

Southern Illinois University Carbondale

OpenSIUC

Research Papers

Graduate School

Spring 2022

Gamification via App-Based Rewards Systems: Behavioral Changes and Effects on User Interactions

Eric Michael Halfacre
eric.m.halfacre@gmail.com

Follow this and additional works at: https://opensiuc.lib.siu.edu/gs_rp

Recommended Citation

Halfacre, Eric M. "Gamification via App-Based Rewards Systems: Behavioral Changes and Effects on User Interactions." (Spring 2022).

This Article is brought to you for free and open access by the Graduate School at OpenSIUC. It has been accepted for inclusion in Research Papers by an authorized administrator of OpenSIUC. For more information, please contact opensiuc@lib.siu.edu.

GAMIFICATION VIA APP-BASED REWARDS SYSTEMS: BEHAVIORAL CHANGES
AND EFFECTS ON USER INTERACTIONS

by

Eric M. Halfacre

B.F.A., Southern Illinois University, 2008

A Research Paper
Submitted in Partial Fulfillment of the Requirements for the
Master of Science

Department of Mass Communications and Media Arts
in the Graduate School
Southern Illinois University Carbondale
May 2022

Copyright by Eric M. Halfacre, 2022
All Rights Reserved

RESEARCH PAPER APPROVAL

GAMIFICATION VIA APP-BASED REWARDS SYSTEMS: BEHAVIORAL CHANGES
AND EFFECTS ON USER INTERACTIONS

by

Eric M. Halfacre

A Research Paper Submitted in Partial

Fulfillment of the Requirements

for the Degree of

Master of Science

in the field of Professional Media and Media Management

Approved by:

Robert Spahr, Chair

Graduate School
Southern Illinois University Carbondale
May 1, 2022

AN ABSTRACT OF THE RESEARCH PAPER OF

Eric M. Halfacre, for the Master of Science degree in Professional Media and Media Management, presented on April 1, 2022, at Southern Illinois University Carbondale.

TITLE: GAMIFICATION VIA APP-BASED REWARDS SYSTEMS: BEHAVIORAL CHANGES AND EFFECTS ON USER INTERACTIONS

MAJOR PROFESSOR: Robert Spahr

User retention and consistent engagement can be difficult with many applications vying for our limited time and attention. Finding innovative ways to draw in new users while appealing to current users also causes many developmental and marketing hurdles. Incorporating games, especially for those who have grown up with a controller in their hands, can be an incentive to gamify activities that award users just for participating. These processes can incentivize and reinforce participatory habits to better the users' lives or can also be a detriment with unforeseen effects.

This research aims to analyze and assess game-based systems used to change behavior, motivate, reinforce positive change, and educate users. These methods will be applied to a prototype application to determine the most effective layout, user experience, applicable rewards, and gaming formats to encourage repeat usage and engagement.

PREFACE

I like games, I mean, come on, who doesn't, unless you're a weirdo, then well, this probably isn't for you. The neat part is finding that balance of meaningful rewards for your time invested. If it weren't for the many years I've spent playing games, I would've never thought to look into it and research how engagement is maintained over long periods of time. So yeah, games and stuff are pretty neat

TABLE OF CONTENTS

| <u>CHAPTER</u> | <u>PAGE</u> |
|--|-------------|
| ABSTRACT..... | i |
| PREFACE..... | ii |
| LIST OF FIGURES | v |
| CHAPTERS | |
| CHAPTER 1 – Introduction..... | 1 |
| CHAPTER 2 – Problem Statement..... | 3 |
| CHAPTER 3 – Hypothesis / Thesis Statement..... | 4 |
| CHAPTER 4 – Review of Literature | 5 |
| CHAPTER 5 – Supporting Theories..... | 10 |
| CHAPTER 6 – Comparative Analysis..... | 15 |
| CHAPTER 7 – Case Studies..... | 21 |
| CHAPTER 8 – Positive Outcomes | 30 |
| CHAPTER 9 – Adverse / Unintended Behavioral Outcomes | 36 |
| CHAPTER 10 – Conclusion/Final Statement..... | 40 |
| REFERENCES | 42 |
| APPENDICES | |
| APPENDIX A – Styling Colors and Fonts | 45 |
| APPENDIX B – Buttons Icons Overlays | 46 |
| APPENDIX C – Onboarding Flow | 48 |
| APPENDIX D – Activities | 52 |
| APPENDIX E – Social Messaging and Profile Settings | 55 |

| | |
|---|----|
| APPENDIX F – Point History Rewards and Redeem | 57 |
| VITA | 58 |

LIST OF FIGURES

| <u>FIGURE</u> | <u>PAGE</u> |
|--------------------------------------|-------------|
| Figure 1 - Discover Activities | 11 |
| Figure 2 - Earning Points | 13 |
| Figure 3 - Nike Shop | 17 |
| Figure 4 - Nike Member Shop | 17 |
| Figure 5 - Starbucks Rewards | 18 |
| Figure 6 - Starbucks Welcome | 18 |
| Figure 7 - Nike Check-In | 20 |
| Figure 8 - Starbucks Check-In | 20 |
| Figure 9 - Challenge | 24 |
| Figure 10 - Profile | 26 |
| Figure 11 - Badge | 26 |
| Figure 12 - Start | 27 |
| Figure 13 - Track | 27 |
| Figure 14 - Home | 27 |
| Figure 15 - Points Earned | 29 |
| Figure 16 - Redeem Points | 29 |

CHAPTER 1

INTRODUCTION

User retention and consistent engagement can be difficult with many applications vying for our limited time and attention. Finding innovative ways to draw in new users while appealing to current users also causes many developmental and marketing hurdles. Incorporating games, especially those who have grown up with a controller in their hands, can be an incentive to gamify activities and award users just for participating. This process can incentivize and reinforce participatory habits to better the users' lives or can also be a detriment with unforeseen effects.

This research aims to analyze and assess game-based systems used to change behavior, motivate, reinforce positive change, and educate users. These methods will be applied to a prototype application to determine the most effective layout, user experience, applicable rewards, and gaming formats to encourage repeat usage and engagement. The findings from this research provide support and direction to create a fitness application based on the history, theories, and current uses of successful gamification in popular apps.

The research utilizes secondary research methods, including design research, comparative analysis, historical case studies, and theoretical analyses to examine the history of media messaging influence on public behavior. While also considering previous studies on various methods of gamifying and rewards-based systems, both pre-digital and post-digital, explore media theories with how they are incorporated and utilized successfully and unsuccessfully. The resulting conclusions will be assessed and determined whether those concepts would become viable avenues to integrate into a fitness application with engaging and sustainable rewards-based gamification activities.

The content and information found during this research provide the groundwork for the first phase of a fitness app available to Student Recreation Center members detailing the creation, mockups, flowcharts/wire-framing, navigation, design, and reward system. Applying historical data, current theories, comparative analysis, and meaningful gamification are required to provide a product capable of maintaining a consistent and engaging user base benefiting both users and businesses.

CHAPTER 2

PROBLEM STATEMENT

The purpose of this is not to create an app just for the sake of having one but to use it as an educational opportunity to influence behavior positively through the subtle use of gamifying physical activity with an underlying rewards system. Secondary services include utilizing the platform as a communication and research tool to better understand the wants and needs of an ever-changing community of students with each new school year. Data from communication and research can be compiled to remedy the current problems of low class enrollment, membership cancellations, and stale or off-trend fitness programming.

CHAPTER 3

HYPOTHESIS/THESIS STATEMENT

The SIU Student Recreation Center would benefit from implementing an application that encourages member participation through a reward system. This system would aid in increasing member and community engagement, instill positive behavioral reinforcement through a reward system, provide methods to connect with users, the ability to determine the interests and wants of active participants, and help shape and revitalize a languishing strategic marketing plan to remain competitive with local fitness centers. Applying and introducing current fitness trends and tactics through a mobile app will also help meet the demands of new incoming students year to year and maintain fresh and relevant content to long-time users.

Incorporating an app dedicated to the recreation center would impact the current business strategy. Integrating app functionalities into the current plan with benefits including fresh marketing tactics, brand awareness, implementation of brand ambassadors, all of which potentially generate new activities and programs available to current and future Student Recreation Center users. User metrics from app usage will give insights into the frequency of visits, fitness trends, search keywords, and program/class interests. As these targets a niche audience, creating a specialized application allows the content providers to focus on limited, goal-oriented events and promotional materials to support the current business plan.

CHAPTER 4

REVIEW OF LITERATURE

Why people play games can be simplified down to four primary and overlapping concepts: distress, have fun, socialize, and aid in mastering an activity. Gamifying tasks or activities can leverage each form and combination. Applying the group to a procedure or system requires a level of fun or enjoyment for the user to encourage repeat engagement.

Accompanying the why people play to the type of fun can also be broken down into four subsets. Hard-fun focuses on competing or winning for the sake of competition, whether it is with oneself or against others. Easy fun is more loosely structured and focuses on exploring within the confines of a given framework presented to the user. An altered state of fun changes how a player feels and utilizes more emotional and personal methods to reward and engage the user. Social fun is the final and most group-oriented method by engaging users, creating an open community, and connecting with others. In terms of the platform's longevity and the user base's size, implementing fun social aspects and other forms described above would be vital in creating a successful user experience.

The gamification process relies on four essential behavior qualities of users or players, explorers, achievers, socializers, and killers. These also help support reasons for engagement and types of fun associated with tasks that determine the intended demographics for ideal users. Explorers enjoy experiencing the objectives given to them while sharing that experience, whether on the platform or with others in their daily lives. They tend to feel rewarded with discovery and immerse themselves in the experience. Achievers are goal-focused with accomplishing personal and given tasks. This success-oriented group walks a fine line of burning themselves out and abandoning activities if they repeatedly fail to satisfy their need for

accomplishments. Socializers make up the third group who represent much of the population. These people tend to play for the interactions with other participants, and historically is the most prevalent of the four types throughout the past, encompassing activities such as dominos, mahjong, and poker. Social interactions are the primary focus of this group. The win or loss outcome is still a factor but does not take a high priority compared to the qualities found in other classifications. The fourth group identified by Zichermann and Cunningham are fondly known as killers. These people are the griefers and trolls who are out to kill the fun of others, where the desire to win is not enough, and take it upon themselves to ensure there is a "loser" and that they have witnesses who observe their defeat.

The user types ideal for the proposed fitness application would fall within the achiever and explorer classifications. Identifying these groups who hold these qualities mentioned will likely possess a more innate drive to engage and utilize the tools provided to them. These people will also provide the base needed for an active and engaging community to build from and encourage others with the knowledge and support to foster positive behavioral changes through gamification and a reward-based system.

There are three schools of thought on motivational design when identifying intrinsic and extrinsic motivations. Recognized by the requirement to make money or compete with others to win or be the best we can be. Intrinsic motivators are our core selves where external influences or reasons do not influence us. They are our base or foundation for building our personalities and beliefs, whereas extrinsic motivators are introduced to us from the external world.

Daniel H. Pink states that once cash is introduced as a motivator, performance, or complex tasks with a drop in effectiveness. This process applies to repeated events and not to single on-off situations. Utilizing cash as a repeated reward will cause the participant to find and

leverage the least amount of effort to achieve the required goal, essentially demotivational and detrimental incentivizing creative thought. He identifies other rewards such as long-term social status rewards that can be more effective at nurturing creativity due to the removal or association with value placed on work or actions.

This form of demotivation via monetary compensation is also supported in a study from 1970 by Edward Deci, a research psychologist at the University of Rochester. He experimented using the puzzle game Soma, where a wooden cube was subdivided into seven smaller pieces of various sizes and shapes. These blocks can be pieced together to form a cube or multiple structures. Deci challenged participants to mimic drawings of shapes with the available Soma blocks without instructions while observing how the participants experimented with the shapes and configurations.

Deci would then allow them to take a break while leaving the room to observe how they spent that time. During their break, participants could choose how to spend their free time. Many students kept experimenting with the blocks. During the second session would be given a dollar for each shape assembled, then have a break where more participants show interest in the blocks now that they were seen as a monetary reward. The experiment was performed a third time without monetary compensation, where new and previous participants were selected. During breaks for these sessions, those who had received money during the earlier sessions showed markedly less interest in the activity versus the breaks where they had initially received compensation.

The primary takeaway is that the esteem boost and inspiration come from a non-monetary acknowledgment of the participants' success. Reinforcing positive action through gamification can be more effective if direct compensation via cash is avoided. Instead, it incentivizes users in

other ways that reward participants by providing them with non-monetary items or currency available within a closed ecosystem.

A critical and cautionary concept explored by Dr. John Houston, a researcher in competitiveness, found that competitive people can be self-destructively competitive. The research showed that people categorized as achievers or killers possessed higher levels of competitive behavior even when there was nothing to be gained. These overly competitive people tended to compete with their partners or teammates with whom they were supposed to collaborate. This intrinsic assertive behavior to win at all costs can be great for a personal drive and exploited by incorporating overly gamified aspects that abuse those who fall within these categories.

Within the free-to-play realm of mobile applications, there are entire games within games set up to exploit these very tendencies to win at all costs. They are providing in-game currency shops to give players instant gratification or a sense of accomplishment by advancing progression not with patience but with their wallets. Gaming the gamers can create a subset of users known as whales. This group spends massive amounts of real-world currency to get the edge on their perceived competition. Leveraging the intrinsic motivations of people with higher levels of competitive behavior may lead to financial strain on the user, which creates pathways to further hardships depending on their self-control.

