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**Trust Commander: Self-monitoring and
development of trust through a serious
game**

by

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A thesis submitted in partial fulfillment for the
degree of Master of Science

in the
Faculty of Exact Sciences (FEW)
VU University, Amsterdam

July 2015

Preface

Before starting this project I did a research project in the field of *Game Studies* at the *University of Amsterdam (UvA)*. During this time I came into contact with Menno Deen. Menno Deen did a guest lecture on autonomous gameplay, as is among his fields of expertise.

When I started this research project I contacted Menno Deen to see if I could do research in fields that were similar to those of the researches he had done. Menno Deen was at that time for a large share of his time involved in a project called *Games4Therapy*. In his research at that time he was working with youth with psycho-social problems, trying to create a game-based tool that would allow the youth to express themselves in a fun, structured and intuitive way. Menno Deen at that point wanted to do more research in the trust levels of the youth. At that point in time I came into contact with Menno Deen.

I started my research by trying to make the definition of the concept *trust* more formal. After reading many papers we got a notion of what trust is and how it works. As we ourselves found that it was quite difficult to understand trust we initially wanted to create a game that would convey (parts of) the working of trust to the target group. We created roughly four to five prototypes of games. However, these games were all discarded as either their message was too vague, hard to understand or the game was too restrictive.

The prototypes in the first iteration of development were often too restrictive because we tried to model trust a resource-form. In our games trust was something that could be gained, spent and/or lost as a resource. However, the action to change the stacked balance of trust had to be programmed into a game, otherwise we would not be able to show the player the dynamics of trust. A problem with this is that the change in balance might not reflect the player's reaction to the action that was taken. In a game where a resource stack is used that does not reflect the player's trust the player is less able to experience the effects of manipulating trust at an emotional level. This aspect made the games too restrictive in our opinion.

In the next iteration of development we tried to make the player's trust part of the game. When drawing some rough sketches of concepts we found two problems with each concept. The first was that all games we game up with had a strong connection to betrayal/distrust. This is not something we wanted as we thought a positive approach would be more suiting for this target group. The second problem was that we had a hard time to find suitable mechanics because of the subjective nature of trust and the

aforementioned risk of focussing on betrayal rather than trust. These aspects made the games to vague and negative.

In the final iteration, before we settled on a concept, we tried to create a game that was more social. This was done because trust is often a fundamental factor in social interaction. The "games" we came up with in this iteration were mostly communication platforms rather than games. However, as these "games" felt the most natural, autonomous and generally 'in the right direction', we decided to come up with ways to make them more gamified and create a game as such. This is how our end product was developed.

In trying to find the right concept and its implementation we have both strayed from initially used theory to some extent and also consumed quite an amount of our available time. As a result of this we had less time for implementing the concept and testing this on players. This does not mean the results are obsolete but rather they should be viewed as exploratory work rather than work on which's validity could be build upon.

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Abstract

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In this thesis we researched how to make a serious game that contributes to building and self-monitoring trust. The game, which we called *Trust Commander*, helps the player to come up with good coping strategies for their psycho-social problems. Players do this by posting questions in the game on which other players can respond. The player earns points by submitting new problems and helping other players solve theirs. In our experiment we investigate the effects and experience of playing this game. We found some indication that playing the game has an effect on the feeling of autonomy and competence of the players. With regards to the experience we found contradicting evaluations of the game as in separate components the game was rated below average and overall the game was rated above average.

Acknowledgements

I would like to thank Menno Deen for being my daily supervisor and being the first reader of this master thesis. He helped me keep my focus on the project and continuously drove me to perform better. Along with words of inspiration and reassurance he got me through the whole project phase without me falling apart. Thank you so much for all your help!

I would like to thanks Anton Eliens for being the second reader of this master thesis. Over the time I have known him he has always inspired me to take a different perspective on things and focus my work and attention on things that mattered. Anton is the voice of sanity in a world that is ever increasingly focussing on rules and bureaucracy in stead of reason. Cheers to you!

I would like to thank all participants who contributed to my experiment; people that filled in questionnaires, used the application, allowed me to hold interviews with them or any combination of these. There was a lot to do and in doing so Ive asked each and everyone of you for a significant time investment. For this my my appreciation is endless.

I would like to thank Melvin Roest for the endless discussions we had about my research in particular and research in general. It was because of these discussions I constantly found myself coming up with new ways to tackle my problems. Additionally, I would like to thank him for tipping me about the game *Superbetter* from Jane McGonical. This game was a large source of inspiration upon which I build my own game, *Trust Commander*.

I would like to thanks Tom van der Spek for supporting me in my development/implementation phase of the final prototype. At points in time Tom used his great skills in programming to help me out with my road bumps. I could not have done it without you, you are a lifesaver!

Finally, I would like to thank my girlfriend and loving family who supported me all along the way. Thanks to their positive attitudes I was able to keep on going, even when times were tough and I really wanted to quit the project. I only regret the burden I have been on them from time to time when my stress levels were going through the roof. Thanks for your continued support!

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Chapter 1

Introduction

A crowd gathers at the center of the city square. As a man crosses a rope from end to end, with no connection to the world other than his feet touching the rope, a woman yells out " *You are doing great!*". The man standing next the woman starts a conversation with her about what they are seeing. Eventually the man asks the woman out on a date. Why is it human beings engage in such actions? The man crossing the rope is engaged in a life-risking action, the woman yelling draws attention to herself and the man asking the woman out is at risk of being rejected. Still all these people do what they do because they have a certain confidence that their actions will not have negative effects and/or will have positive effects. We define confidence as being a part of trust: the rope-walker trusts he will cross the line safely, the woman trusts nobody will object to her speaking out and the man trusts that he will be able to ask the woman out on a date.

Trust is a fundamental aspect of human behavior. With every action we take we have a certain trust that the preferred choice is the best thing to choose, will not harm us and/or provides us with benefits. In these we make a certain trade-off between our belief of the expectancy of success on a task, our competence to perform that task and the desirability of that outcome. As an example, research has been done on students' level of effort during task engagement[1][2][3]. In these studies similar factors were found such as the *capability* to acquire knowledge and skills, *outcome* patterns and *motivation* to acquire knowledge or skills.

There are a variety of factors in our environment that influence these beliefs when making trade-offs. For instance, the woman yelling in the crowd has done the same thing in the past over a hundred times. In all these times very few remarks have been made and no other consequences have occurred. Even if she did not have much trust in her competence or desire to do so the threshold to perform the act is much lower than if she would be doing it for the first time. The man on the rope might be performing without a safety-net for the first time in his life. However if he has enough trust in his competence he will have more trust in the situation ending well. Lastly, the man flirting with the woman next to him might have never done so before and have little trust in the outcome of the situation. However, his desire to go on a date with a nice woman pushes him to continue his attempt.

Even though our trust in something can compel us to perform a certain action the opposite is true as well. For example, if a man does not trust that his wife is spending money on useful things he could check her bank account to evaluate her purchases. As another example, if a parent does not trust that its child will not watch television at night he may put a parental lock on the device, prohibiting a password-less use after certain hours.

The level of trust one experiences is not a given absolute, which would be to either have it or not, but rather a scale between having no trust at all or having enough trust to perform the action without further reflection on it. The rope-walker from our story might have great confidence that he could cross the city square unharmed. However, his trust in his abilities might not be high enough to do so without placing a safety-net underneath the rope. The woman yelling in the crowd might not fully trust in her success if she yells alone so she might for instance get her friends to yell along with her to build her confidence.

The paragraph above also makes for the argument that trust is something we can influence. Placing the safety-net underneath the rope increases the rope-walker's trust in his safeness up to a point he is willing to perform the action. This is not because this situation makes him a hundred percent safe as the net might tear as he falls down, effectively rendering the net useless. The woman in the crowd does not have enough confidence to yell out in public alone but the aid of her friends push her over the edge.

1.1 Defining trust

The definition of trust is not a straight forward process as there are a variety of ways to interpret its meaning and the terminology is ambiguous. An example of multiple interpretations, as touched upon in the introduction section 1, is that confidence is a form of trust but the reverse does not completely describe the concept. Confidence is trust that one places in himself which is distinct from, for example, the trust one can have in someone else. Trust is not just bound to exist between two living beings as it can also be the trust one has in the safety that their home provides. In the following paragraphs we go into some definitions and aspects of trust found in the literature and from this we derive interesting aspects of trust which we can utilize in our project.

In their paper Sheppard et al. dissected trust into four forms of trust relations people can have[4]. These forms are: *shallow dependence*, *shallow interdependence*, *deep dependence* and *deep interdependence*. Essentially, they describe shallow relationships to be relationships where the trusting party/parties have some control or insights into the actions of the other party. An example given in their paper is when you would let a babysitter watch your child you would know where she is and you are able to verify her actions after you return. The knowledge each party has in this example is symmetrical. Deep relationships lack this type of insight, meaning the knowledge of the trusting party/parties is different from the opposition. The difference between dependent and interdependent relations is that in the former one party is dependent on the actions of the other party whilst in the latter both parties are dependent on each other. For each of the four trust relations types they presented they also presented the possible risks and benefits of that type of trust relation. Additionally, they describe mechanisms for building trust for each type of trust relation.

There are multiple ways one can build trust. In a paper about marijuana users Strub et al. researched the development of trust among the users[5]. They found two distinct patterns for the development of trust: the *disclosure pattern* and the *extension pattern*. The extension pattern occurs when the trusting party already has trust in some other party and is now asked to trust a third, additional party related to the second party. This development of trust indicates that trust is to some extent transferable if it has already be developed in the past. The disclosure pattern is a more elaborate process that occurs when the marijuana users have no context for trusting the other party. The

pattern can be dissected in three different sub-patterns. In the first stage the trusting party observes the other party without interaction. When enough indication for likeness is gathered the second stage starts. In this stage the trusting party interacts with the other party to gather evidence of the other party its identity as a marijuana user. Once there is enough evidence to establish the identity of the other party the trusting party starts to validate this by talking directly about the subject, marijuana. In this stage the identity is validated by discussing past experiences and knowledge common to the marijuana users.

As we target a group that is facing problems we want to increase the willingness of this group to resolve their issues. To become determined to solve your problems one must have trust in ones ability to change and ones success in doing so. For this kind of trust we look at self-determination theory (SDT) that state that people have three basic needs, namely competence, autonomy and relatedness[6]. Improving these aspects should contribute to one's trust and determination in performing certain actions. Modeling trust in this way entails that we view trust as a concept that is based on the skill and perception of the trusting party, which is in line with the other researches presented in this section.

In the paragraphs above, we have shown some models of trust in this section which present different views or perspectives on the concept of trust. From these models we will conclude and use the following factors in our own project:

- Trust changes over time by the experiences one has.
- Trust can be modeled as a risk-model that interplays between risk and benefit.
- The outcome of a situation that requires trust can be influenced by the skill and perception of the trusting party.
- Trust is more easily established with parties that share likeness with the trusting party.
- In order to increase the trust and willingness to change one must satisfy the basic needs for competence, autonomy and relatedness.
- Trust is to some extent transferable if the trusting party has preceding experiences with factors of the situation.

