely to vary by school.
Evidence of efficacy of program and interventions	🚫	Priority area
Adaptability of program or intervention to accommodate time restrictions and shifting priorities	✓	Check-ins can be done quickly and at different time intervals
Training resources that can be adapted to own content	⌚	Some interface adaptation available (naming segments, scale). Support resource customization a priority
Training that is expert-led, evidence-based and accredited	🚫	Additional research and quantitative studies required
Training on working with parents and well as students	⌚	Not current priority?

(Recommendations drawn from reviewed literature, and particularly summaries available in Shelemy et al., 2019)

What do teachers want to support them to promote wellbeing and mental health?

A resource that may be particularly useful, and which iyarn is just one part of, is the checklist developed by Shelemy, Harvey, and Waite (2019) (note due to copyright restriction I can't include it here but it's a tickbox yes/no 17 question survey asking "Does your school staff mental health training include..."). The paper is freely available at the link below, and the table can be viewed on the final page of the PDF.

Checklist from: Shelemy, L., Harvey, K., & Waite, P. (2019). Supporting students' mental health in schools: What do teachers want and need? Emotional and Behavioural Difficulties, 24(1), 100–116. <https://doi.org/10.1080/13632752.2019.1582742> - available open access at https://centaur.reading.ac.uk/82380/1/Supporting%20students%27%20mental%20health%20in%20schools-%20what%20do%20teachers%20want%20and%20need_%20%20Revised%20manuscript.pdf

What are potential implications of these findings for iyarn?

This table is intended to provide an overview summary of the evidence synthesis, mapping the key takeaways to the driving questions.

Explanatory note.

- = strength of evidence, with 3* indicating very strong evidence (e.g. from systematic reviews, meta-analyses, and multiple robust randomised control trials); 2* indicating multiple experimental or quasi experimental designs; and 1 * other studies such as observational or correlational work.
- is used to indicate a positive effect found, or supportive evidence.
- is used to indicate a negative effect found, or non-supportive evidence.
- is used to indicate the evidence is unclear or/and underexplored or/and cannot be addressed using quantitative research.

This approach is informed by van der Bles et al.'s discussion (2019)

Driver	Evidence	Comment
What do teachers understand regarding mental health and specific needs?		-Research around teacher mental health literacy and self-efficacy has increased in recent years with increased incidence of student mental health challenges in schools. -Studies in the UK, US, Canada and Australia show an inconsistent approach to pre-teacher and in-service teacher training and support with a general lack of mental health literacy confidence and skills.
What is the evidence around teacher support for young people's mental health?		Reasonable evidence suggest teachers increasingly see support for young people's mental health as part of their role; however many lack the confidence, knowledge and skills to provide this support.
Do teachers know when to help and how to monitor outcomes?		A range of constraints effect teachers' ability and confidence to intervene in students wellbeing and mental health. These may include time constraints, lack of training and skills, lack of support and clarity of roles, poor data literacy. Teachers' mental health literacy has not been a priority and training has been ad-hoc. There is very limited evidence on how they monitor outcomes.
Do teacher interventions help?		Teacher interventions at class and individual level have been found to be effective in promoting help-seeking behaviour, early intervention and referral for students
What is the evidence around the impact of individual vs class interventions for wellbeing?		Whole-school positive education supports wellbeing. Class-based interventions can reduce stigma and promote help-seeking behaviour. Individual intervention supported for early-intervention and referral. Little evidence on comparison of relative impact, class-based tend to be preventative and individual in response to a student perceived to be struggling with mental health.

How do teachers conceptualise mental health data?		Teacher data literacy in general has not been a priority for teacher education or professional development. With more data-driven reporting and assessments this is becoming increasingly important. There is little evidence around mental health data literacy or experience for teachers.
What are the right thresholds for individual/class action		<p>Area for ongoing exploration. There is little evidence or research on current thresholds for referrals or intervention for individual or class action and which from anecdotal evidence are often in response to a crisis.</p> <p>See resources in our segment mapping for approaches to evaluation, which may inform this.</p>

* Most research on teacher experience is based on survey and interview methods.