A third trait to be aware of when exploring effects on extrinsic rewards is that they may crush intrinsic motivations, which may never return. For example, a child who enjoys a particular sport or activity is introduced to the competitive circuit. They may initially garner success, become accustomed to that level of expectation then fall into a losing streak. That losing streak may have a detrimental emotional and self-esteem effect associated with an activity they

once enjoyed. It now may never return to experience that level of enjoyment with a particular activity again.

Those extrinsic rewards can be seen as manipulative or damaging if misused where intrinsic motivation does not match the higher level of extrinsic rewards.

Identifying the type of users and their associated intrinsic and extrinsic motivators is incredibly important when exploring the possible reward systems implemented in mobile application gamifying activities. Creating a balance between meeting their needs and wants while not exploiting or abusing those qualities will aid in creating a positive and meaningful rewards system encouraging repeated use which can transition into beneficial learned behaviors imprinted in users who actively participate and utilize the toolset presented to them.

CHAPTER 5

SUPPORTING THEORIES

The Encyclopedia of Clinical Neuropsychology (2011) defines behavior modification as using basic learning techniques, such as conditioning, biofeedback, assertiveness training, positive or negative reinforcement, hypnosis, or aversion therapy, as changing unwanted individual or group behavior. Utilizing the correct social media messaging and platform may be an effective method for supplying the knowledge to influence and reinforce positive behavior changes to reach college-aged students. This demographic is likely those who are learning to balance a new life away from home's stability or comforts—trying to juggle new social experiences and pressures, academic workloads, and part-time jobs in many cases.

Different methodologies of gamifying actions and digital experiences can provide insights into behavior modification and the effects of media messaging through active participatory actions. Through activities, users can find meaningful connections between the underlying material and their interests by using rewards as a motivator. Ultimately the user will ideally integrate this information into their lives or routine without the initial reward-based motivation.

PROCEDURAL RHETORIC

Procedural rhetoric is a concept that explains how people learn through the authorship of rules and processes. It is an applied form of persuasion through established representations and interactions via rules rather than spoken words, writing, images, or animation. Using this theory to gamifying processes in an application designed to modify behavior provides the tools and limitations within a sandbox application. Guiding the user to utilize available resources set by the designers allows the user freedom to use aspects of the application in ways defined by the rules

(Figure 1 - Discover Activities). Games that can utilize these techniques can influence how users see or perceive the world around them.

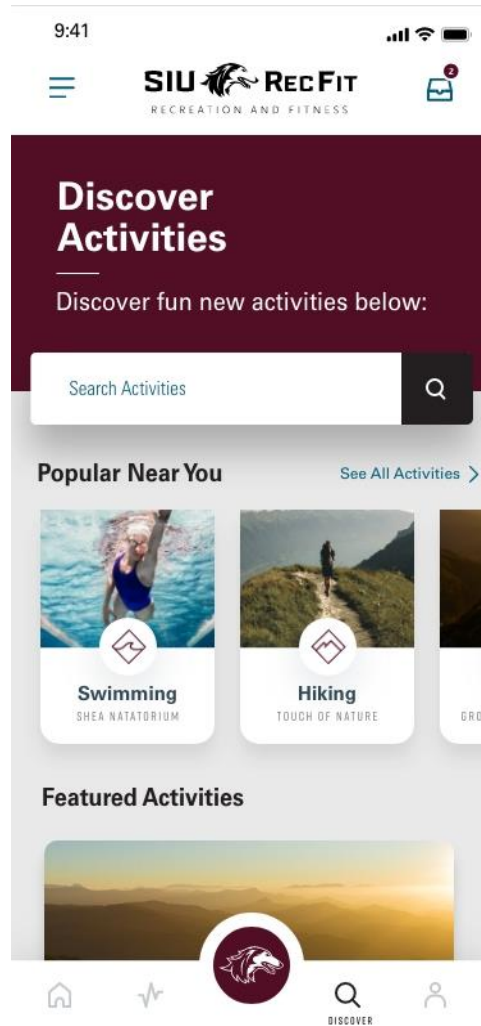


Figure 1 – Discover Activities

Procedural rhetoric is essentially the process of using processes persuasively. Applying this concept to an organizational system such as a recreational center's fitness application can effectively generate behaviors based on the rule set implemented within the usage of the application. Those behaviors are influenced by the processes set by the designers to display content relative to the users' interest via the established guidelines when interacting with activities found in the app. Utilizing these interactions via tools provided within the app can give

the users perceived freedom within the sandbox to form healthy behaviors.

ORGANISMIC INTEGRATION THEORY

Organismic integration theory explains the importance of creating a gamification system that is meaningful to the user. The approach addresses the concern of internalizing the concept regarding the development of extrinsic motivation or reward-based motivators. Without a meaningful and rewarding system, the user has little reason to continue interacting with the platform once the informational material is consumed. Self-determination theory ties in closely with this concept and provides intrinsic motivators which complement the extrinsic motivation set by the designers. Two assumptions associated with self-determination theory are that people are actively directed toward growth and that autonomous motivation is essential. These can be viewed as two sides of the same coin. The designers create a rewarding extrinsic experience providing the user with the intrinsic qualities users desire by motivating them to grow, gain knowledge, or independence supported by gamifying a meaningful topic or subject or essential to the user.

Applying organismic integration theory to activities and rewards within the app is vital for identifying intrinsic and extrinsic motivators for the ideal demographics. Finding the balance that rewards users with their sense of autonomy while providing the additional drive to responsibly encourages further use with a reward system that feels accomplishable and challenging.

THEORY OF USER-CENTERED DESIGN

The final supporting theory is the Theory of User-Centered Design (UCD). Sharing similarities with the organismic integration theory, relying on external rewards as the only way to motivate and provide connections between the game elements and essential aspects of the

activity are presented to help the user make relevant connections between parts of the non-game activity and his or her own goals and desires (Figure 2 – Earning Points). UCD stands apart from the other theories by ensuring that the user's needs and goals are the primary consideration at every stage of the process while monitoring meaningful vs. meaningless gamification.

Creating and monitoring these meaningful and meaningless gamification aspects can be



Figure 2 – Earning Points

the breaking point where users' autonomy can be broken by feeling their time spent does not match the reward earned. Or, on another level, a feeling of missing out on content or rewards due to not having the ability to work towards potential rewards due to extenuating circumstances,

which conflict with the time they can devote to immersing themselves in the activity or experience.

Designing a system with the users' needs at the forefront will aid in developing a system that is rewarding and engaging. Identifying extrinsic motivators and experience here will connect the users with rewarding aspects found within the app's design and content to bridge those connections with intrinsic motivators to drive meaningful engagement, which adequately rewards the user based on their interactions and activity utilizing in-app functions.

CHAPTER 6

COMPARATIVE ANALYSIS

Starbucks Rewards and Nike Plus Membership offer rewards systems that promote repeated purchases both in-app and in-store. Comparing implementation, rewards, requirements, and theories will provide a basis for how and why these systems are successful in promoting repeated use and brand loyalty, both of which serve to support the longevity of the service and community that use these applications and rewards.

Motivating customer loyalty with results is supported by the expectancy theory, where the consumer will behave and act in specific ways when motivated by a desirable outcome. The results in these settings are compensation via in-app rewards supporting interest in the products directly provided by the brand, expanding the consumer's innate loyalty towards the brand. The effort required to achieve these rewards needs to feel accomplishable and attainable while staying within reason to promote repeated usage to encourage use towards goals set by the reward system. Each system put in place by Nike Plus, and Starbucks Rewards both rewards users passively, creating a sense of meaningful engagement with the brands promoting a positive experience, and reinforcing the return use of each platform. The repeat interaction also supports brand loyalty within the consumer, increasing the likelihood and length of use in-app usage and future purchases while providing the parent companies vital information on product and service interest.

Assessment of each reward-based system and its implementation provides a supporting framework and guidelines to create successful and meaningful user interactions with the proposed fitness application. These applications relate to each other by providing consumers with a desirable and rewarding system that rewards users for engaging and usage. Utilizing select

traits from each model will provide important data when creating a system with the intentions to create positive user interaction promoting healthy lifestyle habits while rewarding and supporting users who actively participate in the proposed reward system.

The Nike app is what ties their membership across various apps and sites. Utilizing a singular app as the hub allows users to view rewards on their balance and receive notifications directly from Nike. Nike promotes brand loyalty by creating a central hub by enabling users to access an ecosystem of Nike-centric materials targeted directly to consumers (Figure 3 – Nike Shop). Continued usage of the applications and rewards opens exclusivity options available to only loyal customers. The exclusive perks include priority tickets to Nike and select sporting events, pre-launch shopping opportunities for new collections, and exclusive collections only offered to Nike members (Figure 4 – Nike Member Shop). Exclusivity options can create loyal users and customers who are made to feel unique or privileged in their loyalty towards the brand, creating brand ambassadors who are proponents who wear and advocate for the brand.

Nike membership also promotes togetherness and community utilizing call-to-action such as "Join Us" in their fitness app, which provides free training support, fitness education content, and workout classes. This community is also reinforced by offering articles inspiring members to keep motivated with opportunities to follow and comment on subjects they find in common with other users. Giving users the place and option to interact with others who share their interests proves to be a motivator that supports repeated use. In this case of a fitness app, it helps to encourage members to maintain workout or training regimens supporting a healthy and active lifestyle.

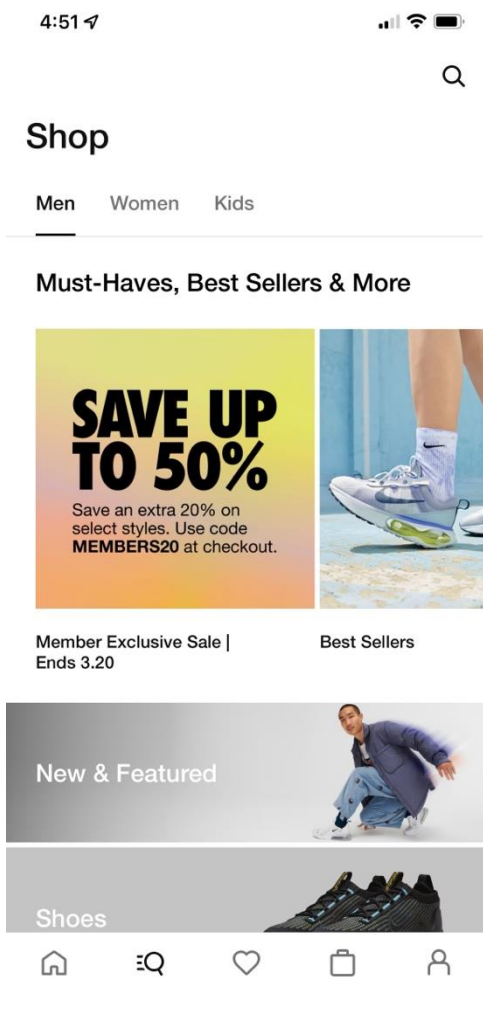


Figure 3 – Nike Shop

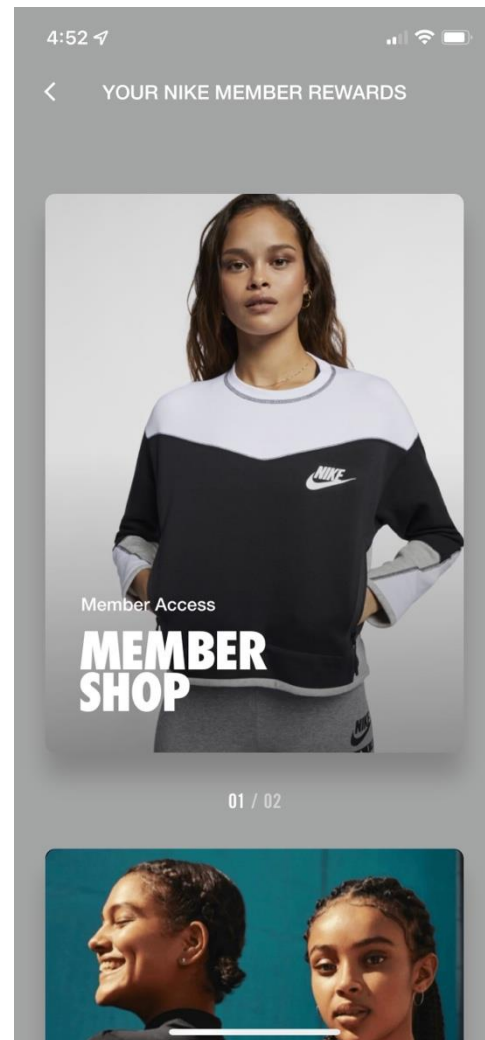


Figure 4 – Nike Shop

Starbucks Rewards work by earning "stars" by spending money at participating locations at a rate of 2 stars per dollar spent, offering to cash out at different star "levels" for various rewards, including drink customization at lower levels to free lunches and merchandise at the upper range (Figure 5 – Starbucks Rewards). Implementing the rewards passively based on simply purchasing and making purchases on specific days for bonus stars gives the members the feeling of getting something a little extra with each purchase. These purchase enhancements help to encourage frequent and repeated purchases when combined with the app, where the initial home screen displays the user's star count, providing initial awareness of their current progress to

achieve the next star level or goal. The freebies at low star levels also help to encourage frequent visits to cash out and visit locations versus other restaurants or locals that also offer similar products.

