Alverno Heights Academy

Student Emotional Wellness Program: 2023-2024 Pilot Phase
Submitted by the CGU Games & Interactive Technology Laboratory

Overview

Summary:

The Games and Interactive Technology Lab (GIT Lab) at Claremont Graduate University (CGU) will partner with Alverno Heights Academy to pilot an emotional wellness program for 7th and 8th grade students during the 2023-2024 academic year. This project involves the implementation of specific features of a gamified digital application , Finch, to encourage prosocial behaviors, improve self-efficacy, and boost self esteem. Students will participate in the program during regular school hours. The program curriculum and subsequent evaluation will be conducted by the GIT Lab with support from Alverno Heights Academy staff.

Background:

The GIT Lab employs students, alumni, and staff from the Applied Cognitive Psychology: User Experience program at Claremont Graduate University, providing graduate students with opportunities to apply and develop their skills in real-world contexts under the guidance of seasoned professionals.

Alverno Heights Academy staff are deeply committed to the well-being and mental health of their students. This commitment has resulted in a detailed set of desired outcomes based on the school's own observations and alignment with its institutional values. Alverno's top priority is to improve the emotional wellness and interpersonal behaviors of current students. To determine which constructs to focus on, five factors were considered: 1) Alverno's well-being priorities, 2) The available and applicable features of the Finch app, 3) The constraints of time and resources, 4) The ethical considerations inherent in conducting such a study, and 5) The practicalities of experimental design, such as statistical power and feasibility. Note that this is the pilot phase of the emotional wellness program, and it can be further developed over time based on initial findings. Taking into account these considerations, the GIT Lab has prioritized three constructs for evaluation: prosocial behavior, self-efficacy, and self-esteem.

Prosocial behavior: Actions such as helping, sharing, caregiving, comforting, and cooperating. Engaging in prosocial behavior has been linked to greater well-being (Piliavin, 2003).

Self-efficacy: A person's belief in their ability to control their own behaviors or succeed in a given situation (Bandura, 1977).

Self-esteem: An overall assessment of one's value or self-worth.

> Note: Self-efficacy and self-esteem are two distinct constructs. While self-esteem may influence a person's belief in their abilities (e.g., "I believe in my ability to accomplish challenging things, so I'm sure I can run a marathon!"), self-efficacy refers to belief in one's ability to perform specific procedures needed to succeed in a task, and is often dependent on prior experience with domain relevant tasks (e.g., "Even though I don't know anyone like me who has completed a marathon, I can figure out how to do it because I have succeeded at many athletic challenges!").

It is well-established that prosocial behaviors have a positive effect on well-being. (Piliavin, 2003). Specifically, prosociality has been associated with improved self-efficacy across the lifespan (Caprara & Steca, 2007). Similarly, it is thought that prosocial behaviors may improve self-esteem in adolescents (Johnson et. al., 1998). Self-esteem and self-efficacy are important factors in healthy adolescent development, strongly predicting academic performance (Bassi, Steca, Fave, & Caprara, 2007) and satisfying social relationships (Harter, 2003).

Prosocial behaviors are powerfully linked to life satisfaction in adolescence. This is substantiated by research on prosocial actions and relationships: engaging in prosocial acts not only nurtures friendship quality but also exerts a direct and meaningful impact on mental health. By fostering connections with peers through shared acts of kindness, we can effectively mitigate anxiety and depression, bolstering emotional resilience during this critical developmental stage (Son & Padilla-Walker, 2020).

Tools

Finch is a self-care mobile application designed to help users feel prepared and positive, one day at a time. Users take care of a digital pet by tracking their self-care behaviors. Finch offers a wide variety of features to support emotional well-being, physical health, and stress management, among other aspects of self-care. Finch has offered to partner with Alverno Heights Academy and the GIT Lab at CGU by providing free access to the premium features of the app to Alverno students for the duration of the program. The use of the app by students will be guided by GIT Lab to focus on specific features that relate to promoting prosocial behaviors.

A Kinder World is an emotional wellbeing app designed to help users build resilience and explore their own emotions. A Kinder World offers mindfulness features, which will be provided to students in the control group. This control group will demonstrate whether self-esteem or self-efficacy can improve without prosocial curriculum.

Although the pilot phase of the wellness program will focus on usage of Finch features to improve outcomes via promoting prosocial behaviors, students in the control group may still benefit from use of A Kinder World. Future iterations of the wellness program may include features from both applications and other digital experiences.

