Overview:

Mobile devices can be found in the hands of every person from every walk of life, and often from a very young age. While the heavy use of technology and some apps and social platforms have been studied to be harmful for young developing minds, the technology can also be applied to discover and improve the welfare and performance of young individuals. This project concept is to develop an app for school students to provide feedback that can be collected by teachers and the school for addressing issues with students’ social, psychological, and physical wellbeing; and in turn, improve learning ability and general health. The app will simply be referred to herein as Student Survey.

Motivation:

There are approximately 2.2 million primary and 1.6 million secondary school students currently attending schools across Australia\*. While many of these students are from well balanced households, come from healthy families and have stable social networks, there are a significant proportion of students that arrive at school each day in a far from ideal frame of mind for learning. A considerable proportion of students arrive at school each day tired, hungry, demoralised, discouraged, alienated, anxious and even traumatised, yet regardless of these conditions are expected to perform to the best of their ability in the classroom.

Proposal:

The Student Survey app will be developed to run on Android and iOS based mobile devices and deployed to all students in a school from the age they are permitted to have access to mobile devices. This age is becoming increasingly younger as parents feel a sense of security to have direct communication channels with their children during the day. In the near future this could be as early as Primary Grade 3 or 4.

The app will present children with a series of five or six simple questions aimed at gathering feedback on various aspects of the child’s wellbeing. The survey would be prompted during roll-call and questions may include if the student is feeling tired, had breakfast that morning, feeling happy and motivated, experiencing any bullying and so on. The app will present these questions to students with emoji icons from a scale of 1 to 4 or 1 to 5. The questions may also change or alternate during the week to survey various aspects of wellbeing, while always maintaining the short five to six question format.

The student devices will send their survey results to the teacher’s device, which will display aggregated results. Responses will be anonymous to protect the identity of children. Student’s devices will be linked to the teacher’s device through an in-app QR code scanner, where students scans the QR code displayed on their teacher’s device to link where the results will be sent.

Teacher’s devices are then linked to a school administrator’s device, that would be monitored by the principal, deputy, or other delegated person which can monitor the broader results via a dashboard view of the aggregated data. The admin device can display graphical information in pie charts, bar graphs and other easy to read formats. The idea is to enable the easy identification of areas of concern, as well as trends, changes over time, and developing patterns to be addressed prior to becoming more significant problems and performance barriers.

The school administrator’s app can also provide benchmarking information against other schools within the region, state and country. This would require a centralised cloud-hosted database where data from all schools would be collected, processed, and statistics securely shared. To maintain security and segregation between end user devices (students & teachers) and the central database, only the school administrator’s devices will send aggregated results to the cloud-hosted database.

Resources:

The following functions and skills sets are required for development and operation of the service, some may be combined into a single role:

* MD – Business owner and manager, product manager and roadmap visionary, development lead, team manager (full time).
* Paediatric Psychologist – Subject matter expert for developing survey questions and interpreting response data (consultant).
* Application Developer(s) – Design and develop the application for iOS and Android, mobile and tablet devices, may require one or more developers (initially full-time, ongoing possibly part-time).
* Systems Administrator – Responsible for infrastructure, servers, backup, security, internal systems and applications, user accounts and access (full-time).
* DBA – Responsible for management and maintenance of the database where response data is to be collected, stored, and mined (part-time).
* BI/Data Analyst – Development of reports and extraction of information and statistics, could be incorporate into DBA role (part-time).
* Sales and Marketing – Manage product promotion, interact with customers to generate leads and sales (full-time).
* Project Manager(s) – Manage deployments and conduct/organise training, relay feedback and act as liaison between customers and internal development (one full-time, additional on contract).
* Finance Manager – Manage business accounts, payments, tax requirements, perform payroll duties (part-time).

Outcomes:

Once there is adequate uptake of the application by a number of schools, the success of the project can start to be measured. The statistical data can initiate programs to strengthen areas of concern, while teaching methods and daily routines can be adapted to improve attentiveness and comprehension. Macro data can be used by various state education boards to run regional and state wide campaigns targeting areas for development. Ultimately the feedback from parents and front line teachers will be key to identify improvement in the wellbeing, behaviour, and classroom performance; which subsequently should reflect more positive results in school assessments and broader NAPLAN testing.

\* <https://www.acara.edu.au/docs/default-source/default-document-library/national-report-on-schooling-in-australia-20170de312404c94637ead88ff00003e0139.pdf?sfvrsn=0>