1.2 Goal of this research

The goal of this research is to create a serious game that contributes to building trust through gameplay and builds up statistics to monitor the progression of the perceived trust over time. We target the game to be used by youth with psycho-social problems, as part of a larger research conducted by our supervisor[7]. In a guideline of the JGZ (Dutch youth healthcare), a department of the RIVM (Dutch national institute of public healthcare and environment), psycho-social problems are defined as follows[8]:

- Emotional problems (internalization problems like fear, withdrawal, depressive feelings)
- Behavioral problems (externalization problems like aggression, distress and delinquent behavior)
- Social problems (problems in making and maintaining contact with others)

In this research we try to contribute to resolving these problems by creating a fun and easy accessible system in which the players can anonymously expose their psycho-social problems. The players should be enabled to reflect better on their problems and learn new coping strategies. The gameplay should motivate the player to play the game, which should be clearly measurable in aspects such as enjoyment and/or the frequency of use.

The game we create will be evaluated on both the effects of the game as well as the experience of playing. To achieve this we look at the in-app data as well as conduct questionnaires and interviews with some of the participants. The evaluation of the game we created will be viewed as the main finding of this research.

1.3 Related Work

As discussed in the previous section trust is a very complex and extensive concept. Because of its ambiguous meaning and use of the term we will present work related to ours through the factors we marked as relevant in section 1.1 as much as possible.

For example, we present a game which is based upon *deep dependence*, which's traits we explained in section 1.1. In this game, as described in the works of Berg et al.[9],

participants are placed in two separate rooms. There are two roles, one for each player, as one player has the *sender*-role and the other has the *receiver*-role. The sender is given the opportunity to send money to a participant of the other room. Between the rooms any amount of money that is brought from one room to the other is tripled as part of the experiment. The receiver gets the tripled amount of money from the sender and then has to decide how much money he will send back to the sender. To prevent the players from establishing some form of trust in their specific relationship the game is played only one time. The amount of money sent and received of both players is seen as a measure of trust in one another. The problem with this game lies in the fact that the receiving party might not want to return anything because it would lower his gain. Because the sending party knows this he might not be willing to send any of his money as his gain would be higher than if he would share (a part of) it. In this example the receiving party would have no consequence over his action if he would choose to not share any of his money.

An example for a trust game that is based on *deep interdependence*, which's traits we explained in section 1.1, is the Prisoner's Dilemma described in the work of Poundstone[10]. This game has two participants. In the virtual setting that is used the participants are both criminals who were arrested and imprisoned. Both prisoners are put into isolation, meaning that no communication between the participants is possible. In the overlaying story there is not enough evidence to convict the criminals for their crime. However, there is enough evidence for the criminals to be convicted for a smaller crime. The prosecutors offer each prisoner a bargain in which they can either betray the other criminal or remain silent. If both prisoners betray each other they will serve a two year sentence. If only one prisoner betrays the other that prisoner is free to walk while the other prisoner is imprisoned for three years. If both prisoners remain silent they only serve a one year sentence for their lesser crime. As in the previous example there would be more to gain if both parties could rely on each other. However, in this example both parties strongly rely on the actions of the other party. When playing this trust game the result of betraying the other are higher valued in two out of the three options from the bargain. With this in mind the only logical output of the game would be that the prisoners always betray each other, as their is much higher. However, studies have shown that people have a bias towards behaving cooperatively which makes the outcome of these trust games less predictable[11].

Another example of trust modeling is that of transaction cost modeling found in economics. Transaction costs reflect the level of trust in the economy according to Casson[12]. This becomes especially interesting when we look at economical game theory. For instance, a similar trade-off as mentioned in the introduction, where the factors were expectancy of success, competence and desirability the outcome, can be found in the work of Kreps et al.[13]. Even though this direction can be very interesting we will not proceed into it as it might create a more mathematical reflection of the concept *trust* than the subjective side we aim to investigate.

The previous examples were all games about trust. However, in all these examples the setting has been artificial. As previously discussed trust is something that changes over time by the experiences one has. In order to have a significant effect on one's trust the repetition of the exercise must happen on a daily or at least regular base. Such exercises must be geared toward everyday problems a person has in order to increase the competence in resolving these kind of issues. An example of this is the Kiwi app¹, from which screenshots are found in appendix D. Kiwi is described as :

"Kiwi is a quick and easy way to ask your friends interesting questions and find out what they think. Features:

- *Answer questions about yourself and share your thoughts with the world.*
- *Follow your friends and interesting people to create a personal feed.*
- *Share your profile to get a follower."*

Kiwi enables people to ask everyday questions to others, which helps build knowledge about everyday things. The questions can however be about anything which makes that it is not specifically geared towards problems and trust but rather to a general information need for common thoughts. With these social features Kiwi becomes a good reflection tool when you start comparing your own thoughts with those of others. From this the user can learn new perspectives or evaluate the ones he already has. The user is able to use the app fairly autonomously as he has a choice how he wants to use the app. The player can both create new questions and reactions as well as consume the questions and reactions of others. By the use of *likes* the user is able to see how many

¹<https://play.google.com/store/apps/details?id=com.chatous.pointblank>

people are positive about a reaction on a certain question. A downside to the concept is that the questions are all treated differently and the user does not have any form of progression over time. The Kiwi app, with between ten and fifty million installations and a four star rating from over two-hundred thousand users, has proven to be an interesting concept to learn from.

Contrary to the Kiwi app, SuperBetter² is an application that does focus its attention on everyday problems and challenges[14]. Screenshots for this application are found in appendix E. Through small tasks the user tries to overcome everyday problems like being overweight. The app is a gamified self-monitoring tool that allows the player to see his progression over time by various points and achievements. Problems are combined into bundles with the same goal, such as losing weight. SuperBetter models problems as games. As such obstacles become challenges, good behavior become power-ups to overcome enemies, where an enemy could be eating late in the night and the power-up for this would be chucking a glass of water. The player can create his own bundles or download bundles from others. Even though the game allows you to share your progress the gameplay is not very social. A player overcomes his challenges with exercises that are executed alone. The player does not see how others progress or reaction relative to the challenges. Another downside is that in order to create new challenges the player must have some idea of what a good coping strategy could be for that specific problem. This is knowledge that might not be available to the player or the coping strategy might not be correct or optimal.

²<https://itunes.apple.com/nl/app/superbetter/id536634968?mt=8>

Chapter 2

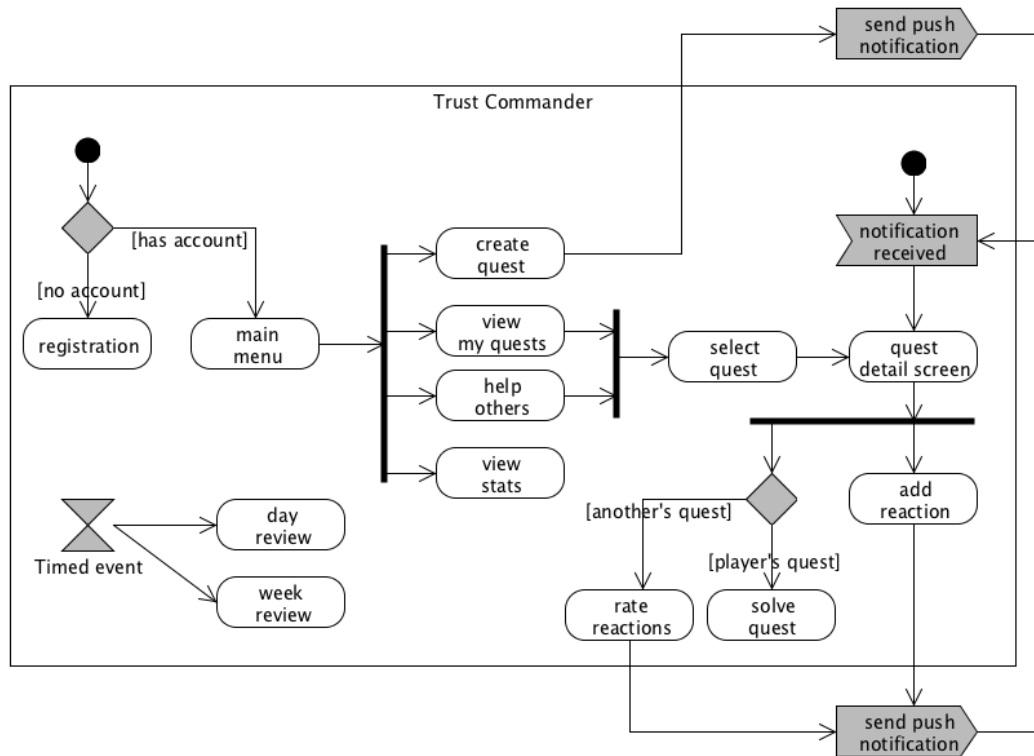
Trust Commander

In this chapter we will go into what features are present in our game Trust Commander and how these features are used. In the first section we will give an overview of all features by giving an overview of the entire front-end application and discussing all functionality per screen. In the section that follows we will go into some technical implementation notes, showing the different components, the connections between nodes and the way parts of both the front end and back end are implemented.

2.1 General overview

We present a concise overview of the entire front-end application in figure 2.1. There are two starting points in our application. In the first scenario the player opens the application itself. From there, depending on whether the player already has an account, he is brought to either the *registration screen* or the *main menu*. In the second scenario the player receives a notification that another player has performed some action. When the player opens the application through this notification he is brought to the *quest detail screen* for the corresponding quest. There are two time-based events, namely each day the player is offered to complete a review of the day after a certain time and at the end of each week the player is able to fill in a review of the entire week. Some actions, like going back to the main menu after viewing player statistics, are not included in this diagram.

FIGURE 2.1: A systematic overview of the front-end of Trust Commander



We have created this overview to be as clear and concise as possible. As such we have excluded some states and transitions, such as a termination state, that would clutter this schematic.

The players receive points for certain actions they perform in the game. We will refer to these actions as *trust-actions*. The following list represents all trust-actions in the game, along with the amount of points each action grants the player:

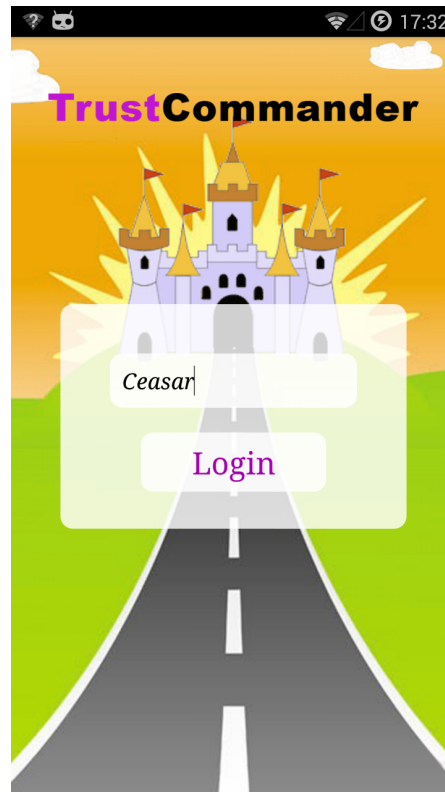
- Add a new quest : +50 points
- Rate a reaction (dislike or like) : +2 points
- Add a reaction to someone else his quest : +10 points
- Fill in your daily feelings-log: +20 points
- Fill in your weekly feelings-log: +30 points
- Finishing a quest: +10 points

The amount of points per trust-action were based on what the researcher thought the amount of effort was that the player needed to perform the action. As an example rating

a reaction given by another player is more easy than coming up with a reaction on your own.

All quests belong to a certain category, for example love or drugs. All points that are earned are earned within the category that corresponds to the quest on which a trust-action was performed.