Anonymous data will be collected from the students about their experiences with A Kinder World and Finch. A research report will be shared with Alverno Academy for consideration of their own well-being initiatives. A Kinder World and Finch will receive the same data, as well as satisfaction related data, both specific to their app. This data may be used by the teams to improve the experiences of the applications for users in the 7th-8th grade age range.

Methods

The Wellness Program will span over a total of 8 weeks, 2 days per week, and 10 minutes per day.

The following research plan outlines the content, structure, and timeline of the proposed emotional wellness intervention of the Alverno Heights Academy, which will be employed during the fall semester of the 2023-2024 academic year. This strategic plan draws inspiration from robust research on emotional well-being in late childhood and early adolescence. Leveraging insights from the GIT Lab's preliminary feature analysis of gamified mental health and wellbeing mobile apps, particularly those centered around nurturing a virtual 'pet' as a means of self-care, we are poised to amplify the positive influence of prosocial behaviors on adolescent wellbeing.

Finch was chosen for the experimental group because of its interactive gameplay and wide breadth of features and goals ranging from social, health, cleanliness, creative and sleep. Based on the GIT Lab's preliminary feature analysis, Finch exhibited high performance in addressing user needs in well-being and life skills. The app A Kinder World was chosen for the unstructured group so that all of the students are provided with emotional well-being resources while allowing the GIT Lab to confidently assess Finch's effect on the structured group's prosocial behavior, self-esteem, and self-efficacy. A Kinder World exhibited strengths in short wellness sessions, engaging and low-maintenance design, and its effectiveness in routine building.

To further strengthen this vital connection between prosocial behaviors and wellbeing, the Alverno Wellness Program will integrate the following strategies for the experimental group:

- **Prosocial Goals:** Finch will introduce collaborative activities that encourage students to work together to achieve prosocial goals. This collective effort will reinforce a sense of community and amplify the impact of their actions.
- **Tracking and Rewards:** Finch incorporates a dynamic tracking system that monitors users' goal completion (i.e., prosocial efforts) and their resulting positive outcomes. Virtual rewards, badges, and progress levels will acknowledge their contributions, motivating sustained engagement.
- **Educational Insights:** Interactive content within the app will shed light on the science behind prosocial behaviors and their profound influence on emotional wellbeing. This educational component will enhance users' understanding and commitment to making a difference.
- **Reflection and Impact:** Regular opportunities for users to reflect on their prosocial actions and the impact they've had will deepen their connection to the positive outcomes generated by their actions.

Research Questions:

1. Will students exhibit an increase in prosocial behavior by the end of the Wellness Program?
2. Will students exhibit an increase in self efficacy and self esteem at the end of the Wellness Program?

Tasks

App introduction

The Wellness Program will begin with an introduction to Finch and the planned tasks for the Alverno Heights Academy staff one to two weeks prior to intervention. Students will be given permission slips to be signed by their parents allowing them to participate in this research study and will also ensure the confidentiality of their information. Alverno Heights's IT staff will randomly install Finch for half of the students (experimental) and A Kinder World for the other half (control) and will assist and creating student accounts. Students will be given around 10 minutes to interact with their assigned apps two days each week. The GIT Lab will provide instructions for both groups to follow for the entirety of the Finch Wellness Program. The GIT Lab will go on site during the first week to support the class instructor with introducing the apps to the class with a walk through of the features, gameplay, and objectives. The students will be under the pretense that they are testing mobile games and the GIT Lab would like their feedback.

Pre-Test Survey

A pre-test survey will be given to all students and parents during the app introduction to record their baseline prosocial behaviors, self-esteem, and self efficacy. A combination of items from

standardized questionnaires supported by previous research, such as the Prosociality Scale, Rosenberg Self-Esteem Scale, and Self-Efficacy Questionnaire for Children (SEQ-C), will be used. In addition, students will be asked about any previous experience with gamified wellness mobile apps.

Intervention

Both groups will be given written instructions 2 days per week at the start of class time. The experimental group will be instructed to set their daily goals in Finch with the requirement of a feature that encourages prosocial behavior since that is the primary construct of interest. An explanation of what those features may look like will be given but students will have the freedom to choose the feature that they would like to use. Once they are done using the feature that encourages prosocial behavior, they will be able to explore the other features that are available in Finch. Similarly throughout the program, the control group will be instructed to use the emotional naming feature in A Kinder World first since it is the first activity they are introduced to during onboarding, then they will have the ability to explore its other features. This structure will allow for more time to explore their apps and its features rather than focusing on instruction. It will also lead to less biased results since students will use the features that they gravitate towards rather than only the ones that they are instructed to use.