Like Nike, Starbucks' rewards program effectively creates return customers entrenched in the rewarding and straightforward system (Figure 6 – Starbucks Welcome). Both examples have garnered incredibly loyal consumers who advocate for the brand, find commonalities within others, and create another version of a brand community.

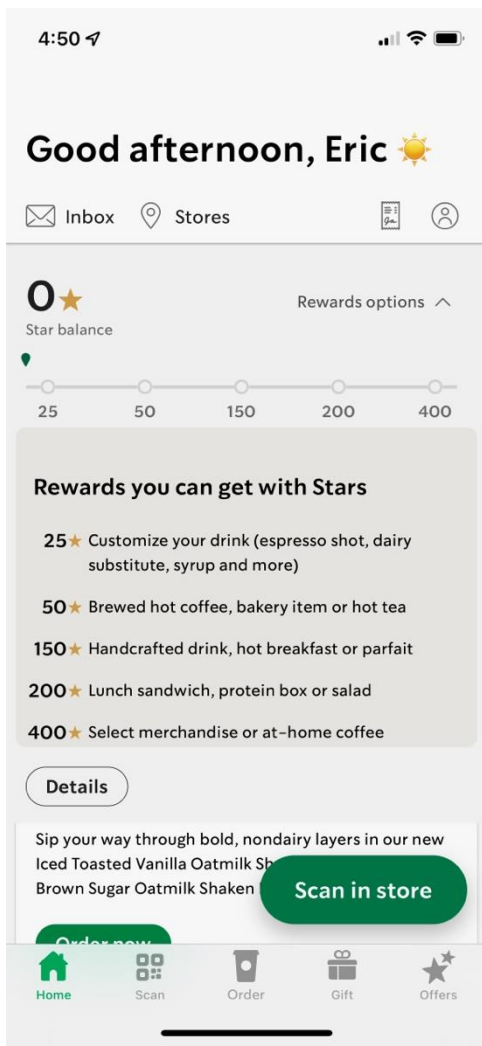


Figure 5 – Starbucks Rewards

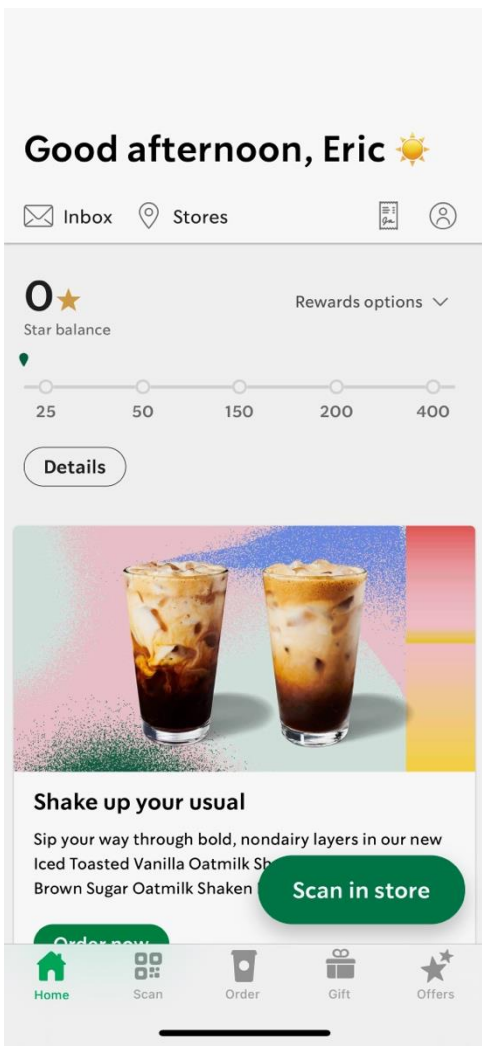


Figure 6 – Starbucks Welcome

The primary difference between the two reward systems is Nike's exclusivity with its membership offering. Nike capitalizes on a "fear of missing out" where if you are not an exclusive member, you do not have access to the premier or advanced opportunities to acquire limited-time offers or rare items. On the other hand, Starbucks is more open and casual, complementing the atmosphere found in-app and in-store versus an almost competitive and sports-like environment curated by the Nike model of business.

Both Nike and Starbucks have capitalized on an omnichannel experience, merging online and in-person interactions creating a seamless and connected loyalty experience keeping the users engaged long-term with both brands. Both Nike and Starbucks share similar uses with QR codes in stores to get personalized services (Figure 7 – Nike Check-In, Figure 8 – Starbucks Check-In).

Applying the most accessible, inclusive, and rewarding systems outlined above while implementing these into a fitness app targeted and curated to a smaller demographic has the opportunity to create the same sense of user accomplishment and satisfaction. Building on an established community, providing them with an avenue to be rewarded for their engagement, and allowing them to connect with others will nurture brand awareness. Effectively targeting the community's intrinsic motivators to provide worthwhile rewards will help establish an active and responsive user base while introducing them to new and exciting opportunities.

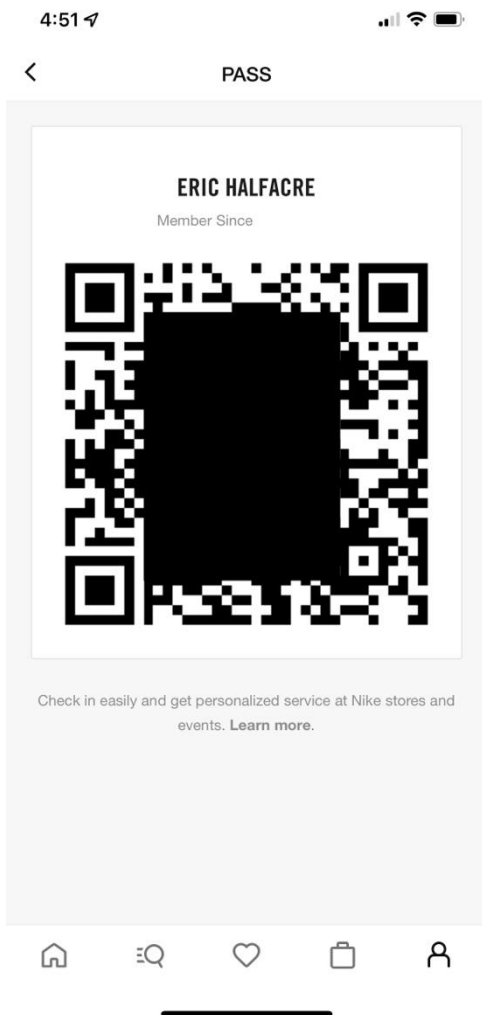


Figure 7 – Nike Check-In

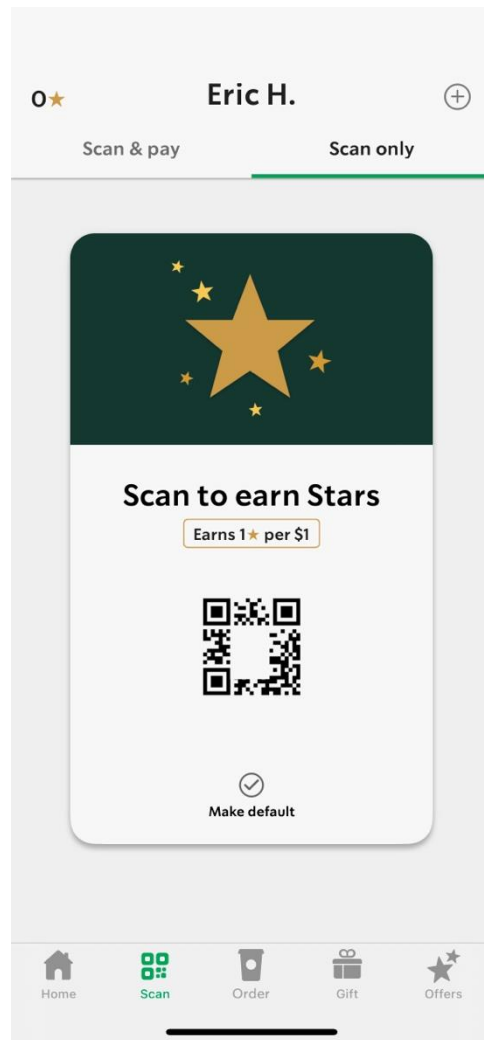


Figure 8 – Starbucks Check-In

CHAPTER 7

CASE STUDIES

ACCELERATED READER PROGRAM

The Accelerated Reader program is an excellent example of a reward-based system introduced to many at an early age. The program was developed in 1984 and sought to provide extrinsic motivators to students by implementing a reward system (Accelerated Reader store) where they could exchange points earned for prizes. Under the pretense of wanting children to read good books, the program's creators incorporated behaviorist motivational techniques aided with technology via a digital testing format. According to the AR website, it is the most popular reading management software and is also used in roughly 60,000 schools.

In 2000, Persinger designed a case study that found that many students interviewed "seemed to read for the recognition their achievement would bring them through extrinsic rewards for both themselves and their classes." Showing that participants primarily engaged with the system based on the rewards they could gain beg the question of whether they would read at the same level and time without the allure of those extrinsic rewards.

Identifying extrinsic motivators with the guidelines and procedures set within the Accelerated Reader program, the process utilizes elements from procedural rhetoric and organismic integration theories. Creating those systems and methods allowing students to choose reading materials set in the parameters of the program provides autonomy to the user to engage with the procedures as the designers intended to create positive activities and experiences for the user. Reinforcing those beneficial actions with meaningful extrinsic rewards intends to create positive behavioral patterns and habits towards reading for pleasure after participating in the program.

The pitfalls of the program can be observed when the extrinsic rewards do not match or outweigh the intrinsic motivators of the students. Due to budgetary constraints or lack of materials, schools cannot always get an extensive library of content. This situation can lead to a limited choice of content for students to read, and what is available does not appeal to the demographic participating in the program. Leveraging extrinsic motivators at such a young age may also create unnecessary competition. This can negatively impact literacy for children who already struggle with reading, leading to poor testing on the corresponding book, which may result in a high degree of reading avoidance and view reading as competition even with oneself.

The importance of implementing meaningful rewards with the autonomy to expand beyond the system's confines is what makes the Accelerated Reader program a supplemental piece with a purpose to aid in literacy and introduce students to new subjects. It is meant to expose young readers to the vast library of literature and to encourage them to explore topics and ideas they would usually avoid by providing an extrinsic motivator that compels them to reach new and challenging goals for themselves.

NIKE PLUS

The Nike Plus fitness app began as a simple iPod application serving as nothing more than a pedometer with a timer before transitioning into a more robust application that offers additional functionality via iPhone and web apps. An ideal app for runners, its fundamental purpose serves to track time and distance. That alone is not enough to maintain such a solid user base; Nike Plus's goal for the app was to build brand loyalty and sell additional merchandise by targeting the large demographic of runners.

The app targets both casual fitness enthusiasts to the hardcore groups who are innately competitive. Able to engage a wide range of audiences via gamifying fitness is an excellent

example of gamification success among a large population. The onboarding process begins by steadily exposing the user to more activities as they progress and use the app. Beginning by competing with yourself, the app opens options to join leaderboards, participate in challenges or engage with the community, helping to create an engaging and fun experience sparking the drive to increase repeated use.

This social layer exposes users to other members who share many of the same goals and activities, solidifying a solid and supportive user base. Additionally, the application encourages the integration of Facebook, which allows users to post their workouts or progress directly to their Facebook feed. When other users like or interact with their posts, the Nike Plus app sends cheers and encouragement, supporting the user on their fitness activity creating positive reinforcement. This social loop reinforces their commitment to the fitness program by showing post-workout comments from their feed, inspiring the user to continue their path of self-betterment.

The app also supports those found on the more competitive side by integrating challenges (Figure 9 - Challenge). These challenges then open to the more advanced or hardcore users. This lets friends within the app challenge each other in various ways, creating additional layers of social interactions specific to the type of user. Message boards are utilities to either motivate or trash talk to encourage you or others to start new challenges or tag someone else to participate.

Nike Plus has continued to grow and evolve, incorporating aspects that appeal to a wide range of audiences within the running community. This continual growth keeps the experience fresh and unique for long-time users, creating brand ambassadors and advocates who purchase Nike products and share their experiences with others. Nike Plus fitness application excels at finding the correct balance of intrinsic and extrinsic motivators to consistently reward the user.

The unique features of competing with users around the world, creative games incorporating challenges, and an ever-changing online community, encourage and support the user into long-time repeated app usage.