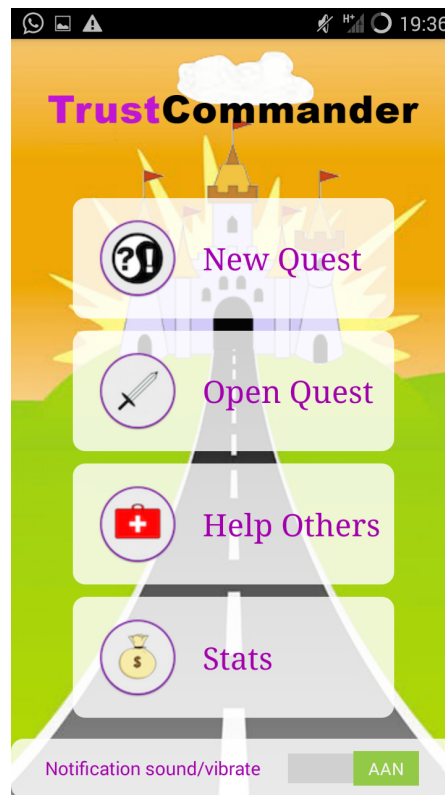
FIGURE 2.2: Registration screen



New players are able to register by creating a username, as depicted in figure 2.2 in the appendix. If the username the player requires is already in use he will get an error message that requests the player to choose another username. Players are not able to logout once they have successfully created an account. If for some reason the application needs to be reinstalled or the player switches phones then a new account must be created. If the player has previously created an account on the mobile phone he is using then the *registration screen* is always bypassed and the player will go to the *main menu*.

In the *main menu*, depicted in figure 2.3 in the appendix, the player has a variety of options to choose from. The player can create a new quest, view his unsolved quests, help others with their quests or view his statistics. All of these options will take the

FIGURE 2.3: Main Menu screen



player to the corresponding screens. Additionally, the *main menu* allows the player to turn of sound and vibration when a push notification is received.

When the player creates a new quest, as depicted in figure 2.4 in the appendix, he firstly has to select a category which corresponds to the subject of the quest. After this the player has to select if the quest is about something that still has to come in the (near) future or whether it is about something that has already happened. In the prior case the reactions should be tips and tricks to help avoid bad situations and in the latter case the reactions should reassure the quest maker and/or help him avoid the situation in the future. A past quest is indicated by a exclamation mark (!) and a future quest is indicated by an question mark (?). To give more insights into the content of the quest the player creates a title for the quest and writes out the quest more elaborately in the description.

When the player browses his personal quests, as depicted figure 2.5 in the appendix, he is presented an overview of all quests he has not solved yet. The list displays whether the quest is a past or future quest, along with the date of placement and the amount of new reactions since the last time he reviewed this quest. When the player selects one of

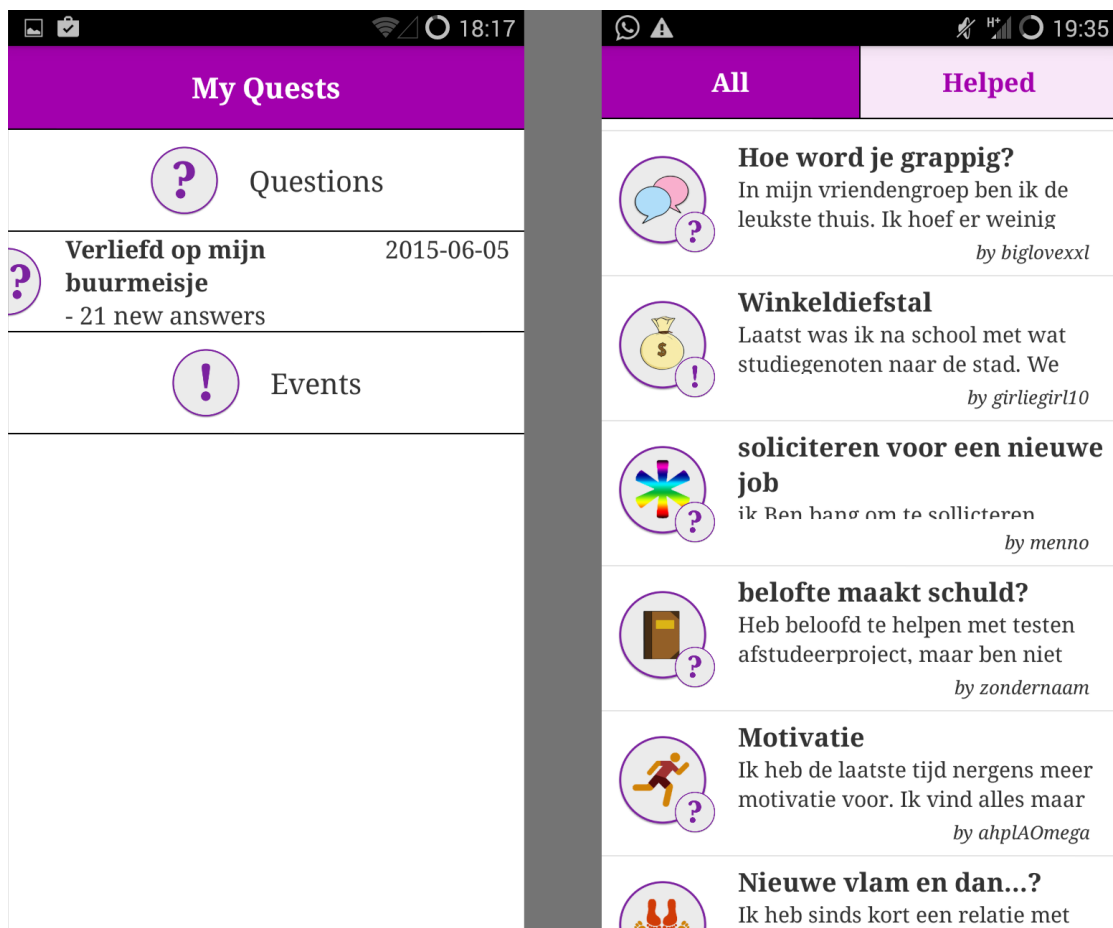
FIGURE 2.4: New Quest screen



the quests he is brought to the *quest detail screen*. When the player browses the quest of others, also depicted in figure 2.5 in the appendix, he is presented an overview of all quests that other quest makers have not solved yet. Quests are sorted by placing the most recently added at the top of the list. The quests display the title, (a portion of) the description, the category of the quest, the type of quest and the username of the player that created the quest. At the top of the screen the player can filter the results. If the player wants to see all new quests he selects *all* and if he wants to see all quests he has aided in he selects *help*. The list of quests is updated accordingly.

In the *quest detail screen*, as depicted in figure 2.6 in the appendix, the player has a few actions he can perform based on the ownership of the quest. In all cases the player is able to add a reaction to the quest. Reactions are always sorted from newest at the bottom to oldest at the top. If the quest belongs to the player that opens the view the player is able to solve the quest, effectively saying that he found some way to solve his problem and has enough confidence that if an event arises that is similar to what is described in the quest he will adjust his behavior to something that is appropriate. If the quest belongs to another player then the player opening the quest is able to rate (dislike or like) a reaction (if there are any) other players have given to this quest. Once

FIGURE 2.5: Browse quest screens



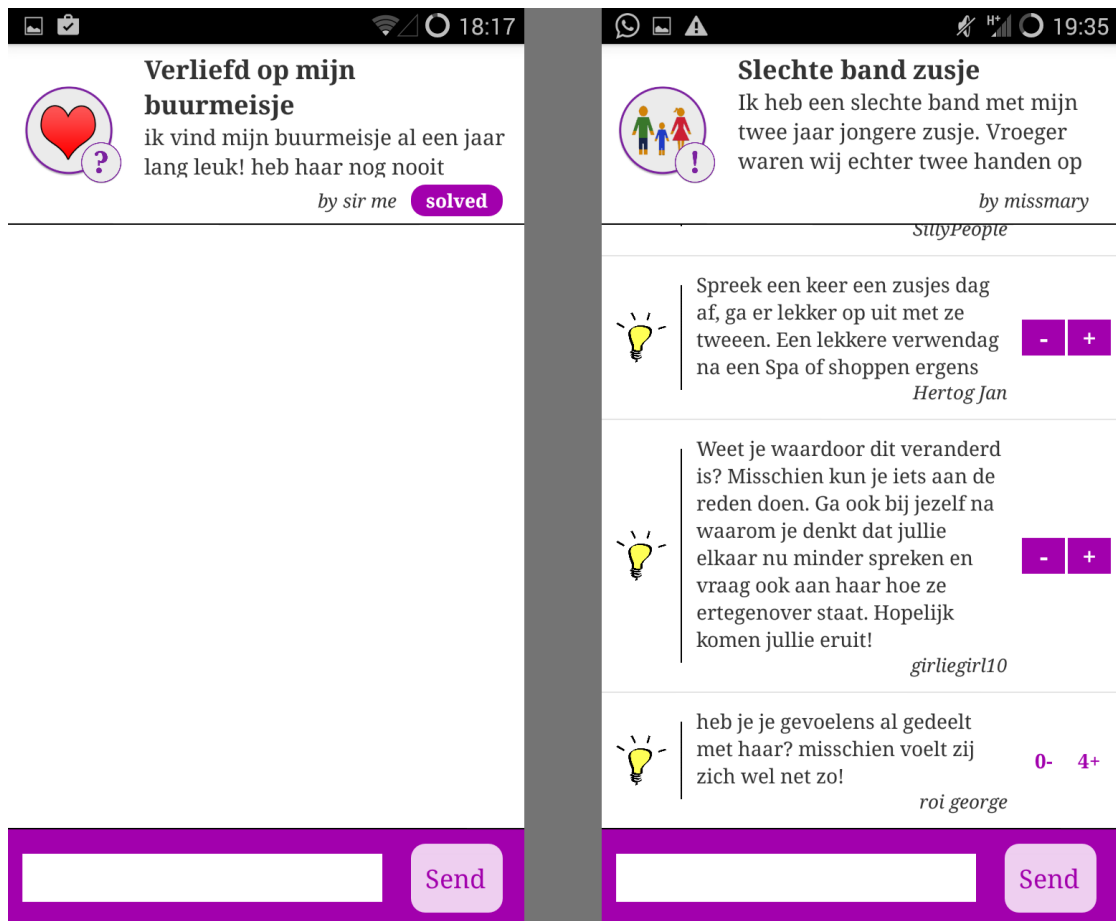
*On the left the screen is displayed when browsing the quests that belong to the player.
On the right the screen is displayed when browsing quests that belong to other players.*

a player places a rating he is not able to undo or change this. The total rating for a reaction will only be available if either the player has placed a rating of his own or if the quest belongs to the player that has opened this quest. We chose this order to avoid a bias when rating a reaction yourself.

The player can look at this scores in his *stats*, as depicted in figure 2.7 in the appendix. In the section at the top the scores can be filtered based on the categories. One additional category is added in this screen, which is the category *all*. In this category the player can view his trust scores over time, coming from the day reviews, as well as the overall points he obtained. In the other categories the player can view his scores for that specific category.

Day reviews, as depicted in figure 2.8 in the appendix, are essentially an enhanced diary. The player indicates how his general feeling was for today, using smiley-icons to represent

FIGURE 2.6: Quest Details screens



On the left the screen is displayed when opening a quest that belongs to the player. On the right the screen is displayed when opening a quest that belong to another player.

five different states of emotion: very sad, sad, neutral, happy, very happy. In the text input the player can describe his day and give reasons for the way he feels about his day.