Students will be segmented into experimental and control groups to confidently and clearly attribute changes in prosocial behavior and attitudes towards the self to Finch. As stated previously, A Kinder World is chosen for the control group because it has a different breadth of features and gameplay that Finch offers but all students will have access to a mental health and wellness resource with scientifically-backed wellness activities.

Daily Surveys

Each day that the students are given time to use Finch and A Kinder World, they will be given a short worksheet that will track their feature usage and satisfaction/sentiment towards the apps. This will ensure that the students are staying engaged with their apps and will allow the GIT Lab to attribute satisfaction and sentiment ratings to the features that were used.

Weekly Surveys

During the last class of each week, students and their instructor will be assigned an in-class survey that will include one item per construct scale (prosocial behavior, self esteem, and self-efficacy) and a single item assessing their attitudes towards their Finch or A Kinder World experience.

Focus Group

During the halfway point of the Wellness Program (Oct. 16), the GIT Lab will go on-site to facilitate a 30 minute focus group. Students who were assigned Finch will go with one lab member and students who were assigned A Kinder World will go with another. The GIT Lab will

ask questions regarding their experiences with the app, what they like, what they don't like, and what they desire.

Interviews

Interviews with the Director and Assistant Director of Alverno Heights will be conducted during the program orientation week, halfway point, and once the program is completed. During the program orientation week, the GIT Lab will establish a baseline of behaviors and attitudes that have been observed within the students. During the halfway point, the lab will meet with Alverno Heights to receive an update on behaviors and attitudes. At the end of the program, a culminating interview will provide insight to the overall effectiveness of the program, changes in behaviors, attitudes, and the school's social environment.

Post-Test Survey

After the final week of the intervention, students and parents will be given the same survey that they completed during the pre-test survey. Additional items assessing their experience with Finch and A Kinder World will be included such as CSAT, NPS, favorite features, desired features, and open-ended feedback. The Alverno Heights Academy staff will also be invited to share student observations and feedback through an open conversation with the GIT Lab.

(Note: A Kinder World and Finch are supported on iPad devices. A Kinder World does not require a paid subscription)

Project Organization

The proposed evaluation program will be managed by Claremont Graduate University's (CGU) Games and Interactive Technology Lab (GIT Lab), in cooperation with Alverno Heights Academy and Finch app.

Stakeholders

Claremont Graduate University Games and Interactive Technology Lab:

At the CGU GIT Lab, students and faculty collaborate on a variety of user experience research projects to deliver quality insights while students gain experience outside of the classroom. All work is peer-reviewed and approved by an industry experienced professional. The GIT Lab is directed by Professor Danielle Green. The Emotional Wellness Program and evaluation will be designed and administered by Kelsey Villacorte and Booker Harrap, a current student and an alumni, respectively.

Danielle Green:

Director

Danielle (Dani) is an Assistant Professor of Practice and Director of the User Experience Master's Program at Claremont Graduate University. She is the co-founder of the UX Researchers' Guild and a practicing UX Consultant. As the GIT Lab Director, she will review deliverables and provide guidance for the researchers executing the project.

Kelsey Villacorte:
Lead UX Researcher

Project Management: Kelsey is a UX researcher in her second year of Claremont Graduate University's Applied Cognitive Psychology: User Experience program. She led the preliminary feature analysis on gamified mental health and wellness apps and will oversee the overall execution and progress of the Alverno Wellness Program.

Booker Harrap:
Senior UX Researcher

Booker is a UX researcher and alumni of Claremont Graduate University's Applied Cognitive Psychology: User Experience program. He played an integral part in the preliminary feature analysis on gamified mental health and wellness apps and will be providing support during the execution and progress of the Alverno Wellness Program.

<u>Alverno Heights Academy:</u>

Alverno Heights Academy is an independent, Catholic, TK-8th school for girls and boys, dedicated to preparing students to function in a society as informed, knowledgeable persons, who have the requisite skills to make and implement mature decisions about complex problems. The evaluation program will be overseen and administered by Joanne Harabedian (Director) and Rich Martinez (Assistant Director), respectively. The participant pool will be comprised of the 7th and 8th grade classes.

Joanne Harabedian:
Director of Alverno Heights Lower School

Evaluation Program Oversight: With a Master's in Human Development, Joanne has intricate knowledge of the complex and diverse growth benchmarks of children. A principal since 2006, she is an advocate for nurturing student potential beyond grades, emphasizing inquiry and risk-taking. All actions taken in this evaluation program will need to be approved by Joanne.