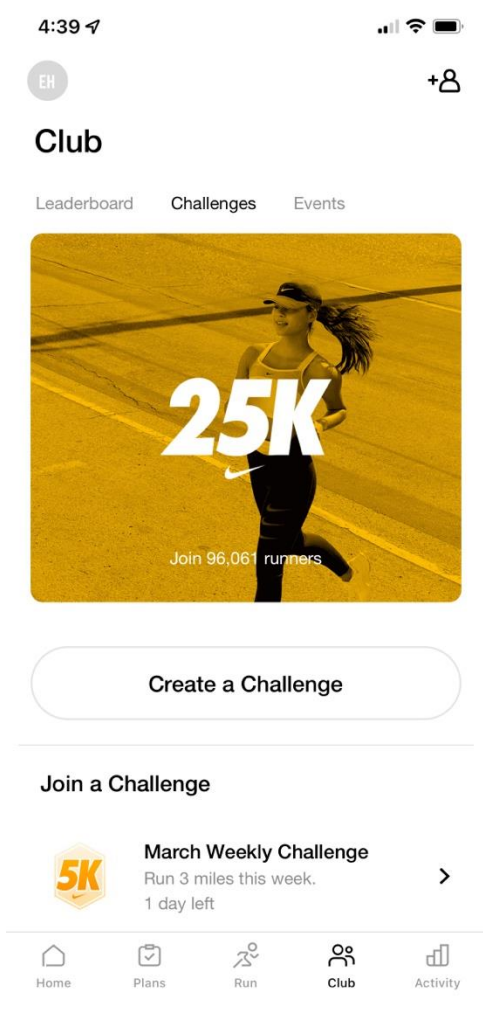


Figure 9 - Challenge

SIU RECFIT

Incorporating aspects from procedural rhetoric, organismic theory, theory of user-centered design provides the base framework on how phase one of the SIU RecFit app would apply procedures and implementation of design parameters that define user interactions with features found within the application.

User and gamer types were compared with observed demographics of those who utilize the Student Recreation Center to create user personas. These personas help define the personality types of achievers and explorers who also possess qualities shared with socializers. These two primary segments are the ideal groups that would benefit the most from the implemented reward systems coupled with activities already available within the recreation center. As achievers and explorers, they possess the intrinsic personality traits that will build an active and engaging user base aiding in the creation of a positive, supportive, and rewarding environment.

The application leverages the usage of those achievers and explorers by implementing social network scoring systems (Figure 10 - Profile) found in other successful platforms. Giving users access to create friend lists with a visible number of friends and earnable badges (Figure 11 - Badge) such as length of membership, the number of classes/programs attended, or leaderboard positions carry weight and are of importance to those user types where an arbitrary number and digital accolades are valued. The interesting aspect of these systems is that they mean nothing, they serve no purpose other than to measure the social score of the user compared to other users. The implantation of a social score is similar to mini-games or side-quests and serves as a distraction and time-sink utilized to increase engagement and time spent interacting with the platform.

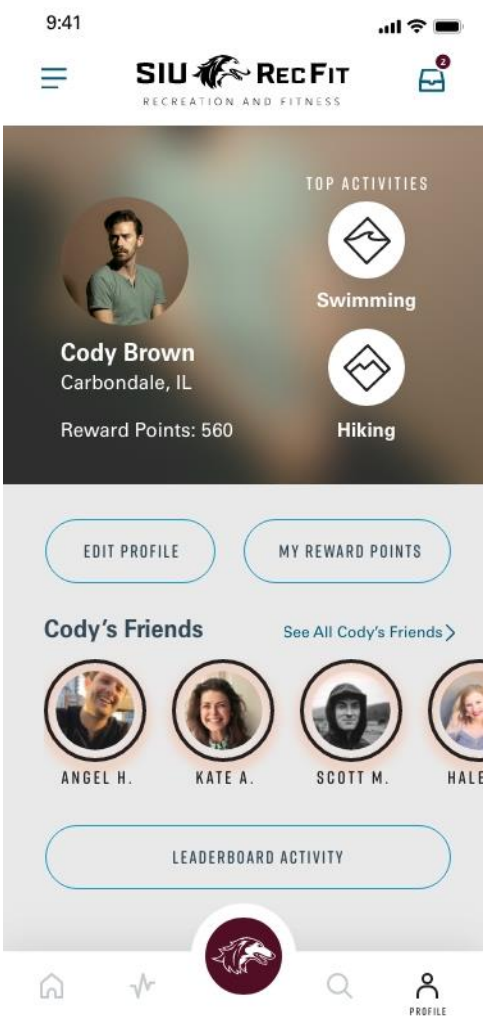


Figure 10 - Profile

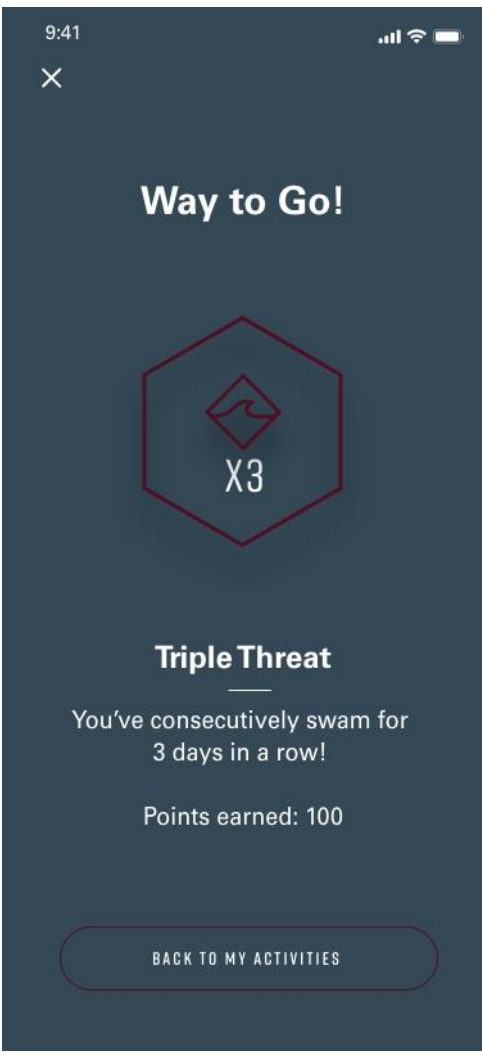


Figure 4 - Badge

The onboarding process is simple and straightforward. As soon as log-in is complete, the user is met with an introduction walking them through the basic functions to add and track activities and monitor their weekly fitness goal progress (Figure 12 - Start, Figure 13 - Track). After a brief guided tutorial, the user is greeted with the home screen where they can explore their feed (Figure 14 - Home).

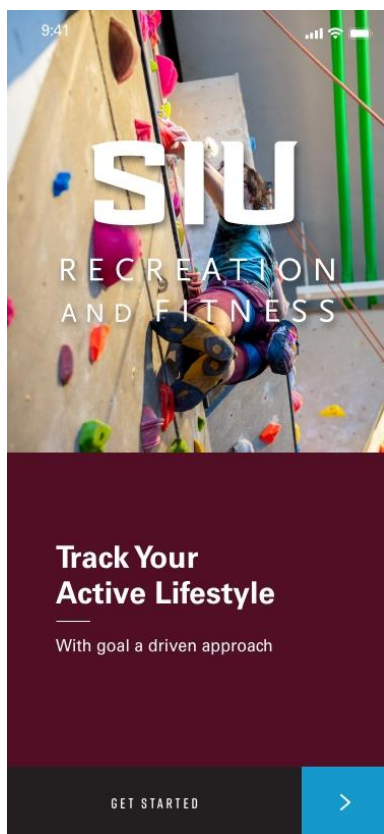


Figure 12 - Start

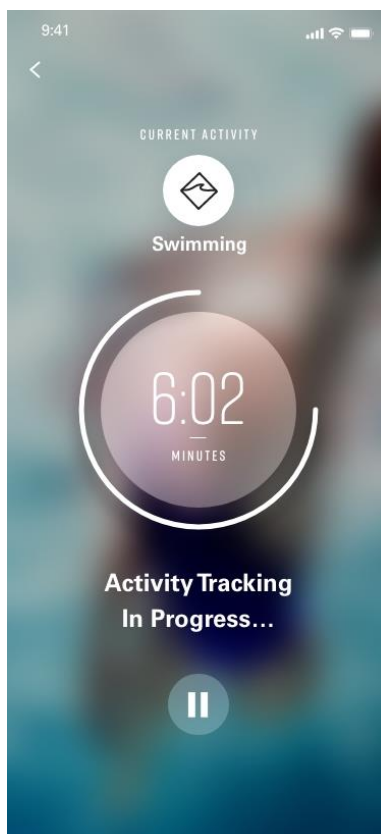


Figure 13 - Track

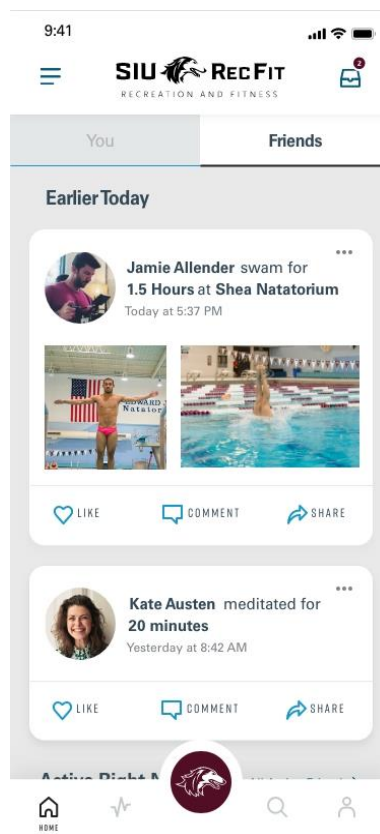


Figure 14 - Home

The reward system in place is designed to reward both active and passive usage of the app. Actively seeking ways to gain rewards can be attributed to the achiever type. The app provides many ways for active recreation and fitness enthusiasts can earn rewards based on their workouts or activities. Able to seek, achieve and grow is important for this group, keeping them engaged with the app and facilities helps to build this group into the primary usage category. These users will likely be more vocal and speak highly of their experiences becoming ambassadors for the brand which can be a great tool to utilize when strategizing avenues on increasing memberships. Passively gaining rewards benefits both of our user types by maintaining low effort creates a sense of continually working towards a goal by utilizing app functions in the most basic ways. Benefitting the socializer type by allowing them to still gain

rewards for simply doing what they enjoy, whether that is logging in daily, participating in free classes, tracking activities, or engaging with friends. Without the pressure to actively seek out and gamify every interaction, this lets the user feel like they are still making progress while casually utilizing the social functions that appeal to them.

The importance here is that the users feel adequately rewarded for their time. Meaningful gamification combining a satisfying reward system with attainable goals will create an open, active, and engaging fitness community.

The rewards system is based on the acquisition of points that can be redeemed for various rec branded merchandise, fitness classes, or membership discounts (Figure 15 – Points Earned, Figure 16 – Redeem Points). Users can earn these points by attending free group fitness classes, volunteering at rec-hosted events, and even based on their overall leaderboard placement, just to name a few. Bonus points are also awarded through participation in paid class registration to encourage the “earn and burn” cycle where user’s virtual rewards are on a constant rotation of being earned while cashing out while engaging in other activities with a goal of increasing loyalty by encouraging the user to redeem banked points to avoid amassing a large stockpile. This process serves to increase the frequency of point redemption and encourage consistent engagement.

The SIU RecFit app provides members access to content created specifically for users of the recreation center in a controlled environment promoting programs and events targeted at the specific geographic and demographic. It gives users access to the most popular programs and aids in curating content based on user wants and needs keeping fitness programming on trend with new workouts and activities. Providing data-driven information via app usage gives the developers valuable information on user trends and habits helping to create a better strategic plan

benefitting both user and institution.

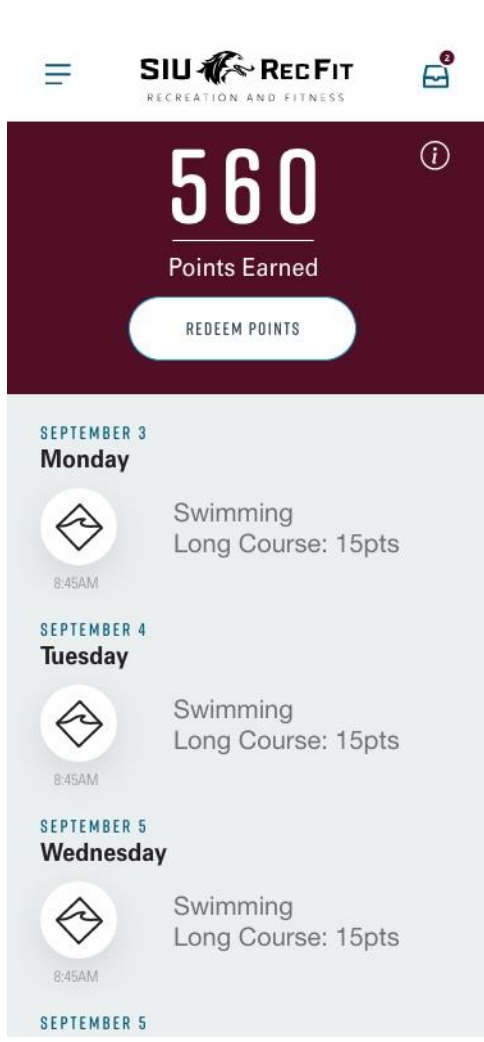


Figure 15 – Points Earned

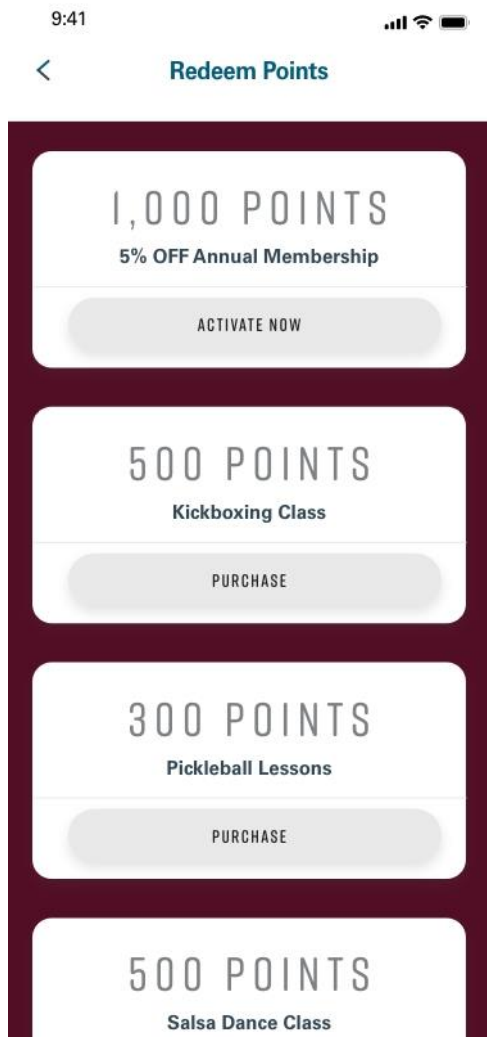


Figure 16 – Redeem Points

CHAPTER 8

POSITIVE OUTCOMES

BENEFICIAL LIFESTYLE CHANGES

Implementing a rewards-based system in a fitness application can provide the extrinsic motivators needed to start a willing participant on a path to self-betterment. In creating the mentioned motivators, they need to aid in the internal motivation to begin, pursue and continue the use of the rewards and to take the learned behaviors and apply those outside of the procedures set within the framework gamifying those activities. Repeated use within the application's gamified rewards can provide users direct feedback encouraging and building upon the success they can achieve. The repeated processes fall into a reward loop that many more prominent gaming content creators utilize to increase engagement, building a strong, dedicated, and active user base.