In the *week reviews*, as depicted in figure 2.9 in appendix, the players received a summary of their actions in the week. This includes the amount of quests placed, amount of reactions posted, amount of ratings given, the amount of quest that he solved and the amount of quests that are still unsolved. Also the player received the summary of his feelings over the week, coming from the day reviews.

FIGURE 2.7: Stats screen

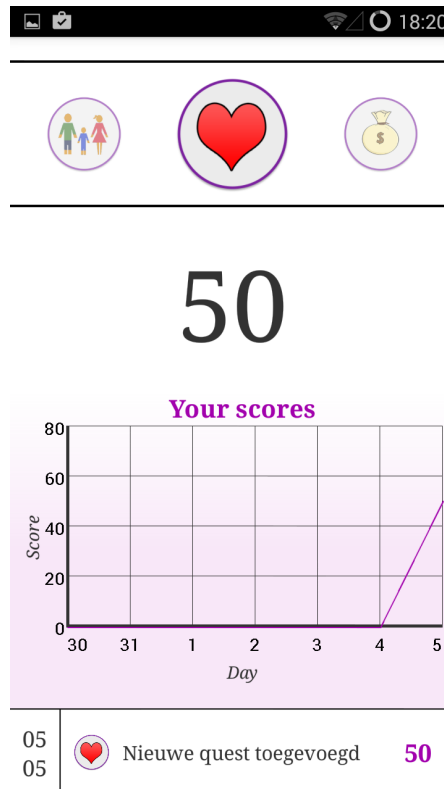


FIGURE 2.8: Day Review screen

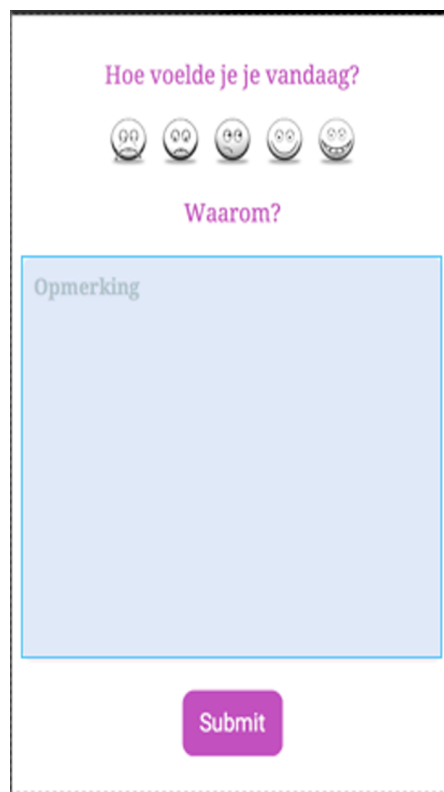
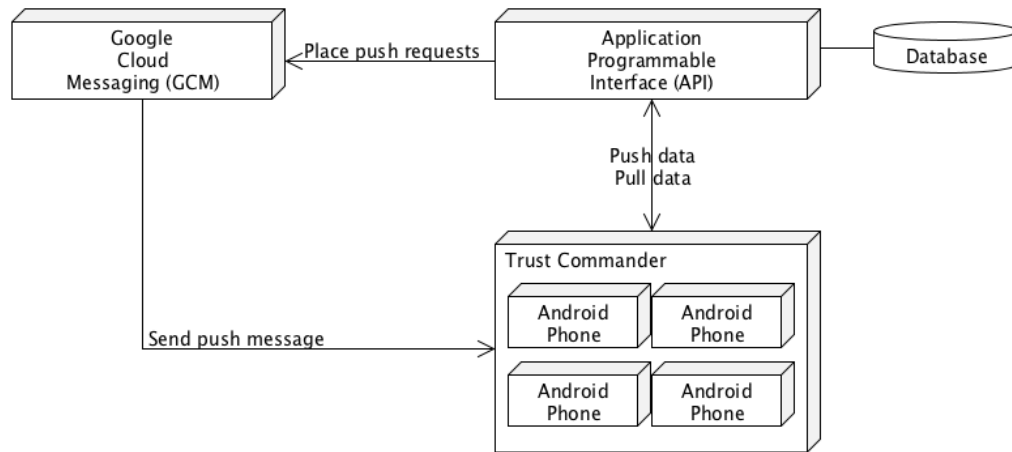


FIGURE 2.9: Week Review screen



FIGURE 2.10: An overview of the different components in the system and their connection.



The system essentially consists of four components: the Trust Commander game running on Android phones, the API running on a web server along with a database and GCM for sending push messages.

2.2 Implementation notes

We present a concise overview of the entire system in figure 2.10. The front end application has been created using native Java code in Android studio and the backend API has been written in PHP, using a JSON-RPC library.

The Trust Commander apps get all their data through the Application Programmable Interface (API). This API is created in a JSON-RPC style so that calls to the API can directly use functions, with or without parameters, within the API. The API is coupled to a MySQL database, which holds all information about the players, their scores, the quests, reactions etcetera. Whenever a player adds a new quest or reaction a request is made to Google Cloud Messaging (GCM) to send notifications to all players, except to the player that performed the trust-action. GCM in turn is responsible for sending the notification to the corresponding devices.

Whenever the player creates a new account the device identifier of his mobile phone is send along with his username. This enables GCM to send push notifications to this device. Players are not allowed to take on usernames that include comma's. This is done because some values in the database are treated as comma separated values (CSV). For example when a new reaction is placed on a quest all other players that have aided in

this quests are given a notification. Which players these are is stored in a single cell in the database using comma separated values. When sending notifications a list of players is derived from the CSV. For each player in this list his device identifier is looked up so the API knows which devices to send push notifications to.

Chapter 3

Evaluation

In this section we will evaluate the game we created, which we named *Trust Commander* as described in section 2. We will start by presenting our method which will contain the experimental design, procedure and material used in the experiment. In the section that follows we look at the experimental setting for the different parts of our research. In the final section we will look at the results of the experiment. The application will be evaluated according to the guidelines set in section 1.2.

3.1 Method

3.1.1 Design and respondents

This study was conducted using a control group and an experimental group. Each respondent had to respond to two questionnaires. The first questionnaire was done as a baseline-test and the second questionnaire was conducted after the experiment. In the experiment the experimental group participated in an intervention. No manipulation was done for the control group. This study uses a between-subject design to investigate autonomy, competence, relatedness and mindfulness between respondents of the control group and those of the experimental group. The experimental group had to fill in an additional part in the questionnaire. In this part interest/enjoyment, value/usefulness and perceived choice were investigated. This additional part was only present in the second questionnaire of the experimental group.

For this study sixty-nine respondents were recruited ($N = 69$). From these sixty-nine respondents thirty-five were placed in the control group (control group: $N = 35$) and thirty-four were placed in the experimental group (experimental group: $N = 34$). A requirement for respondents to participate was to have an Android smartphone if he were to be placed in the experimental group. This entails that all non-Android smartphone respondents were automatically placed in the control group. Respondents that did have an Android smartphone were randomly placed in the control group or experimental group. Three out of the sixty-nine respondents did not speak the Dutch language and were therefore placed in the control group, as the experiment required the knowledge of the Dutch language. All respondents were recruited from the researcher's personal network, meaning that they were mainly friends, family members, acquaintances and fellow students. Sixteen respondents were second grade (friend-of-a-friend) social contacts.

The questionnaires were conducted using online questionnaire software. Respondents received information for the procedures through their email address. The questionnaires took an estimated five to fifteen minutes to complete. None of the respondents received any form of compensation for participating in this study. All participants volunteered to contribute to this study by free will.

After the experiment was conducted three participants were selected based on their educational background and gaming experience. With these three participants we conducted semi-structured interviews to gain more qualitative insights into the feeling of autonomy, competence, relatedness, mindfulness and enjoyment. Additionally, we researched what aspects of the application could be improved. None of the interviewees received any form of compensation and, like their contribution in filling out the questionnaires, their contribution was on a voluntary basis.

3.1.2 Procedure

All questionnaires were conducted online from unknown locations. The questions and multiple choice answers were all in English. This is was done because some of the questionnaires used in this study are originally in English and we did not want to change these. To have a consistent questionnaire we chose to adapt our own questions to be in English as well. Respondents had an implicit choice to respond to the open questions in Dutch or English.

Respondents received information on the procedures for the research two days before the start of the experiment. The control group received information on when the first questionnaire would be sent, what was expected of them and that the second questionnaire would be sent exactly one week later. The experimental group received the same information with the addition of a brief summary of what Android application was they had to install and what this application was for.

At the start of the experiment the control group was sent a link to the online questionnaire at 10:00AM. A reminder for the questionnaire was sent in the evening at 20:00PM. In addition to the information for the control group the experimental group received installation instructions for the Android application and a manual explaining the different screens and functions within the application.

The first questionnaire was identical for both the control and the experimental group and consisted of three parts. Prior to any questions the respondents were informed that their information would be used anonymously and would not be used outside the scope of this research. This was done for no particular reason other than it might give the respondent some peace of mind. In the first page of the questionnaire the respondents had to fill in basic personal information. This information was used to match the baseline-test with the post-manipulation test and get basic demographic information about the respondents. The second page and third page were multiple choice questions to ascertain the respondents feeling of autonomy, competence, relatedness and mindfulness.

Between the first and second questionnaire the experimental group was asked to use the app on a daily basis. Each day at 12:00PM the participants were asked how trustful they felt in achieving their goals. Participants were able to add in new quests, synonym for everyday problems in which they lacked trust. Also, participants were able to help other players with their quests by suggesting new solutions and/or voting on solutions proposed by others.

After the experiment was completed a week later both the control group and the experimental group received a link to the second online questionnaire at 10:00AM. A reminder for the questionnaire was sent in the evening at 20:00PM. In addition to the information for the control group the experimental group received a note that the application could be removed as utilization was no longer necessary.

The second questionnaire was identical to the first one for the control group. In the experimental group an additional part was included to the questionnaire. This part of the questionnaire assesses the respondent's interest/enjoyment, value/usefulness and perceived choice. After sending in the questionnaire the respondents were kindly thanked for their contribution in this research.

After the experiment was conducted three participants were selected based on their educational background and gaming experience. Each participant was asked to meet at a place of choice for an individual interview. All three interviews were conducted at the homes of the selected participants. At the start of each interview the participants were thanked for their contribution and asked if they objected to recording the conversation. All conversations were recorded but no permission was given to use the recording for other purposes than writing out the interview results. Each participant answered all questions in similar order and they were thanked for their contribution after the interview. The interviews all took an approximate 60 minutes to conduct. Within two days after each interview the participant was sent the written interview for confirmation on its contents.

3.1.3 Material

3.1.3.1 Questionnaires

Basic information. In this self-constructed questionnaire name (either in full or partial), date of birth (day/month/year), gender (male/female), occupation and country of origin were examined to find out some background information about the respondents. The given name of the participant was used to match the baseline-questionnaire results with those of the post-experiment questionnaire. See appendix [B.1](#) for this questionnaire.

Basic Psychological Needs Scale (BPNS) - Basic Need Satisfaction in General. This questionnaire was used to assess the degree to which the respondent experiences satisfaction of his autonomy, competence and relatedness. According to self-determination theory the needs assessed in this questionnaire must be satisfied for someone to develop and function in healthy ways[15]. This questionnaire was used in both the first inquiry and the second inquiry for both the control group and the experimental group. The questionnaire consists of twenty-one items spread across the three different

scales, the autonomy, the competence and relatedness scale. Answers were given on a 7-point likert-scale, ranging from 1 (not true at all) to 7 (very true). An example item from the autonomy scale is "*I feel like I can pretty much be myself in my daily situations*", an example of the competence scale is "*Most days I feel a sense of accomplishment from what I do*" and an example from the relatedness scale is "*People are generally pretty friendly towards me*". See appendix B.2 for the this questionnaire.