Rich Martinez:
Assistant Director; Science, Math, and Spanish Chair

Evaluation Program Administration: Rich will be responsible for administering the program to students.

Student Participants:
7th and 8th grade classes

All willing and approved 7th and 8th grade students at Alverno Heights Academy will take part in the program by interacting with the apps and providing feedback.

<u>**Finch App:**</u>
Ryan Browne: Growth, Product, Business, Partnerships, and Science

Finch is a self-care pet app designed to help users feel prepared and positive, one day at a time. Finch has offered to partner with Alverno Heights Academy and the GIT Lab at CGU by providing free access to the premium features of the app to Alverno students for the duration of the program.

<u>**A Kinder World:**</u>
Hannah C. Gunderman, Ph.D.: Wellbeing Researcher
Jack Railton-Woodcock: Brand Manager

A Kinder World is an emotional wellbeing app designed to help users build resilience and explore their own emotions. Users take care of virtual houseplants while completing scientifically-backed wellbeing activities.

Responsibilities

The following program responsibilities are proposed in alignment with Alverno's goals and evaluation priorities.

Program Foci	Team	Responsibilities
Resources		• Obtaining permission from students and parents • Providing tablets to students • Installing applications • Creating student accounts
		• Providing premium subscription to app for students in treatment group
		• Providing app for control group
		• Establishing program • Providing survey materials • Providing instructions for facilitator
Student Experience		• Setting aside 15 minutes, 3 days a week to facilitate students engaging with the app • Ensure students receive and complete materials • Maintain engagement with weekly show-and-tell
		• Onsite program orientation • Data collection
Outcomes		• Receives report on student outcomes by app and feature
		• Receives report on student outcomes by feature • Receives Finch app student experience report (CSAT etc.)
		• Receives report on student outcomes • Receives AKW app student experience report (CSAT etc.)
		• Data Analysis • Synthesis and stakeholder report generation

Project Management

In order to ensure the smooth execution of the project, a comprehensive project management approach will be implemented, encompassing communication, quality assurance, and risk management strategies.

Communication Plan:
Effective communication is crucial for the successful coordination of all project stakeholders. The following communication channels and mechanisms will be employed:
- **Regular Email Correspondence (Outlook):** Project updates, important announcements, and general communication will be facilitated through email correspondence to keep all stakeholders informed.
- **Weekly Team Meetings:** The project team will convene on a weekly basis to discuss progress, address any challenges, and align on project goals and priorities.
- **Weekly Lab Meetings**: Weekly meetings within the Games and Interactive Technology Lab (GIT Lab) will be held to review the project's progress, share insights, and establish team goals
- **Two-Week Sprints:** The project will follow a two-week sprint cycle, during which specific tasks and objectives will be defined and accomplished. Sprint planning meetings will be held to outline priorities for each sprint period.

Tools
The following tools will be used to throughout the Wellness Program:
- **Qualtrics**: Distribution of survey links and platform for data collection
- **Miro**: Qualitative data analysis
- **Excel and/or R Studio**: Quantitative data analysis
- **Jira**: Establish sprint goals and tasks for the GIT Lab team.
- **Google Drive:** Collaborative report building and material creation
- **Zoom**: Team and lab meetings, project meetings, interviews, and report presentations

Quality Assurance:
To maintain the integrity of the project's execution and data collection, a robust quality assurance strategy will be employed:
- **Weekly Data Collection**: A comprehensive data collection process will be executed, including daily and weekly surveys to gauge students' engagement with the Finch and A Kinder World apps. These surveys will help assess satisfaction and sentiment ratings for various app features.
- **Consistent Data Analysis**: Collected data will be consistently and meticulously analyzed to identify patterns, trends, and insights related to the targeted constructs of prosocial behavior, self-esteem, and self-efficacy.
- **Mitigating Research Intent Bias:** The true intent of the research will be refrained from disclosure until the completion of the Finch Wellness Program to prevent potential bias

in students' behavior. This approach will help maintain a genuine assessment of the app's impact.

Risk Management

Mitigating potential risks is essential for the project's success. The following risks have been identified, along with corresponding strategies to address them:

Low Participation: Limited engagement and participation from students in the program.
- Implement a focus group during the halfway point of the Wellness Program. Students may be motivated to stay engaged with their apps knowing that the GIT Lab will come back to talk with them about their experiences with the apps.
- Emphasize the fact that this is a break from class

Social Influences/Pressures: External influences, such as peer pressure, may affect students' attitudes and behaviors towards the app.
- Emphasize the individual nature of participation and the focus on game review rather than comparison with peers. Foster an environment where each student's unique progress is valued.