Participation in a fitness application program can lead to many benefits for users dedicated to the platform. There are many long-term and short-term gains that are available and provide the user with ways to better themselves. If we assess the short-term gains, it provides participants with a social platform to connect with other users with like-minded interests with similar fitness goals. It can provide the foundation needed to transfer learned habits and behaviors that will create positive changes in their health and fitness. The beneficial lifestyle changes targeted with starting a fitness app are to connect those people with social communities that support and encourage repeated use. The procedures set inside this application seek to introduce users to new and varied activities with meaningful reward systems.

Benefits not only encompass the physical well-being but also aid in the mental aspects of users. Physical results on mental health are shown to help people have better self-esteem, less

stress and mental fatigue, increased levels of motivation, and a sense of achievement.

Encouraging physical activity to remedy mental or emotional situations has been a relatively recent change in higher education settings where physical activity is essentially prescribed in some situations (severity dependent) where students may experience isolation or depression in their newly found college life. Combining mental health with recreational center activities provides an avenue for students to connect with others in a supportive and engaging environment. Encouraging physical activity to benefit mental health can help to provide new perspectives and enable users to participate in activities they may not have previously desired to do so.

BRAND AMBASSADORS

Apple, Microsoft, Google, Coca-Cola, and Disney all share a vital advertising strategy: transforming a casual purchaser into a brand ambassador. The transformation occurs by creating an ecosystem or experiences that create positive interactions between the consumers and the products the users willfully move to advocate for, wear branded apparel, and share those positive experiences and merchandise with others. This process is incredibly beneficial for the brand due to the low marketing cost needed to fulfill this strategy. The use and recognition of the brands' iconic logos, colors, designs, characters, merchandise, and products are utilized strategically to widen their consumer base. This technique also works for these brands' established position in their respective fields and appeals to their intended demographics.

Brand loyalty begins with the satisfaction of a product or service, whether by choice or external stimuli, which can create brand ambassadors who turn into autonomous advertisements sharing the brand visually, audibly through conversations, or digitally through social media interactions. Brand loyalty has been a large part of the success of each brand. Whether the

consumers are aware or not, each has been utilized as a brand ambassador when they wear, use, and share their experiences. These positive experiences help build trust and dedication to the brand, utilizing their enthusiasm to broaden their marketing reach. This reach extends itself in direct-to-consumer marketing, offering the consumer a marketplace where they can purchase items and, in some cases, personalize the product, making it feel like their own. For example, Apple offers an engraving service to personalize objects, Microsoft Xbox has a storefront allowing you to customize gamepad controllers, Coca-Cola will put your name on a bottle, you can get your name on Disney's iconic mouse ears, and Google's experience is intertwined with the user's digital identity. The ability to personalize the branded items aids the consumer curate a sense of confirmation and validity in their purchasing decisions. The positive reinforcement of those actions helps to complete the circle of brand loyalty, direct-to-consumer marketing, and brand ambassadors. This process is shared between Apple, Microsoft, Google, Coca-Cola, and Disney and helps create, build, and strengthen each brand.

The direct-to-consumer strategy helps the consumer embrace the ecosystem that builds on brand loyalty, leading consumers to advocate their purchases to others. Utilizing a direct-to-consumer approach, those brands can connect with the consumer by offering an opportunity to do business directly, ensuring a quality product is delivered to and received by the consumer. Control of the product, reputation, and access to analytical data with how the user interacts with the product is the driving force within this strategy. Whether providing exclusive items or controlling the products' licensing, direct-to-consumer marketing can gain a more thorough idea, and representation of their consumer to ensure their loyalty and repeated purchasing decisions related to the brand.

GATHERING DATA

Social media is utilized in many aspects of advertising and has integrated and intertwined itself into people's daily lives across the globe. It is arguably the most effective and malleable form of advertising in recent history. Businesses market directly to their intended audience no matter where they are located or at what time of day. No longer are they limited to displaying ads in the right place at the right time. However, that is still of significant importance in being successful. The advanced devices many of us carry in our pockets give advertisers the ability to market directly to us. With the detailed information available to advertisers, they can deliver curated ads throughout social media platforms tailored to consumers' interests which sophisticated algorithms can predict.

The usage of mobile apps removes some of the barriers that traditional methods could not address. The ability to listen to a wide array of feedback across the platforms available has been a significant source of information for businesses and campaign planning. Listening and processing anonymous consumer feedback can help understand and predict trends and apply changes to current products or content.

Social media monitoring and the data gathered from various methods are some of the critical factors in creating successful campaigns. The information provided from previous campaigns or related topics aids in the future use of advertising and how digital media teams interact with their community and plan to address customer service issues. Surveys and polls can give marketers insights into predicting behavioral patterns and the will to purchase services or items. The research data from those may also show trends that could help build an effective strategic response. Social media listening is also a tactic marketing service utilizes to gather information and insights as to what communities and users are saying and reacting to the

responses and actions of companies, both large and small.

Many companies use their social media platforms and applications to have direct conversations with consumers and followers. They can converse with that group in real-time, giving and receiving feedback, creating, and curating their online business persona. That persona can build strong loyalty and attachment to the brand due to the level of customer service and quality interactions. For the company, this type of word-of-mouth advertising is a lower cost yet builds the consumer base on a much more personal level.

These media platforms are also a vital area of advertising and community interactions.

In addition to having active social media accounts combined with app functionalities, institutions can gather quantitative information using surveys and polls. The data collected from these methods give measurable information that can predict behaviors, interests, and intent-to-purchase. Applying research data, advertisers can curate messages and offers to target their ideal demographic when strategizing future campaigns. Targeting these groups is an invaluable tool that should be utilized when available to maximize the potential return on investment.

Social media listening is a term used to describe the act of monitoring consumer-to-business and consumer-to-consumer interactions across a wide variety of platforms. This method passively gathers information without interference or influence from the business. The raw data can be applied to the business image and how that translates to consumer appeal. While it is more qualitative in the data approach, the resulting research will provide the business with more generalized metrics that can provide valuable insights into how to effectively appeal to their desired audience.

Social media monitoring has transformed into an invaluable form of data research. The information gathered can be applied to future campaigns in numerous ways depending on how

the business intends to reach its target demographics. The methods mentioned here are just a few examples of the many ways advertisers can utilize social media interactions and feedback, whether those interactions occur between consumer to consumer, consumer to business, or business to business. Each form of interaction provides data that can be used to tailor a practical marketing approach to maximize the return on investment in the field of digital media advertising.

CHAPTER 9

ADVERSE / UNINTENDED BEHAVIORAL OUTCOMES

FEAR OF MISSING OUT

The fear of missing out is something most individuals can relate to. The broadest application of the term can apply to many aspects of someone's daily life. It alters our habits, priorities, social interactions, both digital and physical, and can weigh heavily on our minds if we do not feed the cause behind that fear.

The term applies to traditional social media as a state of comparing yourself to others and the curated portrayal of their lives they display on social media. When comparing yourself to the curated images of another user's life, the self-assessments, and comparisons a person begins to make when reflecting on their status, may lead to feelings of incompleteness. That feeling of something missing is the basis of the fear of missing out on activities or experiences that seem abundant or normal on social media.

That base fear has been utilized in the gaming industry to create remarkably effective gameplay loops for minimal costs and substantial returns. These gameplay loops, limited timed events, and rewards help create an environment catered to maintaining consistent user bases, bolstering the longevity and shelf-life of applications implementing these systems.

A study has shown that the fear of missing out is one of the most significant causes of social media addiction ('Fear of Missing out' Driving Social Media Addiction, Study Suggests, n.d.). Many of those contributing factors can be found and likened to those in the gaming industry.

The interconnected nature of how we participate online, and our offline lives have blurred to an extent to where we plan actions in real life to coincide and, in some cases, prioritize online

interactions. The reward loops and limited timed events play a significant part in their design to emphasize daily rituals that reward repetitious behaviors, conditioning the users to log in and repeat daily tasks. The issue that arises is the need to repeat this process daily, causing something remarkably similar or even addiction-like tendencies. When these needs are not met, the overwhelming feeling of missing out can take hold.

The constant connection to game worlds and communities promotes the attachment and drives the need to ensure the user is not missing out on content. Studios and developers have developed unique tactics in content creation that emphasize and elicit the fear of missing out. Applying the "games as a service" method creates an ever-changing world and content where assets, cosmetic items, and events are cycled out of availability. Playing on the "you had to be there" moments entices other users to increase engagement time. This model also utilizes those same users as brand ambassadors sporting one-off items seen by new or returning players who realize they have missed content and are now committed to being around for the next round of content.

Playing on users' fear of missing out can also be found in the various currency shops on many popular games and applications. Most of these digital storefronts emphasize timed availability with countdown timers or boosts. In each of these, dollars are exchanged for game-specific currency that is only good for that single platform. For example, Destiny has the Eververse Store, Elder Scrolls Online's Crown Store, Fortnite's Item Shop, and Overwatch have their randomized "Loot Boxes," containing a random assortment of digital items. Many more examples utilize the allure of timed content to elicit anxiety over missing an opportunity. Couple that with the need to repeatedly complete daily actions, and an entertaining way to fulfill psychological needs of social communication ('Fear of Missing out' Driving Social Media

Addiction, Study Suggests, n.d.), is a highly effective way to build an addiction which also funds the cycle.

THE CARROT ON A STICK

The ability to play on fear or exclusion from activities is a strong motivator utilized in the social gaming industry. Being constantly reminded about what we are missing out on can be debilitating. That is solved by providing simple repetitive gameplay loops that give just enough reward to leave us feeling validated. Yet that is short-lived due to content delivery within the game-world and corresponding notifications and in-game ads that point to the next task or item.

The sustainability of this model needs to be brought into question. The fear of missing out on social media has been one of the contributing factors to burnout and withdrawal from those platforms. Applying similar features to gamified activities within an app featuring monetary requirements, either real currency or earned, would seem to exacerbate, or at least expedite the inevitable. The process of consistent removal of content and always knowing that something new is about to be released leads to your goals or accomplishments never really becoming complete. By design, something placed just out of reach keeps players coming back, never gaining total satisfaction that they are finished. Whether that involves grinding for that coveted reward, knowing that a new release of content is around the corner, or fully utilizing earned reward balances.

The implemented model has proven to be incredibly effective and will increase its efficiency going forward. Due diligence goes a long way in researching the methods to maintain a profitable user base with minimal contributions while leading to maximum gains. Assessment of the situation lies at the personal level, where the user can take control and decide whether these activities are rewarding and goals attainable. At the same time, manipulating the user or

their emotions or aspirations provides the basis for a thriving industry via gamification.

CHAPTER 10

CONCLUSION / FINAL STATEMENT

Overall, the supporting theories of Organismic integration theory, Procedural Rhetoric, and Theory of User-Centered Design combined with user types such as achievers, explorers and to a lesser extent, socializers create a clear guide on how applied procedures and user interactivity can appeal to certain player/user types. These ideal user types are able to be categorized by their intrinsic motivators to establish goals balanced by extrinsic factors. The finessing component of implementing a system that can provide meaningful rewards, engaging gameplay, content, and interactions, while maintaining a challenge level customizable to various skill levels is important in reaching the broadest section of your ideal demographics. Without creating that balance, may lead to a less than stellar experience primarily for the end-user where the extrinsic motivators are required to maintain minimum interaction with the platform.

Utilizing an application as a social platform with underlying aspects of promoting physical and mental well-being creates many positive behavioral change opportunities for the aspiring user. It is this portion of users that will gain the most from the procedures and information displayed in a fitness-oriented application. But that also is coupled with responsible usage and application of that knowledge, which is the responsibility of the individuals participating/engaging in the program.