Mindful Attention Awareness Scale (MAAS) - Day-to-Day Experiences. This questionnaire was used to assess the degree to which the respondent was mindful. Mindfulness reference to the awareness and attention of a person to what is taking place in the present. This questionnaire was used in both the pre-experiment test and the post-experiment test for both the control group and the experimental group. The questionnaire consists of fifteen items that are all used for assessing this single factor. Answers were given on a 7-point likert-scale, ranging from 1 (almost always) to 7 (almost never). Example items from this scale are "*I rush through activities without being really attentive to them*" and "*I find myself preoccupied with the future or the past*". See appendix B.4 for this questionnaire.

Intrinsic Motivation Inventory (IMI) - Activity Perception Questionnaire. This questionnaire was used to assess the participants subjective experience related to a target activity. The scales we used in particular assessed the participant's interest/enjoyment, value/usefulness and perceived choice towards the given task. Originally this questionnaire was used when doing laboratory experiments. This questionnaire was used only in the the post-experiment test for the experimental group. The questionnaire consists of twenty-five items spread across the three different scales, the interest/enjoyment, the value/usefulness and perceived choice scale. Answers were given on a 7-point likert-scale, ranging from 1 (not true at all) to 7 (very true). An example item from the interest/enjoyment scale is "*I would describe this activity as very fun*", an example of the value/usefulness scale is "*I believe doing this activity could be of some value for me*" and an example from the perceived scale is "*While doing this activity I felt like I had a choice*". See appendix B.3 for this questionnaire.

Trust Commander evaluation. This self-constructed questionnaire was used to inquire how much time respondents spent on playing the game, they would rate the game

and what aspects they did and did not like. Example questions from this questionnaire are "How often did you play Trust Commander?" and "What aspects of Trust Commander did you like?" See appendix B.5 for this questionnaire.

3.1.3.2 In-app Data

All data used in the app was stored on a web-server. This data was kept in a MySQL¹ database in different tables. All actions the player took, like adding a quest or new reaction to an existing quest, were given a timestamp, apart from other necessary information like the username and text. This data gave us insights into the information about players, quests, reactions and (dis)likes. The data contained no indications of the true identities of the participants in order to keep them anonymous.

3.1.3.3 Semi-structured Interview

The interviews were conducted semi-structured. At the start of the first interview some questions were made in preparation. However, the initial interview questions were extended by additional questions which were asked in the first interview and that were not part of this initial set. As a result all interviewees were asked the same questions. As the interviews were not fully structured the flow of questions in the interviews differed. To make a better comparison among the results the flow of questions of the first interview was taken as the final flow. The two following interview results were modeled to fit this flow. A summary of all three interviews can be found in appendix C. All interviewees approved these summaries but did not sign them to ensure their anonymity.

3.2 Experimental Setting

3.2.1 Questionnaires

In this study sixty-nine respondents agreed to participate in the study. unfortunately, thirty-five respondents had to be excluded from the analysis, as they did not complete either the first, the second or neither questionnaire. The final analysis was done with

¹<https://www.mysql.com/>

TABLE 3.1: General information about respondents of the questionnaire

Experiment Group	Respondents N	Gender		Age			
		Male	Female	Mean	SD	Median	Range
Control	17	9	8	22.20	10.87	24	17-59
Experiment	17	10	7	22.28	3.95	22	18-36

a sample of thirty-four respondents ($N = 34$). From these thirty-four respondents seventeen were situated in the control group (control group: $N = 17$) and seventeen were situated in the experimental group (experimental group: $N = 17$). See table 3.1 for the distribution of the respondents over the two experiment groups, their gender and their age.

3.2.2 In-app data

After the experiment was completed we extracted the game information from the online database. This data gave us some insights into how many people actually played the game, what they did within the game and at what times they played.

We started this study with an experimental group with a sample size of thirty-four (experimental group: $N = 34$). The database contained a list of thirty-five unique in-game usernames. However, three participants reported that they had to reinstall the application and created a new username when they started to play the game again. After merging duplicate usernames, the final list of participants counted thirty-one unique players (total players: $N = 31$). However, we can not be certain all these usernames have distinct players behind them because other players might have switched their username without reporting this. Players' actions can be derived from their in-game *scorecards*, as any action taken within the game that gives the player points are saved on their virtual scorecard. In total twenty-nine scorecards were created meaning that of the thirty-one players that created a username two did not play the game at all. For these reasons all information from the database will reflect twenty-nine (active players: $N = 29$) players that were active in the game to some extent.

Any action taken within the game that gives the player points will be called a *trust-action*. A trust-action can be one of the following things:

- Add a new quest

TABLE 3.2: Spread and amount of performed trust-actions

Type of trust-action	Amount
Add a new quest	32
Rate a reaction (dislike or like)	425
Add a reaction to another player's quest	119
Fill in your day review	95
Fill in your week review	12
Finish a quest	23

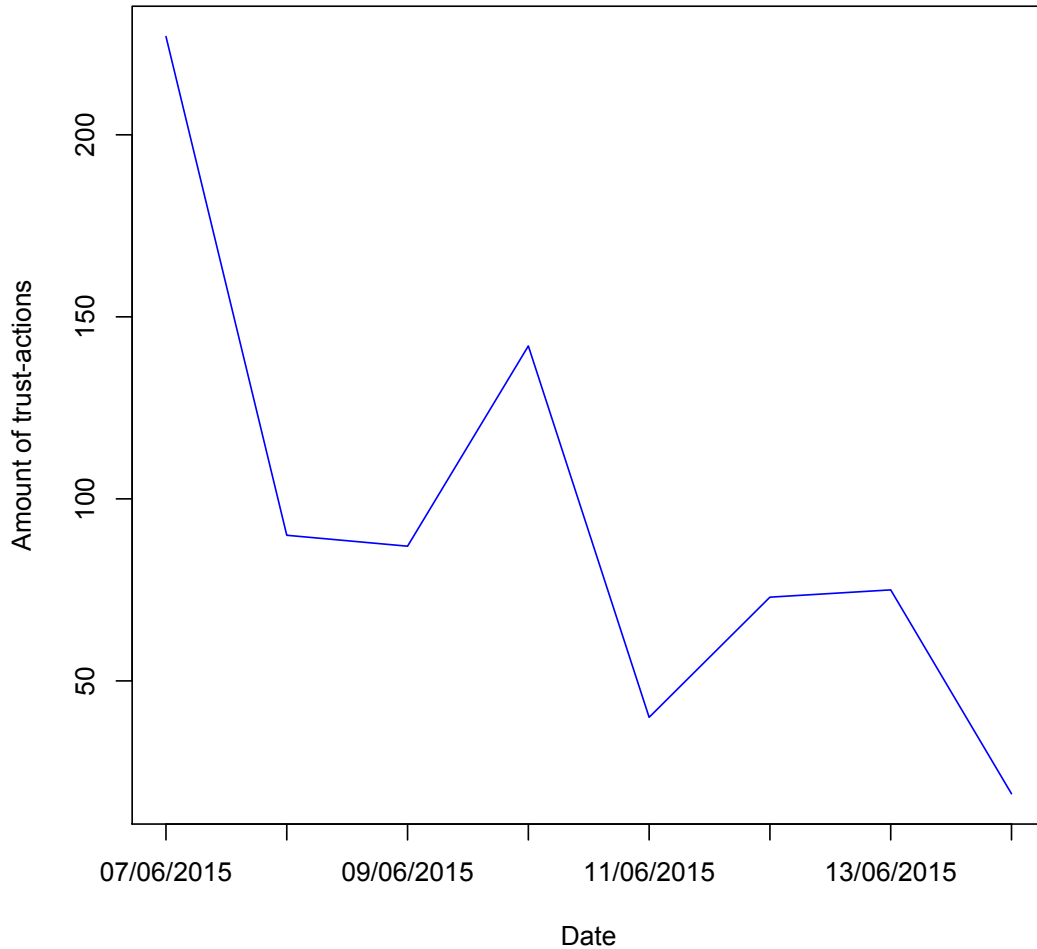
- Rate a reaction (like or dislike)
- Add a reaction to someone else his quest
- Fill in your daily feelings-log
- Fill in your weekly feelings-log
- Finishing a quest

In total 700 trust-actions were performed by all twenty-nine players combined. This means an averages of 3.45 trust-actions per player per day, rounded to two decimals. We listed the total amount of trust-actions per player and found a median of 13 for the entire experiment week. See table 3.2 for the distribution of all trust-actions over the types of trust-actions.

On average, players were reasonably active during the experiment week. Players played the game the most the first day of the experiment. This is arguably because players were exploring the application and the start of the experiment week was on sunday, on which most of the participants were free from work, school or other obligations. On the last day of the experiment week the activity decreased more than the rest of the week. However, on this day an email was sent at 10:00AM that this was the final day of the experiment and players did not have to play the game anymore. For a graphical representation of the activity of the players over the week, in terms of trust-actions, see figure 3.1.

We zoom in on some data about specific players. Looking at the scorecards of the individual players we find some indication that players play the game in their own ways. In table 3.3 we present the top seven players with the most reactions, quests and ratings. As can be seen the high scores for these different trust-action types are filled by different

FIGURE 3.1: Progression of the amount of trust-actions



players. For instance the player *zondernaam* has placed the most quests of all players but is placed seventh in the top of reactions and is not in the top of the ratings. A possible explanation is that this player uses the application to get answers on his problem and does not want to explore other players their problems. On the other hand the player *missmary* is on first place of the most reactions list and on the fourth of the most ratings list and is not to be found on the most quests list. Possibly this players likes to help others and this helps her to help solve her own problems as well.

We present some example quests from participants, given during the experiment week, in table 3.4. These quests are representative in quality for most other quests that were created in the application. These quests show the diversity of the quests created in the experiment. For instance, in the second quest the problem came from a past event that

TABLE 3.3: Top seven players with the most reactions, quest and ratings

Top seven players with the most reactions		Top seven players with the most quests		Top seven players with the most ratings performed	
Username	Amount	Username	Amount	Username	Amount
missmary	15	zondernaam	5	girliegirl10	101
SillyPeople	13	girliegirl10	4	Hertog Jan	95
Appel	13	SillyPeople	3	SillyPeople	93
biglovexxl	9	Hertog Jan	3	missmary	44
Hertog Jan	8	Appel	2	Daghw	27
girliegirl10	8	biglovexxl	2	Hannah	16
zondernaam	8	Blobje	1	potato	13

TABLE 3.4: Four examples of quests from participants

Title	XTC	I kicked my dog	Being honest to friends about bad things	Bad relation with little sister
Text	A couple of my friends are going to a party next week where they will take XTC. I will go too but I actually do not want to join in taking drugs. I think if i tell them this they will try to convince me to use any way. What could I do best?	I came home from school yesterday and saw my dog was busy pooping in the living room. I had just walked her outside where she went as well. Now she limps slightly and I feel somewhat guilty. How can I prevent myself from having these anger attacks?	My best friends are 100 percent against drugs but I am not. Sometimes I want to use drugs to get to know my limits better. My friends say they disapprove of my behavior. I do want to be honest with my friends... How can I do this without it causing a conflict?	I have a bad relation with my sister, who is two years younger than I am. We used to be really close but these days we kind of avoid each other. What can I do about this?