Area of exploration and future evaluation for iyarn:

Issue	Implication
There is a large degree of inconsistency in teacher training and capability around student wellbeing and mental health literacy. Teachers recognise the increase in mental health challenges for their students but often feel unprepared or lack confidence in supporting students. Data may not be used effectively to support wellbeing or wellbeing literacy.	While iyarn is a 'stand alone', it is used in wider systems; training should support effective practice, while being flexible to the particular contexts. Opportunities may exist to integrate resources to improve mental health and data literacy for teachers using an experiential learning approach.
Teachers' report experiencing increasing pressures and stress leading to mental health challenges. Teachers require additional support and resources in order to care for their own mental health before they can care for their students.	An extension of the teacher check-in tool might provide resources and suggestions to support teachers' mental health and wellbeing
Teachers' experience challenges in implementing wellbeing and mental health programs due to a lack of training, time constraints and the need to have flexibility to adapt to changes in the school environment and timetable Programs and resources that involve teachers in the design and implementation plan tend to have more consistent and higher quality implementation	Iyarn has strength in the ability to use it flexibly inside or outside of the classroom with little time commitment required from teachers. Involving teachers in planning how they might want to use the platform and planning implementations collaboratively may improve consistency and commitment of teachers. Input into design and feature development by teachers is likely to increase usability and improve implementation.

Evidence synthesis 3: Young people's preferences and concerns

What are the UX/design implications lyarn?

Design Implication	lyarn status	Comment
Students actively involved in co-design of platform		Involvement in expression of segments. Wider input in design, or implementation unclear
Clear messaging around privacy and confidentiality		Priority area*
Ability for students to hide or show comments when reviewing past entries		Consider this feature for future
Ability for students to modify colours and look and feel		Consider this feature for future
Include one click buttons to request support from counsellor or teacher		Priority area
Include links to self-help resources in platform		Potentially integrating from resources bank developed for emails
Information for parents about their children's use of lyarn and links to reliable resources for parents such as Reachout		Increase information for parents as introduction to lyarn and blog posts
Enabling customisation of segments for students		Currently available with school support

*lyarn may wish to create a simple 'duty of care' document for teachers, parents, and young people to understand policies and obligations in interaction with the tool, and may take some inspiration from the reachout model: <https://schools.au.reachout.com/articles/reachout-duty-of-care-framework>

What are potential implications of these findings for iyarn?

This table is intended to provide an overview summary of the evidence synthesis, mapping the key takeaways to the driving questions.

Explanatory note.

= strength of evidence, with 3* indicating very strong evidence (e.g. from systematic reviews, meta-analyses, and multiple robust randomised control trials); 2* indicating multiple experimental or quasi experimental designs; and 1 * other studies such as observational or correlational work.

is used to indicate a positive effect found, or supportive evidence.

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is used to indicate the evidence is unclear or/and underexplored or/and cannot be addressed using quantitative research.

This approach is informed by van der Bles et al.'s discussion (n.d.)

Driver	Evidence	Comment
What are key concerns for 12-15 year age group, including around privacy?		General research on the key concerns for young people aged 12-15 has a strong foundation, however given the rapid changes with issues such as climate disruption and COVID-19 this research needs to be constantly reviewed and updated, particularly with regards to the impact on wellbeing and mental health. There is some research on the concerns and perspective of young people in using wellbeing and mental health apps, however specific evidence regarding students experience of issues such as privacy and confidentiality in self-monitoring apps in schools is very limited.
What are the key considerations for parents in giving consent to their children engaging with digital wellbeing and mental health programs in school.		Limited research could be found regarding parents considerations of consent. confidentiality and this could potentially be an important area for iyarn to understand given parent consent is essential for students to use the platform at school
How can shared resources and information between parents, teachers and students help to build relationships to support student mental health		Program based approaches (across school communities, with a systematic implementation) are well supported, however the role of technologies and use of checkin apps to foster these has not been well explored yet.

Area of exploration and future evaluation for lyarn:

Issue	Implication
There is a lack of research and evidence of students experience of using wellbeing tools such as lyarn in a school setting Exploring students' perspective of using wellbeing, self-monitoring tools in a school setting in particular with regards to privacy, trust and impact on help seeking behaviour could be valuable	Additional research and evidence of students' experience could contribute to considerations of how to develop the tool to continue to meet the needs of students within a school setting. It could also inform the use of the platform by young people outside of a school setting.
The role of parents in supporting young people's mental health and wellbeing in programs run within school time has limited research available	This research could be valuable to understand any potential barriers to consent from parents as well as providing a coordinated approach to support for young people across their networks

Some key bibliography

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For an additional slice of the literature and issues around use of digital technologies in wellbeing and mental health work with young people see:

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Chapter 9

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