The primary issue found across most sources indicates one vital note of importance. Once you introduce a reward for performing an activity, that reward cannot be taken away or removed. Rewards are utilized to increase and drive engagement or usage of a procedure. Once that extrinsic motivator is removed, as in the research performed by Deci, the drive to engage in those activities is lost. The subject of the study was to identify the positive and negative effects on the

behavior of a rewards-based/gamified experience; in that scope, the primary influence is the question of are the rewards meaningful. If that question is met with positive repeated engagement, then depending on the user type, it will determine how they interact and utilize the platform. That group will make up the consistent user base required to create a successful experience.

Gamifying activities such as fitness does harbor some benefit to the user. It should be noted that most benefits are held by the creator or business behind the service. The imbalance does not discredit the intentions to provide and create a tool to help people to better themselves. Still, as users, customers need to ensure what is offered to them is worth the time and effort it takes to engage with a platform to reap the benefits of the rewards provided.

The findings set up further potential primary research in assessing the implementation of extrinsic motivators and their effects on the intrinsic qualities of various player types. Looking at how gamifying certain actions such as motivation for physical activity and how that can affect users of various genders, ages, and lifestyles with the short and long-term effects on their behavior and how that impacts other facets of life in both the physical and mental states.

REFERENCES

- 3, 2, 1 Go! Video Gaming Is at an All-Time High During COVID-19.
<https://www.nielsen.com/us/en/insights/article/2020/3-2-1-go-video-gaming-is-at-an-all-time-high-during-covid-19>. Accessed 29 Jan. 2022.
- Chomsky, Noam. *Media Control: The Spectacular Achievements of Propaganda*. 2. ed, Seven Stories Pr, 2002.
- 'Fear of Missing out' Driving Social Media Addiction, Study Suggests.
<https://www.ntu.ac.uk/about-us/news/news-articles/2018/06/fear-of-missing-out-driving-social-media-addiction,-study-suggests>. Accessed 29 Jan. 2022.
- "How Does Self-Determination Theory Explain Motivation?" *Verywell Mind*,
<https://www.verywellmind.com/what-is-self-determination-theory-2795387>. Accessed 19 Oct. 2021.
- Kolakowsky-Hayner, Stephanie A. "Behavior Modification." *Encyclopedia of Clinical Neuropsychology*, edited by Jeffrey S. Kreutzer et al., Springer New York, 2011, pp. 371–72. DOI.org (Crossref), https://doi.org/10.1007/978-0-387-79948-3_1081.
- Nielsen, Jakob. *Designing Web Usability*. New Riders, 2000.
- . *Usability Engineering*. 3.Nachdr., Kaufmann, 2010.
- Persinger, Jennie M. "What Are the Characteristics of a Successful Implementation of Accelerated Reader?" *Knowledge Quest*, vol. 29, no. n5, June 2001, pp. 30–35.
- "Physical Activity and Mental Health." *Mental Health Foundation*, 7 Aug. 2015,
<https://www.mentalhealth.org.uk/a-to-z/p/physical-activity-and-mental-health>.
- Saffer, Dan. *Designing for Interaction: Creating Innovative Applications and Devices*. 2nd ed, New Riders, 2010.

“Self-Determination Theory of Motivation: Why Intrinsic Motivation Matters.”

PositivePsychology.Com, 21 June 2018, <https://positivepsychology.com/self-determination-theory/>.

Shirky, Clay. Cognitive Surplus: How Technology Makes Consumers into Collaborators. 1. publ., [Repr.], Penguin Books, 2011.

Stefl-Mabry, Joette. Accelerated Reading: Silent Sustained Reading Camouflaged in a Computer Program? p. 15.

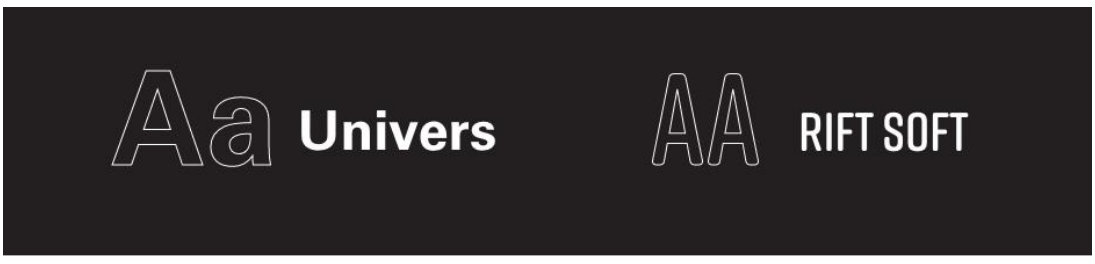
Wardrip-Fruin, Noah, and Nick Montfort, editors. The NewMediaReader. MIT Press, 2003.

Zichermann, Gabe, and Christopher Cunningham. Gamification by Design: Implementing Game Mechanics in Web and Mobile Apps. 1st. ed, O'Reilly Media, 2011.

APPENDICES

APPENDIX A

Styling, Colors and Fonts



Primary Heading 30pt Bold

Secondary Heading 24pt Bold

Section Header 18pt Bold

Sub Title 18pt Regular

Card Title 15pt Bold

Card Copy Small 15pt Light

Body Copy Small 14pt Light

Message Time Stamp 12pt Light

BUTTON LABEL DARK 14PT DEMI



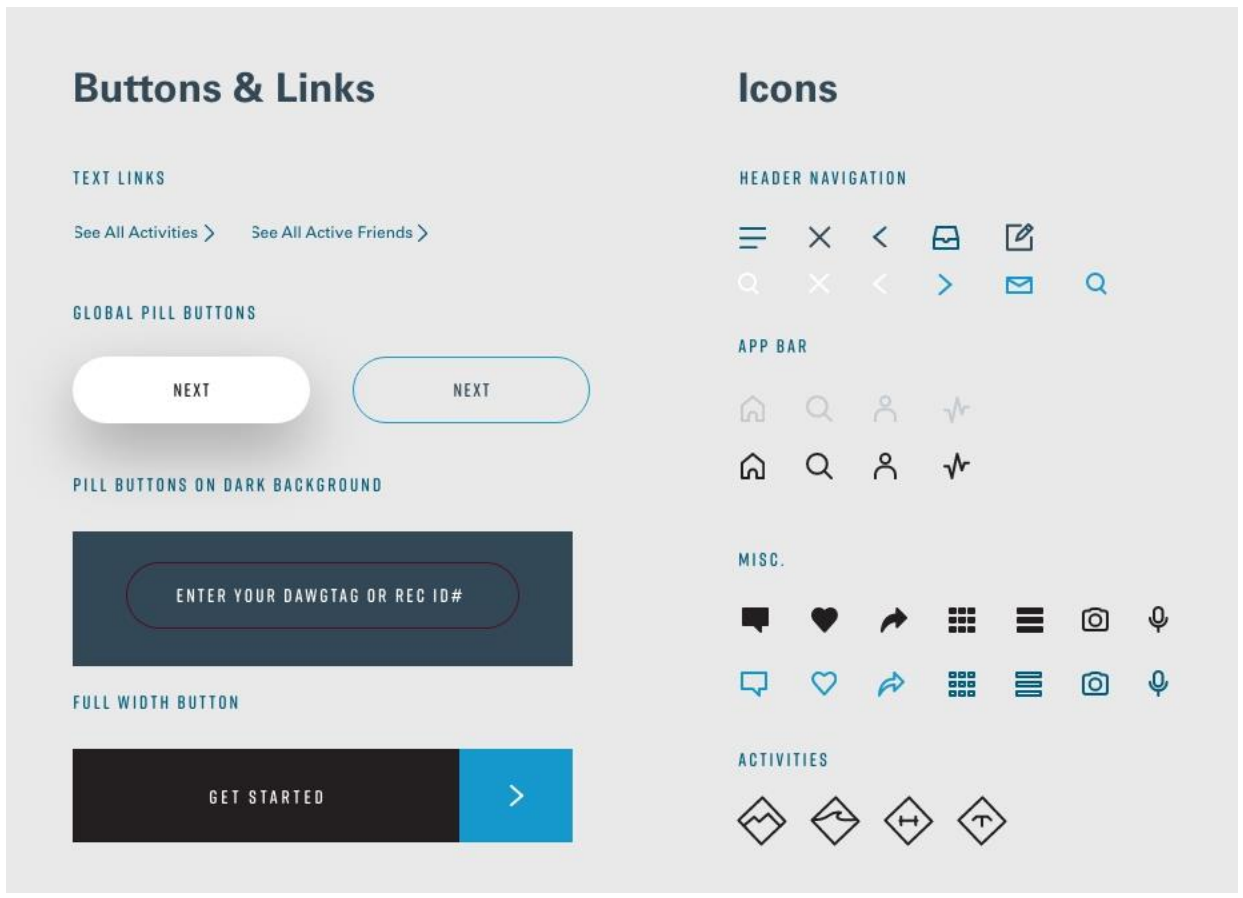
BUTTON LABEL LIGHT 14PX DEMI

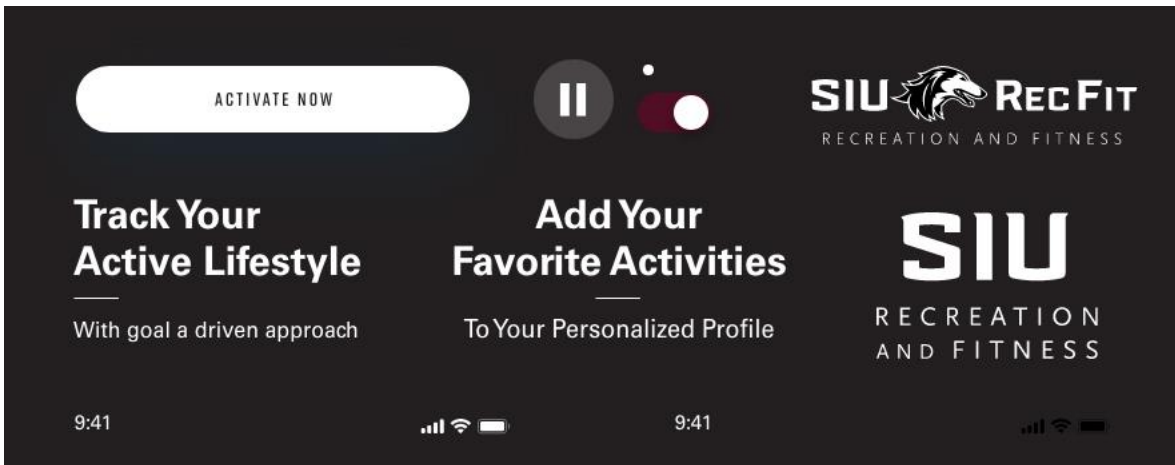
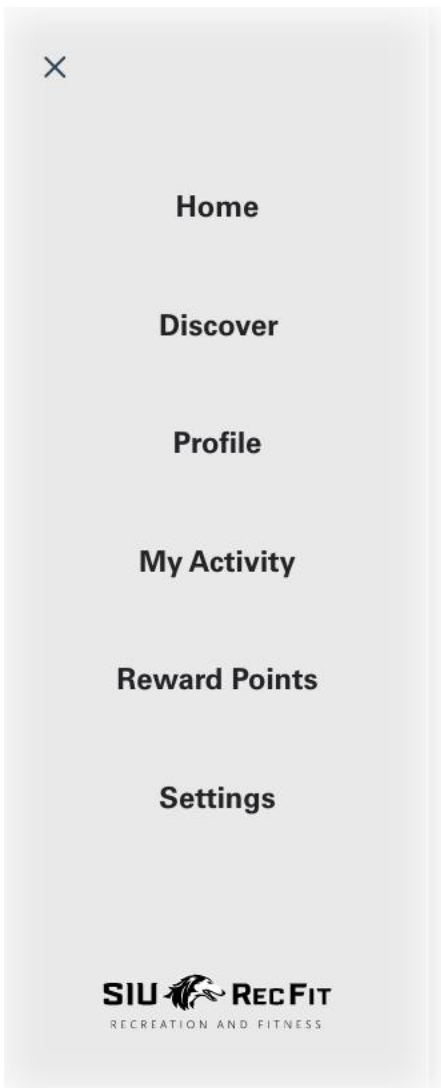
CARD SUBTITLE 10PX MEDIUM

A light grey rectangular area containing a color palette. It is divided into three sections: 'Primary Colors' with three swatches (Maroon #520E24, Black #231F20, Dark Blue #005070), 'Typography Colors' with three swatches (Black #231F20, Dark Blue #005070, White #FFFFFF), and 'Secondary Colors' with three swatches (Grey #E9E9E9, Cyan #159808, Yellow #FCB53B). Each swatch is a rounded rectangle with its name and hex code printed on it.