These quests were translated as they were originally in Dutch.

the player regrets and wishes to avoid in the future while the other three are problems about event that might take place in the (near) future. Two of these quests are about drugs. However, one of the quests is about resisting drugs in social events while the other quest is about being honest to your peers about recreative drug usage. One of the quests is on a very short term scale, where someone kicked his dog in a moment of aggression, while another quest is on a more long term scale, where two sisters have grown apart.

Lastly, we present in-game content of day reviews by participants in table 3.5. These day reviews can help a player and/or his supervisor gain insights into structural problems

TABLE 3.5: Four examples of day reviews from participants

Today went fairly well. Yesterday I fell asleep later and this morning I was up way to early but I did go to palates later in the morning. This was really nice. Afterwards I did some chores at home and did my homework. I just went to dancing lessons also. Now I sit down on the coach being tired.	I have been busy studying really well	Had a couple of really busy days. Did a lot of fun stuff I am still tired and busy so my moods swing a little.	Too many projects, did not finish any of the things I wanted to get done.
--	---------------------------------------	--	---

These day reviews were translated as they were originally in Dutch.

and/or help his feelings over time into perspective. As can be seen from the table some day reviews were more elaborate than others. What is interesting to see is that some participants were very specific in logging the reason(s) for their day reviews.

3.2.3 Interviews

The interviewees were all selected at random. Of the three interviewees two were aged twenty-five and one was aged twenty-two. Two of the interviewees were students and the third one just graduated from her education. One interviewee was female and the other two were male. The graduated student did a master in psychology, specifically in social and organizational psychology. From the remaining two students one studied informatics and worked part-time at an app development bureau. This student spend quite some of his free time playing games. The remaining was a multidisciplinary student, as he did a master in informatics with a specialization in multimedia, game studies and a bachelor in psychology. As all interviewees wished to remain anonymous we have assigned them new names: Adam, Bob and Caroline. For the matching of each profile to each of these interviewees see table 3.6.

TABLE 3.6: Background information on the interviewees

	Adam	Bob	Caroline
Age	25	25	22
Gender	Male	Male	Female
Education	<ul style="list-style-type: none"> • (graduate) bachelor in food and dieting • (current) bachelor in informatics 	<ul style="list-style-type: none"> • (graduate) bachelor in information sciences • (current) master in computer science • (current) master in game studies • (current) bachelor in psychology 	<ul style="list-style-type: none"> • (graduate) bachelor in psychology • (graduate) master in social & organizational psychology
Job	Android app developer	Student / researcher	Student (finishing)
Gaming Experience	Games daily	Past experience, non current	Casual games

3.3 Results

The results are split into two sections. In the first section we will look at the results of the questionnaires. In the section that follows we will look at the results of the interviews. Even though there are two different result sections their research content is the same. The difference is that the former method is a quantitative perspective and the latter one is a qualitative one. All interviewees also filled out the questionnaire.

3.3.1 Questionnaires

In this section we will discuss the results of the questionnaires. Our sample size is quite small ($N = 17$) for statistical analysis. Because of the small sample size we will use three descriptive statistical measures: the mean, the standard deviation and the median. An alternative would have been to use confidence intervals. This holds some

implications such as that we will not check normality of data, check if values that differ are also statistically significant or calculate Cronbach's alfa to check the power of scales within the questionnaire. As such these results can be interpreted as indications, a larger number of participants is required to generate a sample-size large enough to measure potential significant effects. In the next two sections we will discuss the effects of and the playing experience when using Trust Commander. We will discuss the effects in terms of competence, relatedness, mindfulness and autonomy. The playing experience we will discuss in terms of interest/enjoyment, value/usefulness, perceived choice, an overall rating of the application by the respondents and some of their perceived weak and strong points of the application.

3.3.1.1 Effects

We present the values of all scales, before and after the experiment, for both the control group and experimental group in table 3.7.

In the control group we see almost no difference in the scales autonomy, competence and mindfulness when comparing the values of the first questionnaire with those of the seconds questionnaire. This is desirable in this group as they did not receive any intervention from our side between these two time slots. We do see an increase in relatedness in this group. As stated above, we do not further investigate if this is grounded in the data by, for instance, outliers and/or weaker power of the scale(s).

In the experimental group we see that mindfulness has remained very similar with a mean increase of 0.04, which is the same amount as in the control group. The relatedness scale, with a mean increase of 0.22, also shows a similar pattern with regards to the control group. In the scales autonomy and competence we do see an increase in the mean that is not present in the control group. Competence shows a mean increase of 0.23, which could be an indication that participants felt slightly more competent about resolving their problems after using this application. Autonomy shows a mean increase of 0.95, which could be an indication that participants felt more in control of their lives after using this application. Again, as stated above, we do not further investigate if this is grounded in the data by, for instance, outliers and/or weaker power of the scale(s).

TABLE 3.7: Results of the experiment on the used scales (Autonomy, Competence, Relatedness and Mindfulness)

Scale	Experimental Group						Mean Difference
	Pre-experiment			Post-experiment			
	Median	Mean	SD	Median	Mean	SD	
Autonomy	4	3.99	1.20	5	4.94	1.08	0.95
Competence	4	4.58	1.15	5	4.81	1.29	0.23
Relatedness	4	4.80	1.40	5	5.01	1.42	0.22
Mindfulness	4	4.14	1.75	4	4.18	1.48	0.04
Scale	Control Group						Mean Difference
	Pre-experiment			Post-experiment			
	Median	Mean	SD	Median	Mean	SD	
Autonomy	4	4.26	1.35	4	4.24	1.26	-0.01
Competence	4	4.48	1.36	4	4.51	1.32	0.03
Relatedness	4	4.93	1.27	5	5.13	1.06	0.20
Mindfulness	5	4.58	1.31	5	4.62	1.47	0.04
Difference	1	0.48	-0.21	1	-0.44	-0.16	

TABLE 3.8: Task evaluation after the experiment

	Median	Mean	SD
Value/usefulness	4	3.56	1.53
Interest/enjoyment	3	4.47	1.80
Perceived choice	3	3.65	1.61

3.3.1.2 Experience

Overall players rated the application above average. On a 7-point likert scale Trust Commander received an average grade of 4.76, with a standard deviation of 1.2 and a median of 5. However, looking at the scales from the different questionnaires as presented in table 3.8, we see that on all scales the mean value is below average. From the questionnaire we are not able to see why this would be the case.

In the following sections we will go into the positive and negative aspects the participants stated about the app in the questionnaire.

3.3.1.3 Postive aspects

Two of the participants made remarks that they liked their anonymity within the application. To illustrate this one of the answers was : *"I liked how everything was anonymous, it made it possible for people to write personal things without worrying about giving information regarding their identity."*

By the count of eleven participants, more than half of the participants liked that the application enabled them to either give help, ask for help or both. As an example, one of the respondents said *"I liked the interactiveness of other people and interesting stories. I also liked helping other people with their problem. Finding out that I was able to give answers to a problem of another person, gave me a feeling of confidence. Somehow it made me feel like I am more capable of finding solutions on my own than I used to think."*

Four participant made positive remarks about the design of the applications. Examples of these are *"The design was elegant and simple."* and *"It had a proper interface."*

Two remarks were given about the point system. One of which was : *"It is also nice you can rate advice from other people as being bad or good."*

Lastly, three remarks were made about the quality of the content within the application. An example from these comments was : *"I like the idea of being able to talk to people about personal problems/situations that happen to you in your life. Using this app you have the feeling that you get more realistic and helpful answers than you would if you used a regular search engine such as Google as you know that the people that are using the app might be in a similar situation as you."*

3.3.1.4 Negative aspects

During the experiment a bug arose that caused a lot of notifications to be send on one day to all participants. Two participants made remarks about the amount of notifications being too much. Additionally, there were five other remarks about bugs in general.

Four remarks were made about the implementation of the application. These were:

- *"I wasn't able to see the quests I solved."*
- *"A word cap, detailed advice is not possible within a few words."*
- *"It sucked to type on a mobile phone."*
- *"No option to comment, only an option to answer questions."*

Two remarks were made about the design. The first remark was that the design partly suggest that the game is a fantasy game because of its appearance. The other remark is that some parts of the user interface, unspecified by the participant, were a bit unclear.

Four remarks were given about the point system. No clear trend was visible among these remarks. Three of them appear to find the point system unnecessary and/or unclear, as indicated by answers like *"The purpose of the points I didn't really get. Maybe I should have read the manual."* and *"the focus on the reward system with points."*. One participant in specific did not like that there was a dislike button for reactions to quests. He indicated this by his answer : *"The dislike button, I think the app is made to help people boost there confidence. An dislike button doesn't help with this. A dislike is always negative."*.

Three participants found the answers given by others to be very generic as indicated by answers like *"The fact that a lot of the answers were very predictable and therefore not really helpful. Then again I suppose that such is to be expected when you are not talking to close friends who really know you."* and *"Many of the answers I could have figured out myself. For me, it helps to have a face-to-face conversation when I'm struggling with something. Just a textual solution to a problem has little value to me."*.

3.3.2 Interviews

In the following few sections we will discuss the some aspects of playing our game through the perspectives of these interviewees. We have structured the different subjects as follows (in order):

- General opinion of the concept
- Design of the game
- Quality of the content
- Building of skill
- Level of autonomy
- Mindfulness in relation to the app

3.3.2.1 General opinions on the concept

All three interviewees liked the concept in general as supported by statements such as *"I really liked the app because of the interaction you have with others"* (Adam), *"The first time I opened it I thought: an app in which you can anonymously and with low effort can expose your problems and get others to help you can really be a good thing for some people to gain more insights into their lives"* (Bob) and *"I really like that it enables people to reach each other anonymously"* (Caroline). That the application allowed you to be anonymous when exposing your application to others was considered a strong point for the application.

Although the in-game point system received some criticism it was generally regarded very positively. For Bob it was not so much the points that he received as that he was surprised that he was rewarded for his trust-actions. Caroline liked the points simply because they stacked and that her high score graph improved over time. She also liked seeing how others rated the reactions she had given to quests and reading reactions other players gave on her quests.

The criticism heard most about the point system is that the points did not contribute to any progression in the game. Only if you challenge yourself to get more points will you want to obtain more points in the long term. Suggestions to resolve this issue was to either have time-based goals set by yourself or a supervisor (Adam) or build in levels or other achievements (Adam and Bob)

The application allowed the players to get different perspectives on problems. Some of these suggestions were not obvious to the player which led to reactions like *"I could have done it that way too, that is better than my answer"* (Adam) or *"so people generally think that answer is better"* (Caroline).

The interviewees liked the way they felt if their reactions to quests were liked by many people. This is best illustrated by Adam : *"If I saw my answers were liked and you had helped someone than this game me a good feeling. Also the fact that people were so quick to respond gave you the impression that everybody took the app serious"*.

All interviewees experienced a positive feelings when others rated their reactions to quests positively: *"It motivates me to see that my answer was liked"* (Adam), *"I was very happy with every plus point I got on my reactions"* (Bob) and *"if you got a lot of*

plusses then I really thought 'Yes, I am really capable on this subject'." (Caroline) as examples of this.

When reactions were rated negatively this was received in different ways. On one hand it spun negative feelings such as *"every time I got a minus points I thought: bunch of losers, why don't you get this? Seeing these negative points was very confronting for me"* (Bob) and *"the dislikes required some explanation as currently they felt really bad."* (Adam). Caroline supported Adam's statement that dislikes should be accompanied by some explanation or guidance. As she explained it : *"I think it would be very difficult if someone only received minuses. Probably this should be guided in some way so you know that a minus is not a rejection on your personality."*. Even though Adam felt bad about receiving negative feedback he did state that it motivated him to think better about his future reactions.