Small Classes: The small class size may lead to heightened impact if a few students choose not to participate.
- Decrease the amount of socialization centered around the Wellness Program. Students will only come together to discuss their feelings and reviews on their respective apps during the halfway point of the program.

Aversion to Increased Screen Time: Some teachers and parents might resist increased screen time due to concerns about overuse or digital fatigue.
- Incorporate the mindfulness features in Finch and A Kinder World and emphasize the balanced use of technology to ensure that the app's engagement does not contribute to excessive screen time.
- Emphasize both apps' educational and wellness purposes to parents and teachers.

Parental Control: Parental desire for their children to appear better than others may influence participation or responses.
- Maintain consistent communication with parents, ensuring they receive the same information as students and clarifying the research intent after the program's completion.

Privacy and Data: Concerns about privacy and data security may arise among students and parents.
- Assure participants that Finch data is completely anonymous and private, with no personally identifiable information being collected. Survey responses will also remain anonymous, contributing to a secure and confidential research environment.
- Students will not be required to share the content of what they input in the apps.

Jealousy: Students in one group may express interest in using the app of the other group due to perceived advantages.

- Foster a sense of inclusivity and open dialogue by explaining the research design and goals to students. Emphasize that each app serves a unique purpose and that the focus is on evaluating their effectiveness for well-being improvement.
- Decrease the amount of socialization centered around the Wellness Program. Students will only come together to discuss their feelings and reviews on their respective apps during the halfway point of the program.

Deliverables

Alverno Heights Academy:

Student Outcomes Research Report: Results of the treatments' effects on student behavior and attitudes (changes in prosocial behavior, self-esteem, and self-efficacy) as assessed by surveys collected from students, teachers and parents.

Finch App:

Student Outcomes Research Report (specific to Finch users): See above

Finch App Feedback Report: The following student feedback on their experience with the Finch app: CSAT, NPS, favorite features, desired features, and open-ended feedback.

A Kinder World:

Student Outcomes Research Report (specific to A Kinder World users): See above
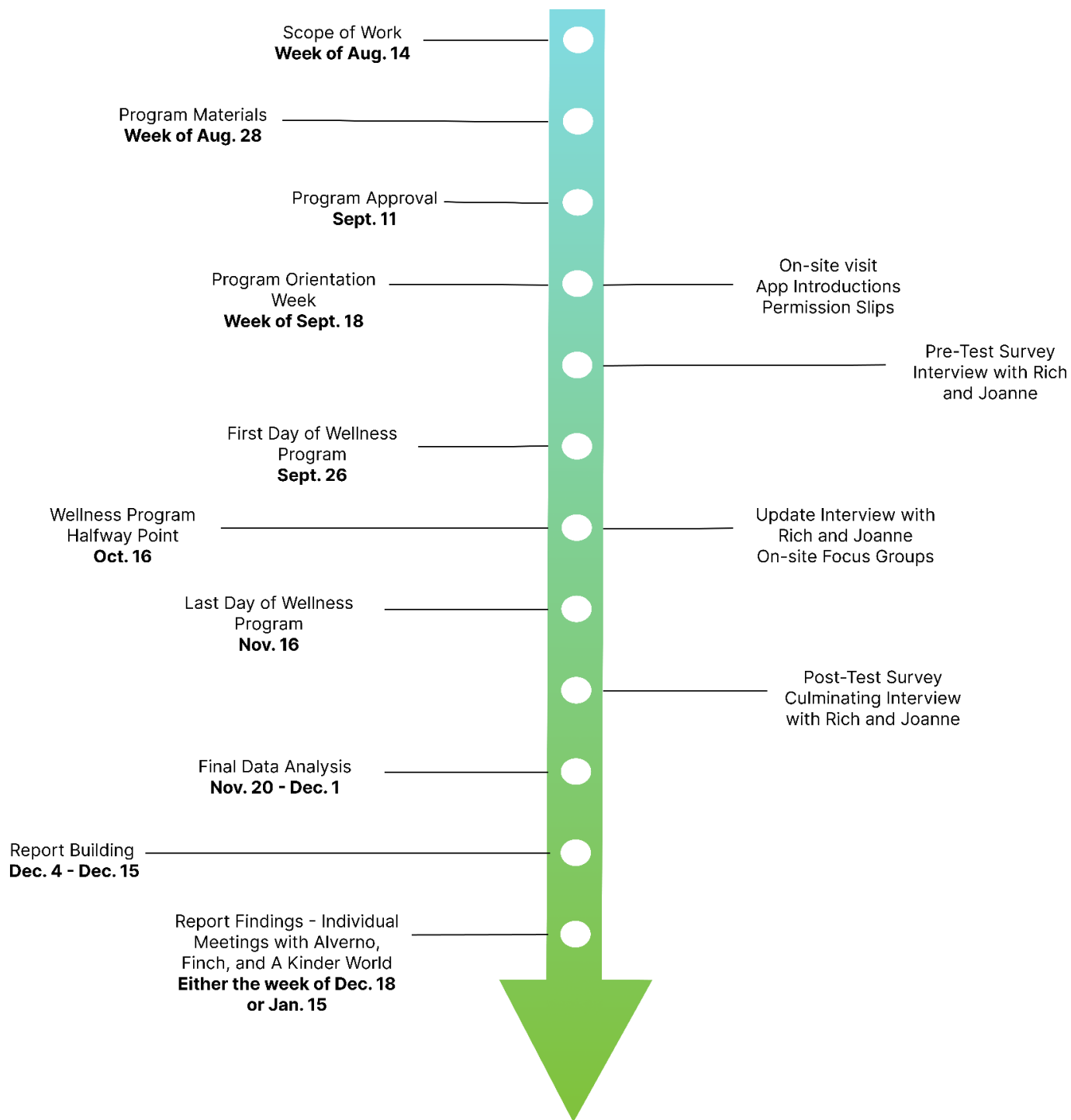
A Kinder World App Feedback Report: The following student feedback on their experience with the A Kinder World app: CSAT, NPS, favorite features, desired features, and open-ended feedback.