APPENDIX B

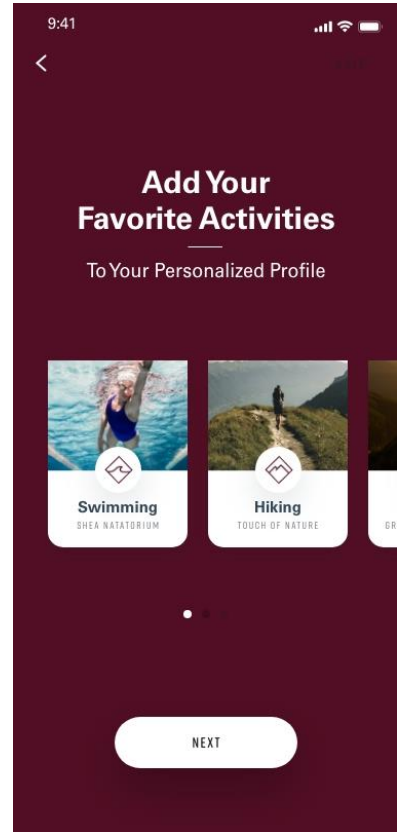
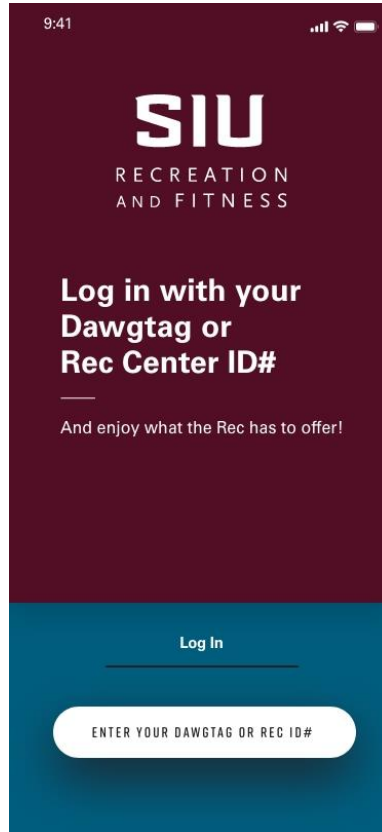
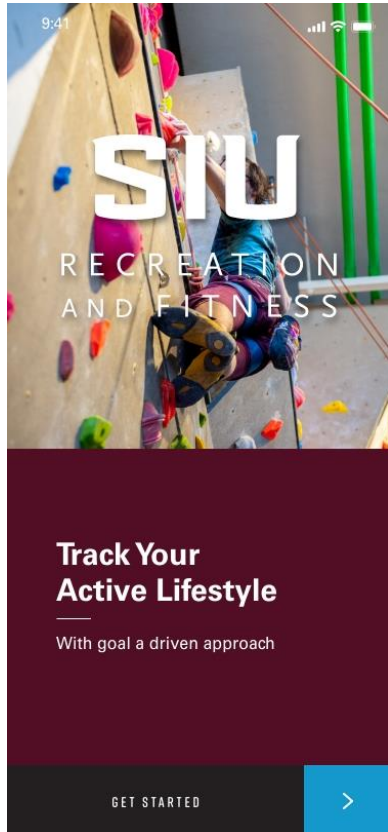
Buttons Icons Overlays

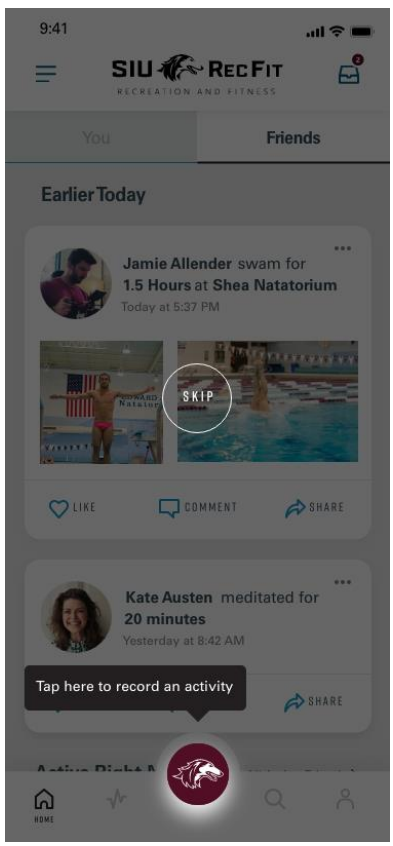
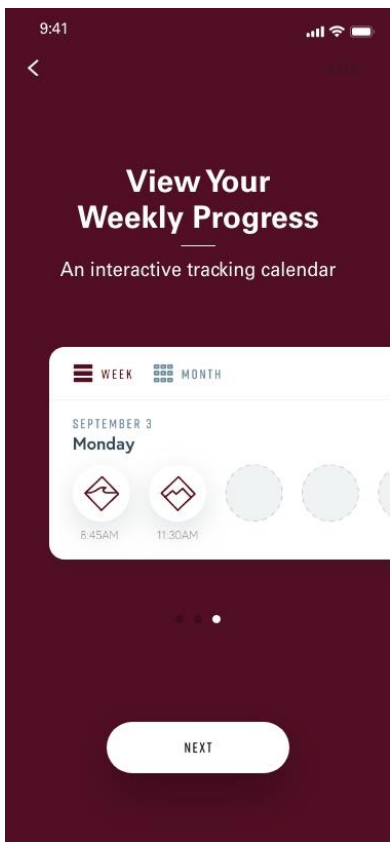
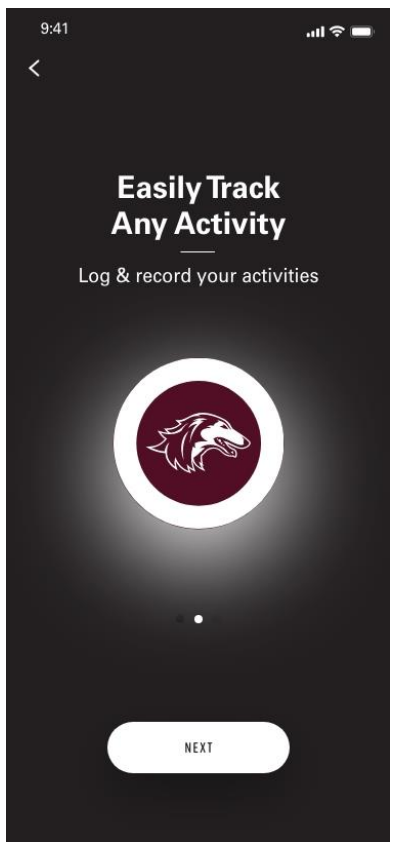


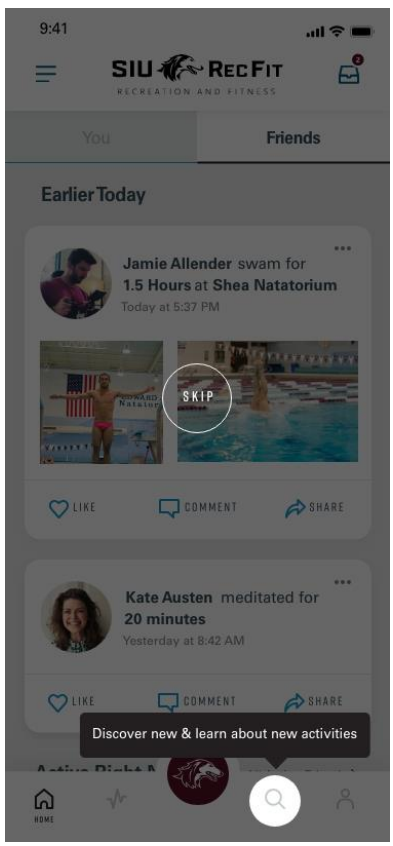
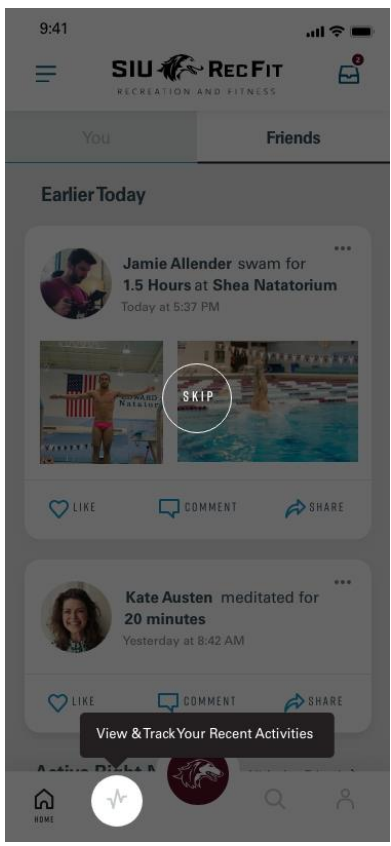
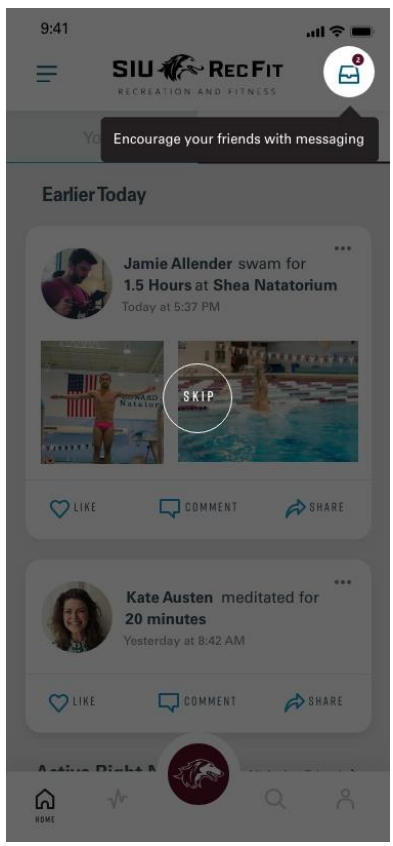


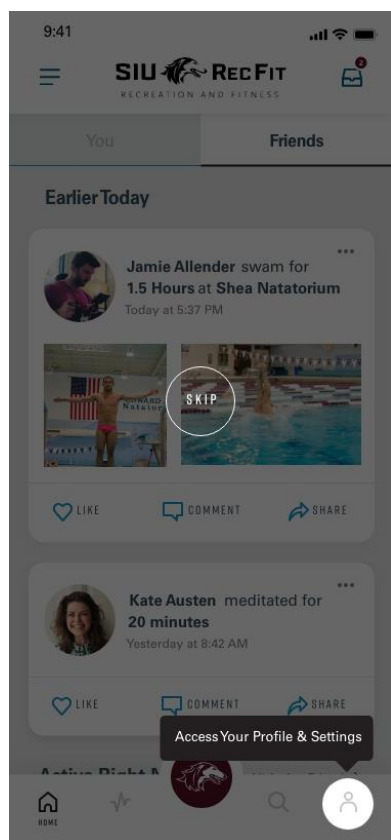
APPENDIX C

Onboarding Flow



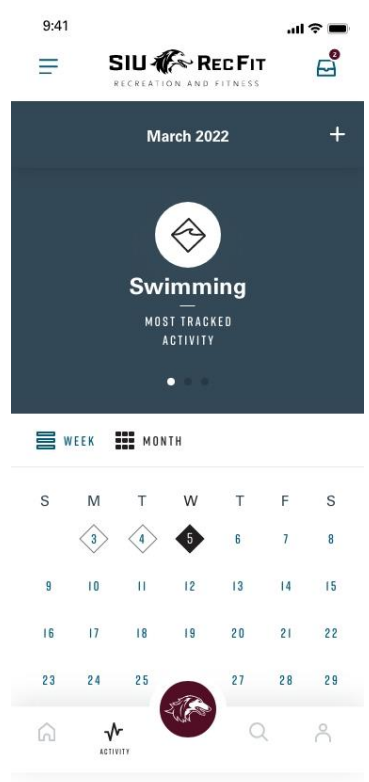
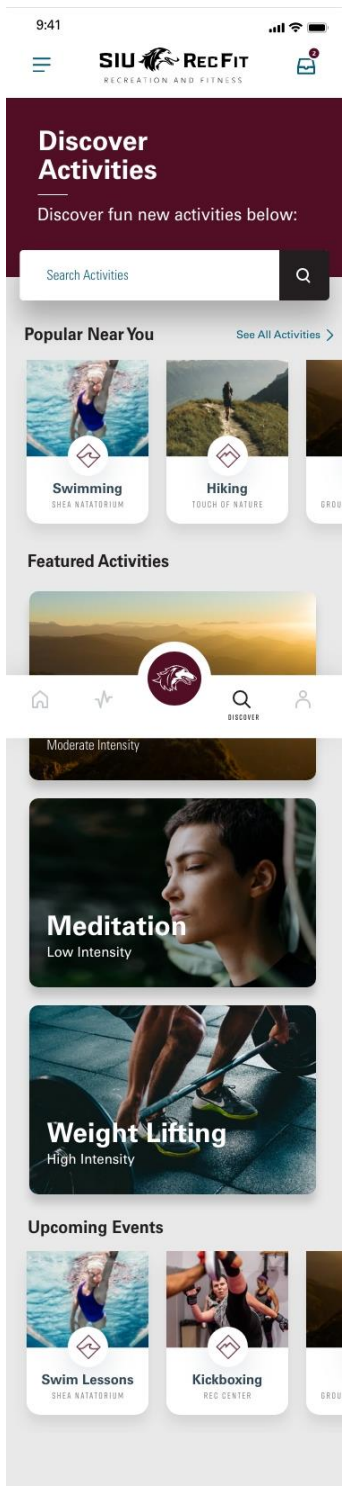
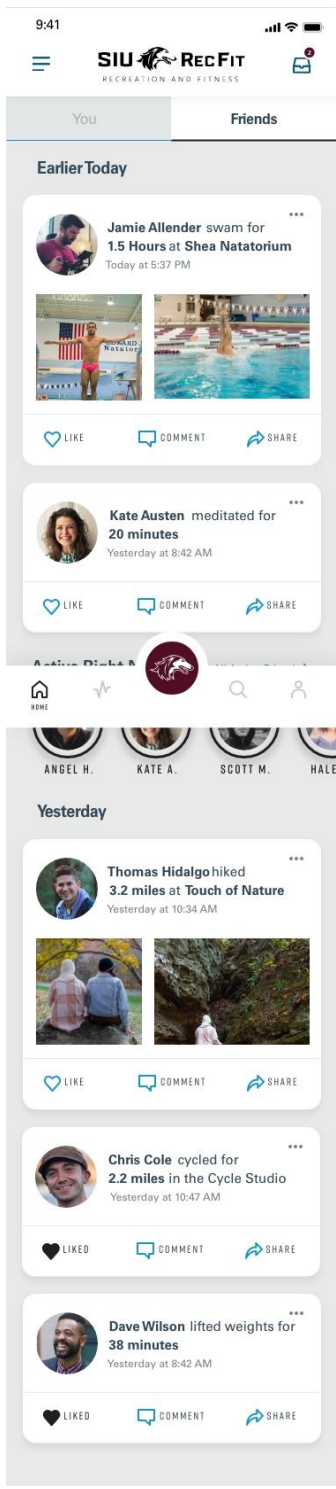