3.3.2.2 Design of the game

All interviewees were positive about the design. The use of colorful colors was mentioned by both Adam and Caroline as being very positively influential. Adam indicated this by saying *"the design was clean, colorful and playful, just as a game should be. Even though this is not a classic game the design did make it feel like a real game"* while Caroline described it as *"the design was very nice, simple and the images etcetera were very colorful. The application was a bit formal in the sense that it had a certain goal and every bit of the interface was used for that goal. However, because of the images and color, the app did not feel boring or formal."*.

There was some debate on the background of the main menu. This image depicted a castle at the end of a long road, as can be seen in figure 2.3. Both Adam and Bob were very positive about this image. For instance, Bob said *"the background image of the main menu worked really well on me as it gives me a feeling of hope."*. Contrary to this Caroline found the image of the castle to be misplaced. *"To me, this gave me feeling that I was going to play a 'real' game instead of something more casual. I thought I was going to play something like Age of Empires. So this design gave me other expectations of the game than what the game actually was."* (Caroline).

The categories used in the application were also debated. Caroline had a strong positive attitude towards this concept, as indicated by *"I thought these were really good as it enabled you to make a better decision about what subject you want to touch upon more. Also it gave you some knowledge about what the quest is about without opening it yet. Had this system not been in place then all quest would start to form a long list of uniform problems. This could cause you to lose the overview and might make you quit using the app. This way the organization was good"*. Bob supported this statement slightly with the remark that it would only be useful to have these categories when you have more players in the game because now the amount of quests were too few to have need for such an organization. His argumentation is best presented in his quote *"the number of quest was currently too small to make a choice for certain categories as you were able to do all quests regardless of their category."* Bob liked the use of categories but not as a knowledge organizing concept. He liked it because it gave him a fun choice whenever you start a quest : *"When I start a quest I just think of whatever looks fun and just press that. It looks fun and it feels like you have the freedom to choose something of your own liking. That is a great feeling"*. However, he did made another remark about it that even if half the players did obey more strictly to the use of categories you would still have half an organization, *"which would be better than nothing at all"* as Bob described it.

The usability of the application was mentioned by both Bob and Caroline. Bob found it a shortcoming of the application that all text input had to be done on the smartphone. This increased the time he had to spend on the application : *"I would like a better way of input. Typing on a touchscreen took to long for me if I wanted to input a lot of text."* (Bob). However, in another statement Bob explained that he only uses the game swiftly, for thirty up to sixty seconds each time, which could be a reason for him to want another type of input. Perpendicular to this statement is one from Caroline : *"I liked that you could use the app for such short periods of time during the day. It could be used between things you are doing. Because you get a notification you are tended more to see what was added and give a short reaction."* One thing she agrees on with Bob is that creating a quest took more time than giving reactions. However this was justified by her by the quote *"you want to know something from others so you should be willing to invest that extra effort for that purpose."* Adam thought of the app as being very accessible because *"you can choose your own way to play to game: adding quests, helping others,*

rating reactions or simply read the quests to learn from them". Both Bob and Caroline supported this statement and made the remark that the game is also very accessible because it is free and you can remain anonymous when using it. Additionally, Caroline remarked that it was a good thing that when you received a notification you could select it and go straight to the quest the trust-action was about.

Making a new quest was a bit confronting for Bob. This was because the screen in simply a white textfield where you had to come up with your own structure and words for the quest. Caroline also made a remark about this saying "*For some people it could be useful to get some help when making a new quest. They can be guided in the process of formalizing their situation*". As a suggestion from Caroline more screens could be added where in each screen the player had to describe a different aspect of his situation.

3.3.2.3 Quality of the content

The interviewees agreed that the quality of quests was very high. This was supported by statements such as "*Despite the short length of the quest texts you were very able to estimate the situation and give an appropriate answer.*" (Adam), "*I found the questions very strong.*" (Bob) and "*Often people had very good descriptions of their problems.*" (Caroline).

The interviewees did not agree upon the quality of the reactions to quests. Bob thought that the answers were too much "*common sense*" answers that were not tailored to the person that made the quest. In defense of these kind of answers Adam gave the following statement : "*Sometimes you saw that a certain answer was already given and other people started to give similar answers. This made it so the thoughts sometimes went in one direction only in stead of being divers. Still these answers were not bad as I noticed from myself that it was a good reality check if my own ideas were good*". Very similarly Caroline said "*Often some answer was present on which most people agreed. You then saw other answers that were very similar to this answer*". Even Bob still had some use for these kinds of answers himself: "*However, in an unexpected way, it was to some use for me as it gave me a short sample of the common thoughts of the average Dutch resident.*" (Bob). Caroline even contradicted the statement saying "*Some reactions were given from very different perspectives*".

3.3.2.4 Building of skill

All participants agreed that the game enabled you to learn to better cope with your problems. This is supported by arguments such as *"you learn to know yourself better with this app because when you help others you start to become more aware of yourself. This will eventually come to your daily life as well as you gain more confidence in your ability to help others and so in time you will be able to help yourself better."* (Adam), *"I think that you can become a lot better in solving your problems."* (Bob) and *"you learn things from others which you can use for yourself if you think the same would work for your own situation. Because you see that certain reactions are rated higher than others then you learn what the general coping strategies from other are."* (Caroline).

The progression over time was difficult to see in application. For example, due to some bugs in the *stats screen's* graphs and points did not all display properly. Also the points that were received in the game had no reference point, which made them less meaningful. Suggestions to improve this issue were to be able to set goals yourself or to have goals set by the application or your coach and then obtain achievements based on these goals. Adam and Bob would have liked to have some sort of leveling system in place. Caroline would have liked to have a better separation of the points in the statistics menu so it would be more clear from which trust-action the points in a certain category came from. One insight into progression that Caroline was able to see was the difference in the height of points among different categories.

3.3.2.5 Level of autonomy

All interviewees agreed that the game could make the player more autonomous from coaches who provide some kind of treatment/counseling. However the use of this game would have to be supplemental to other sessions. This is reflected in statements such as *"there should be a coach in place to help you overcome the feeling you get when you get dislikes on your reactions, especially when you just began playing the game. Your coach can be a sort of safety net in the beginning and over time you can become more autonomous."* (Adam) and *"a coach can help you, for example, to overcome the feeling of getting lots of minuses in a week. The coach can put these into context or in any case discuss the reason with you so you can get back on the right track."*. As another

perspective, Bob noted that you need a pro-active attitude to overcome your problems, even if you have the motivation for it. According to him when you face a road bump this might cause you to become less active in your attempt to solve your problem. ” *Without guidance you will eventually abandon the game and then it is easier to fall back in your old patterns.*” (Bob).

The foundation for the reasoning of these interviewees is that a coach might not always be available. ” *You do not always have your coach with you to ask for advice but you do always carry your mobile phone.*” (Caroline) and ” *In an utopian world your coach would be available to you every minute of the day and then the application would not be so powerful. However this is not a utopian world and that is where the application finds its value. In the future this will only become so because the patient attention is disappearing increasingly more.*” (Bob).

3.3.2.6 Mindfulness in relation to the app

Adam was the only interviewee who thought people would probably become more aware of their problems. ” *Especially with ranking and scores you are going to pay closer attention to your live which problems you have which you can place in the app for points*”. This statement is somewhat undermined by Caroline as she thinks that in order to use this game people must be quite aware of their problems already, otherwise they would have no need for using it. Bob and Caroline agree on that the application would only change the way you approach your problems. This supported by statements such as ” *Take Google for example: people overthink their problems less as they just look it up. On the other hand they are being active in finding their answer from the query results, which makes them active with their problem. I think you still overthink your problems the same amount but just in a different way.*” (Bob).

Chapter 4

Conclusions

4.1 Discussion

The results from the experiments coming from the questionnaires were based on a fairly small sample size of seventeen respondents per group. As such we view these results only as initial indications of the effects of playing the game. In extend we did not use proper statistical measures such as mathematical significance, checking the normality of the data or do any calculations on the power of the scales from the questionnaires such as a calculation of Crobach's Alfa. Numbers reflected in this thesis may therefor be a skewed representation of their intrinsic value. Further research must be done on a larger scale to validate the results presented in this thesis.

The participants for the interviews were selected at random and represent only a small portion of the total group of participants. The statements presented in the results of the interviews may not reflect the general opinion of the entire test group.

The participants that were used for this experiment did not came from the target group of the project, with were youth with psycho-social problems. Within the test group were mainly adults over their twenties, with a higher level education and overall few social problems in which externalization formed an issue. These attributes of the test group are perpendicular to the attributes of the target group which are youth between the ages twelve to eighteen, with a low level of education and to some extent social problems in which externalization formed an issue. As such more research needs to be done with

people from the target group to see if the effects presented in this paper also apply to that group.

The experiment we conducted in this research ran for seven days time. Because of this there was a maximum one week reviews per participant, effectively rendering it useless in this setting. Additionally, the day reviews could only show your progress over the period of a maximum of seven days. We believe this timespan is not enough to see accurately monitor the state of the player over time. Both these issues require a longer experimental period to research their effect.

4.2 Conclusions from the project

We have created a serious game in which people can expose their problems and help others with theirs in a playful way. The game's purpose was to have an easily accessible tool with which the player is able to learn new coping strategies and see his progression of skill over time. This could in the long term contribute to feelings of trust in handling different situations.

In our experiment we evaluated the game, which was implemented as a mobile game for the Android platform, using a control and experiment group. The experiment group played the game and no intervention was done with the control group. We evaluated the game on their effect on the players in terms of autonomy, competence, relatedness and mindfulness using questionnaires. Additionally, we evaluated usefulness, enjoyment and perceived choice with the experiment group. From this group we also conducted semi-structured interviews with three participant for a qualitative evaluation of all previously mentioned concepts, except for relatedness.

In our experiment we found indications that the intervention could have positive effects on the autonomy and competence of the players, with the strongest indication for a positive effect on autonomy. Relatedness and mindfulness remained similar in both groups. The participants reported contradicting values for the quality of the application. In terms of usefulness, enjoyment and perceived choice the game was rated below average but the overall rating of the game was above average.

In the questionnaires more than half of the respondents liked the concept of asking for help and helping others with their problems. The visual design was received well by some respondents. On the other side some respondents were, apart from implementation bugs and lacking features, negative about parts of the point system and that reactions to quest were very generic.

The interviewees were, in line with the questionnaires, positive about the concept of the game. The critique heard most was that negative ratings on reactions were not accompanied by an explanation or justification. Even though some reactions to quest were generic all interviews said that this was beneficial in one way or another. The interviewees were all positive about the design of the game in the visual sense. The visual design that was used made the game feel more playful and not-boring. Using categories in the game caused some debate though all agreed that such a system is a necessary addition as the scale of content goes up. All participants agreed that using this game could enable the player to cope better with the problems they are facing. According to the interviewees this aspect could in time make a player less dependent on coaches who provide some kind of treatment and/or counseling. Some initial proof for the previous two statements is reflected in the results of the questionnaires. Also in line with the results of the questionnaires the interviewees thought that using this game would not affect the mindfulness of the player as they would change the way they approach their problems rather than reflect on them more.