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Timeline

Scope of Work
Week of Aug. 14

Program Materials
Week of Aug. 28

Program Approval
Sept. 11

Program Orientation
Week
Week of Sept. 18

On-site visit
App Introductions
Permission Slips

Pre-Test Survey
Interview with Rich
and Joanne

First Day of Wellness
Program
Sept. 26

Wellness Program
Halfway Point
Oct. 16

Update Interview with
Rich and Joanne
On-site Focus Groups

Last Day of Wellness
Program
Nov. 16

Post-Test Survey
Culminating Interview
with Rich and Joanne

Final Data Analysis
Nov. 20 - Dec. 1

Report Building
Dec. 4 - Dec. 15

Report Findings - Individual
Meetings with Alverno,
Finch, and A Kinder World
**Either the week of Dec. 18
or Jan. 15**

Key milestones:

1. Delivery of Statement of Work **(Week of Aug. 14)**
2. Delivery of program materials (i.e., surveys and instructions) **(Week of Aug. 28)**
3. Deadline for program approval **(Sept. 11)**
4. Introduction to Alverno staff and students **(Week of Sept. 18)**
   a. On site visit to introduce team and project
   b. Walk through of Finch and A Kinder World
   c. Send out permission slips
5. Pre-Test Survey for the students and parents who are given permission to participate **(Week of Sept. 18)**
   a. Pre-test interview with Rich and Joanne
6. First day of Wellness Program **(Sept. 26)**
   a. 2 days of app play (Tuesday and Thursday)
   b. Daily surveys for students
   c. Weekly in-class surveys for students and instructor distributed at the end of the week
7. Half way point **(Oct. 16)**
   a. Update interview with Rich and Joanne
   b. On-site focus groups
8. Last day of Wellness Program **(Nov. 16)**
9. Post-Test Survey for students and parents **(Nov. 16)**
   a. Post-test interview with Rich and Joanne
10. Final Data Analysis **(Nov. 20 - Dec. 1)**
11. Report Building **(Dec. 4 - Dec. 15)**
12. Report Due - Individual meetings with Alverno, Finch, and A Kinder World
    a. **Either the week of Dec. 18 or Jan. 15**

Appendix

Prosociality Scale
https://parentingacrosscultures.org/wp-content/uploads/2019/06/youth_prosocialBehavior.pdf

Rosenberg Self-Esteem Scale
https://fetzer.org/sites/default/files/images/stories/pdf/selfmeasures/Self_Measures_for_Self-Esteem_ROSENBERG_SELF-ESTEEM.pdf

SEQ-C
https://pdf4pro.com/cdn/self-efficacy-questionnaire-for-children-3dc5be.pdf

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