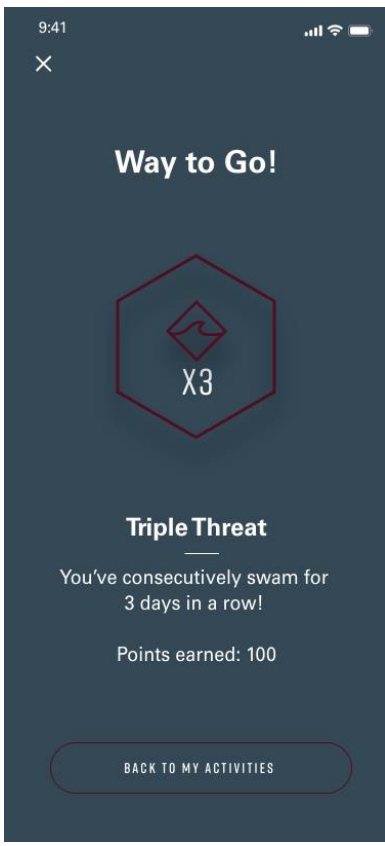
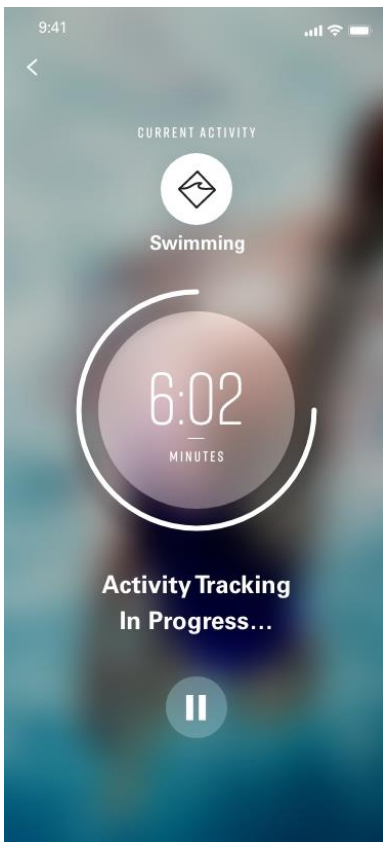
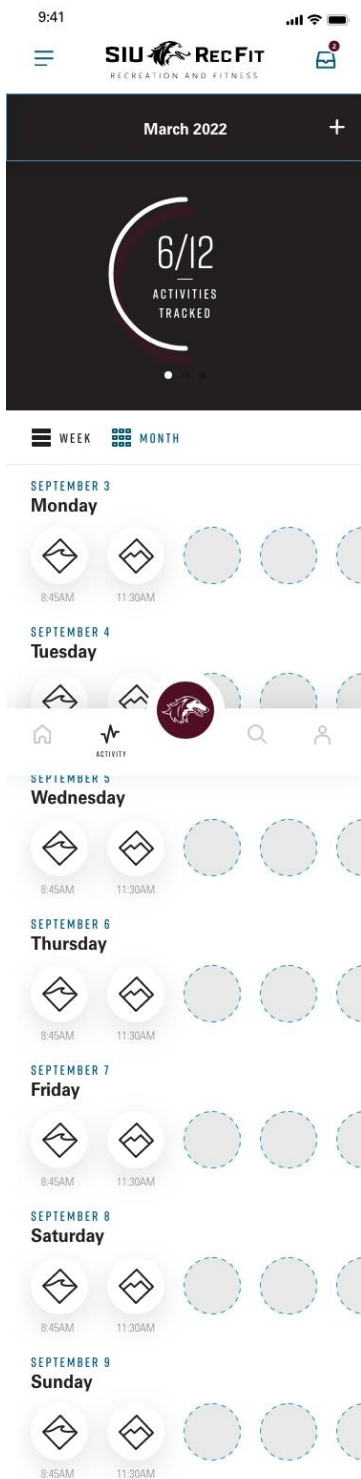





APPENDIX D

Activities







9:41

Swimming
Long Course

Moderate Intensity

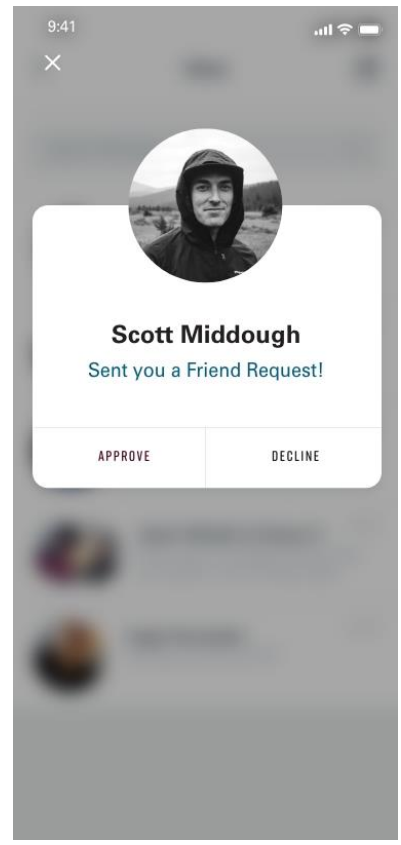
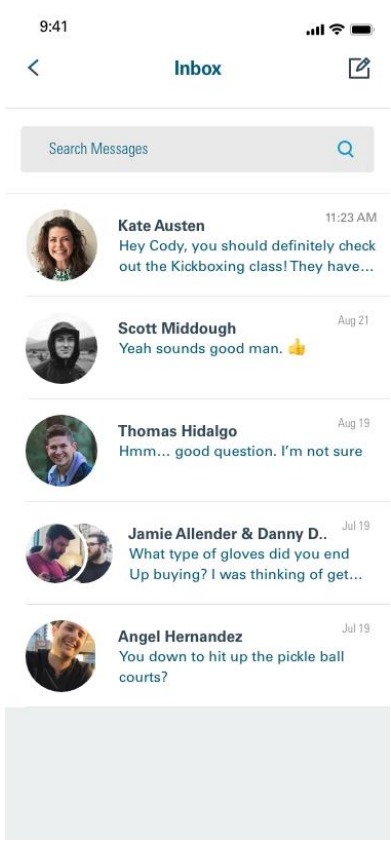
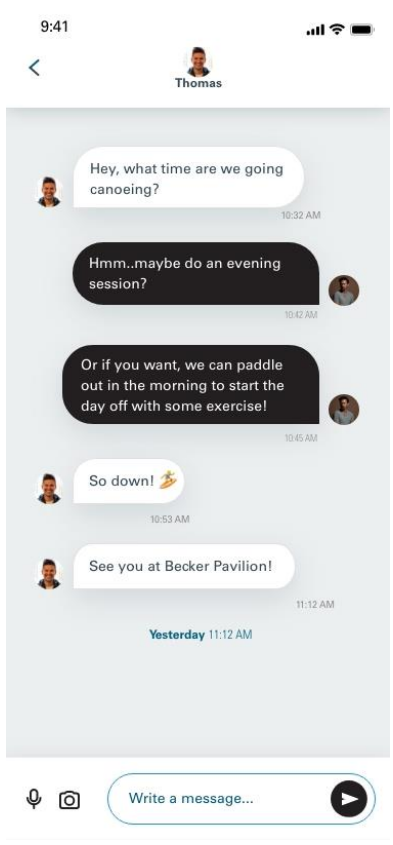
OVERVIEW

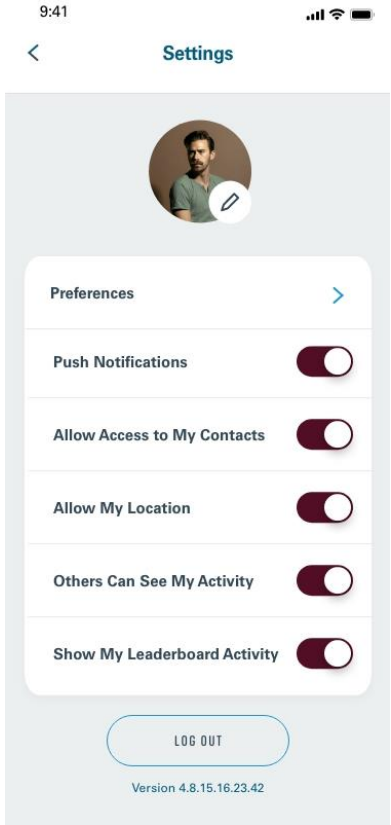
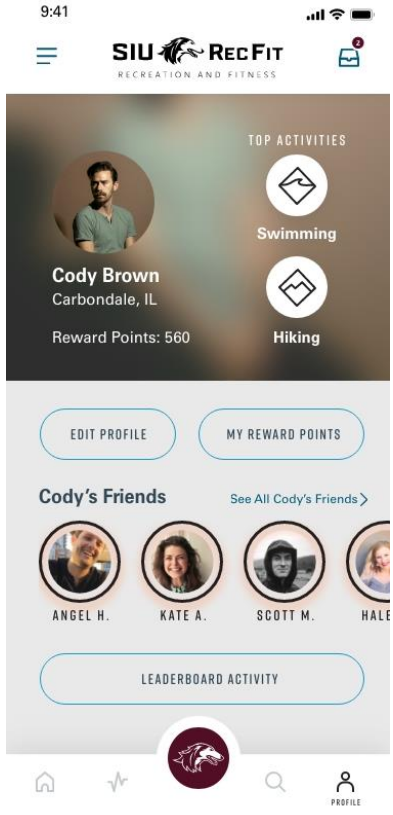
This is a simple, low stress run workout that can help build endurance while also including just enough short fartlek-style intervals to boost speed, form, and cadence. It's a workout that's easy to scale back or add to, depending on time and fatigue.

[ADD TO ACTIVITIES](#)

APPENDIX E

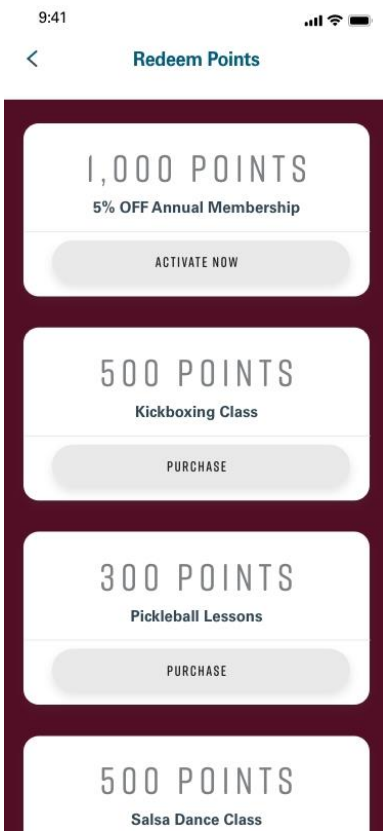
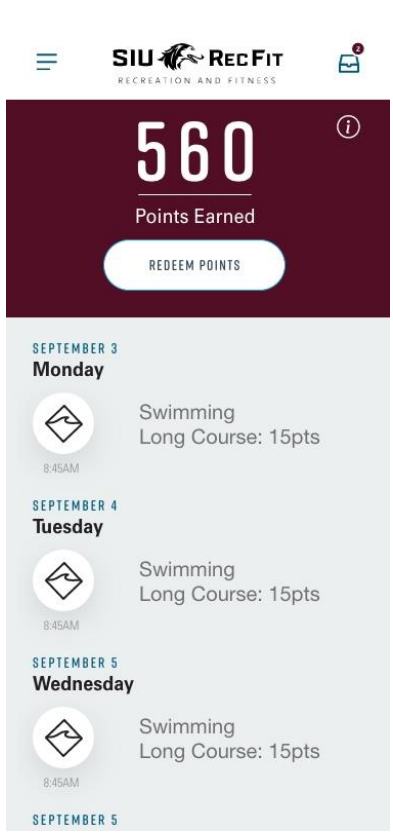
Social Messaging and Profile Settings





APPENDIX F

Point History Rewards and Redeem



VITA

Graduate School
Southern Illinois University

Eric M. Halfacre

eric.m.halfacre@gmail.com

Southern Illinois University Carbondale
Bachelor of Fine Art, Communication Design, May 2008

Research Paper Title:

Gamification via App-Based Rewards Systems: Behavioral Changes and Effects on User Interactions

Major Professor: Robert Spahr