4.3 Future work

In the discussion section we presented some shortcomings of our current research which should be improved upon in future research. Apart from these directions the game should be made bug free to reduce noise in the results caused by irritation of the players. Some suggestions were made by participants to improve the game. Among these suggestions the following were the most prominent:

- Enable the players to see past quests. This allows them to review quest of interest after the quest has been 'solved'.
- Create a more guided way of inputting new quests. This could improve the overall quality of the quests in the game, which could lead to more qualitative reactions.

- All input is currently done by text. A more playful way of exposing your problem could contribute to a more playful experience and the overall sense of the game being a game rather than an application.
- Negative ratings on reactions of players should be accompanied by some form of justification in order to compensate for the negative feelings players experienced when receiving such ratings.
- More value should be created for the in-game points. A leveling or achievement system could be set into place to create such value.

Trust scores used in the game, created by day and week reviews need to be improved. Currently the player can only view his progress in the last seven days, which was sufficient for our experiment. In future research this functionality must be improved in order to enable the player to get better insights in his progression over time and the foundation for this progression.

Afterwords

This project has been very interesting to me and I have learned a great deal from it. Some things did not go as planned, which is something to be expected from any project one does, but overall I regret no decisions I have made. Let me thank everybody who has contributed to my research once more: many thanks!

Of course there is always more that could have been done. As with any project a lack of time and the allocation of the time you do have is always an important factor. However, through this paper I have refrained from calling upon this aspect as I think it is only an excuse for the work you have done rather than a defense. My work, as presented in this paper, I view as qualitative enough to stand alone without having to resort to such excuses. But, as said before, this did play an inevitable role in the project which is something to take into account when reading through the document.

Additionally, without the time scarcity even considered, not every aspect of our research is described in this document. For instance, there were about six other games prototyped before the final game came into place. This process, nor its implications, were not described as it would obfuscate the message of the paper. We decided it was more important to focus on what we had created and how that was evaluated rather than what was not created and the reasons why we did not pursue these tracks. If you have questions about this pre-phase or its content you are more than welcome to contact me.

Many thanks for your time!

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Appendix A

Management Summary

In this thesis we researched how to make a serious game that contributes to building and self-monitoring trust. The game, which we called *Trust Commander*, helps our target group, youth with psycho-social problem, to come up with new coping strategies. The players learn these aspects by posting questions in the game on which other players can react. By a voting system the most commonly approved answers are found. The player earns points by submitting new problems and helping others solve theirs.

We created an implementation of the game as an Android application. With thirty-four participants we then evaluated the game on its effects on - and the experience of the player. We split the participants up into two groups of which one group (control) did not get to play the game and the other group (experiment) did get to play the game. We found some indication that playing the game has effect on the feeling of autonomy and competence of the players. However these results are inconclusive because of the small sample size. We found contradicting evaluations of the game as in some aspects the game was rated below average and in other aspects it was rated above average. The experiment ran for one week so we were not able to evaluate the monitoring process properly.

In the future we must improve some features of the application like balancing the negative feedback on quest reactions with explanations and improving the pointing system to give more value to the points. Overall the participants thought the game could be used as a supplement to treatment of the target group, as they thought it would help the target group become more competent in solving their every day problems.

The portfolio of this project can be found at : <http://www.fubi.nl/trustcommander/>

Appendix B

Questionnaires

Questionnaires [B.2](#), [B.3](#) and [B.4](#) are taken from self-determination theory¹ and are only included to have a complete overview of all used material in my thesis. These questionnaires should not be utilized or distributed without consent of the original owners.

If desirable one can download the results of the following questionnaires at the following link: <http://www.fubi.nl/trustcommander/download>

B.1 Basic Information

- What is your name?
- What is your date of birth?
- What is your gender?
- What is your occupation?
- In which country were you born?

B.2 Basic Need Satisfaction in General

Please read each of the following items carefully, thinking about how it relates to your life, and then indicate how true it is for you. Use the following scale to respond:

¹www.selfdeterminationtheory.org/questionnaires/

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5
- 6
- 7 Very true

1. I feel like I am free to decide for myself how to live my life.
2. I really like the people I interact with.
3. Often, I do not feel very competent.
4. I feel pressured in my life.
5. People I know tell me I am good at what I do.
6. I get along with people I come into contact with.
7. I pretty much keep to myself and don't have a lot of social contacts.
8. I generally feel free to express my ideas and opinions.
9. I consider the people I regularly interact with to be my friends.
10. I have been able to learn interesting new skills recently.
11. In my daily life, I frequently have to do what I am told.
12. People in my life care about me.
13. Most days I feel a sense of accomplishment from what I do.
14. People I interact with on a daily basis tend to take my feelings into consideration.
15. In my life I do not get much of a chance to show how capable I am.
16. There are not many people that I am close to.

17. I feel like I can pretty much be myself in my daily situations.
18. The people I interact with regularly do not seem to like me much.
19. I often do not feel very capable.
20. There is not much opportunity for me to decide for myself how to do things in my daily life.
21. People are generally pretty friendly towards me.

Scoring information. Form three subscale scores, one for the degree to which the person experiences satisfaction of each of the three needs. To do that, you must first reverse score all items that are worded in a negative way (i.e., the items shown below with (R) following the items number). To reverse score an item, simply subtract the item response from 8. Thus, for example, a 2 would be converted to a 6. Once you have reverse scored the items, simply average the items on the relevant subscale. They are:

- Autonomy: 1, 4(R), 8, 11(R), 14, 17, 20(R)
- Competence: 3(R), 5, 10, 13, 15(R), 19(R)
- Relatedness: 2, 6, 7(R), 9, 12, 16(R), 18(R), 21

B.3 Activity Perception Questionnaire

The following items concern your experience with the task. Please answer all items. For each item, please indicate how true the statement is for you, using the following scale as a guide:

- 1 Not at all true
- 2
- 3
- 4 Somewhat true
- 5

- 6
 - 7 Very true
1. I believe that doing this activity could be of some value for me.
 2. I believe I had some choice about doing this activity.
 3. While I was doing this activity, I was thinking about how much I enjoyed it.
 4. I believe that doing this activity is useful for improved concentration.
 5. This activity was fun to do.
 6. I think this activity is important for my improvement.
 7. I enjoyed doing this activity very much.
 8. I really did not have a choice about doing this activity.
 9. I did this activity because I wanted to.
 10. I think this is an important activity.
 11. I felt like I was enjoying the activity while I was doing it.
 12. I thought this was a very boring activity.
 13. It is possible that this activity could improve my studying habits.
 14. I felt like I had no choice but to do this activity.
 15. I thought this was a very interesting activity.
 16. I am willing to do this activity again because I think it is somewhat useful.
 17. I would describe this activity as very enjoyable.
 18. I felt like I had to do this activity.
 19. I believe doing this activity could be somewhat beneficial for me.
 20. I did this activity because I had to.
 21. I believe doing this activity could help me do better in school.

22. While doing this activity I felt like I had a choice.
23. I would describe this activity as very fun.
24. I felt like it was not my own choice to do this activity.
25. I would be willing to do this activity again because it has some value for me.

Scoring information. Begin by reverse scoring items number 8, 12, 14, 18, 20, and 24 by subtracting the item response from 8 and using the result as the item score for that item. Then calculate subscale scores by averaging the items scores for the items on each subscale. They are shown below. The (R) after an item number is just a reminder that the item score is the reverse of the participant's response on that item.

- Interest/enjoyment: 3, 5, 7, 11, 12(R), 15, 17, 23
- Value/usefulness: 1, 4, 6, 10, 13, 16, 19, 21, 25
- Perceived choice: 2, 8(R), 9, 14(R), 18(R), 20(R), 22, 24(R)

B.4 Day-to-Day Experiences

Instructions: Below is a collection of statements about your everyday experience. Using the 1-7 scale below please indicate how frequently or infrequently you currently have each experience. Please answer according to what *really reflects* your experience rather than what you think your experience should be. Please treat each item separately from every other item.

- I could be experiencing some emotion and not be conscious of it until some time later.
- I break or spill things because of carelessness, not paying attention, or thinking of something else.
- I find it difficult to stay focused on whats happening in the present.
- I tend to walk quickly to get where Im going without paying attention to what I experience along the way.

- I tend not to notice feelings of physical tension or discomfort until they really grab my attention.
- I forget a persons name almost as soon as Ive been told it for the first time.
- It seems I am running on automatic, without much awareness of what Im doing.
- I rush through activities without being really attentive to them.
- I get so focused on the goal I want to achieve that I lose touch with what Im doing right now to get there.
- I do jobs or tasks automatically, without being aware of what I'm doing.
- I find myself listening to someone with one ear, doing something else at the same time.
- I go places on automatic pilot and then wonder why I went there.
- I find myself preoccupied with the future or the past.
- I find myself doing things without paying attention.
- I snack without being aware that Im eating.

B.5 Trust Commander evaluation

- How often did you play Trust Commander?
 - Every day
 - Almost every day
 - Every two days
 - Every three days
 - Two days of the experiment week
 - One day of the experiment week
- How many times a day did you play?
 - One time
 - Two times

- Three times
- Between 4 and 6 times
- More than 6 times
- More than 10 times
- How long did you play each time on average?
 - Less than a minute
 - 1-2 minutes
 - 2-5 minutes
 - More than 5 minutes
- Overall, what did you think of Trust Commander?
 - 1 (very bad)
 - 2
 - 3
 - 4 (neutral)
 - 5
 - 6
 - 7 (very good)
- What aspects of Trust Commander did you like?
- What aspects of Trust Commander did you not like?

Appendix C

Interviews

C.1 Interview with a 25 year old multi-disciplinary male student - Bob

Geef korte introductie over jezelf

Ik ben een 25 jarige student uit Nederland. Mijn bachelor heb ik gehaald in de informatiekunde en momenteel studeer ik een bachelor psychologie, een master game studies en een master computer science. Game studies is een studie die gaat over de psychologie achter games, de implementatie hiervan en de reflectie hierover. Binnen computer science studeer ik de track Multimedia. Hierin wordt er gekeken naar hoe multimedia ingezet en gebruikt kan worden binnen de maatschappij. Daarbuiten publiceer ik binnenkort een paper over waarom mensen games blijven spelen die ze frustreren.

Wat zijn je initiale opmerkingen over de app?

De app heeft een leuk design. Het achtergrond plaatje van het hoofdmenu werkt erg goed omdat het mij een gevoel van hoop gaf. Ik vond de naam echter verkeerd gekozen, ondanks dat deze goed op mij werkte. De naam heeft een jongens achtige naam en suggereert oorlog. Voor een jongere doelgroep zal dit oke zijn.

Door de kleine sample size had ik het gevoel bekeken te worden. Hierdoor vond ik het in het begin laag drempeliger om advies te geven dan advies te vragen. Gevolg : feedback loop want je geeft alleen advies en gebeurt niets slechts, dit vergrote mijn vertrouwen in de app (illusioneel).

Wat voor vragen heb je gesteld en antwoorden gegeven?

De vragen die ik gesteld heb waren gerelateerd aan mijn leven maar niet direct uit mijn leven. Zelf heb ik twee vragen gesteld: een over vrienden die aan de drugs zijn en een over hoe ik grappiger kan worden.

De eerste vraag heb ik gesteld omdat ik dacht dat dat soort vragen ook gesteld zouden worden door de mensen voor wie deze app bedoeld is en ik benieuwd wat naar het antwoord. De antwoorden vond ik niet heel relevant omdat het voornamelijk common sense antwoorden waren die ik zelf ook zou kunnen verzinnen. Echter zou het natuurlijk kunnen dat andere dit niet kunnen verzinnen.

De tweede vraag heb ik gesteld omdat het een probleem is waar ik zelf echt deels mee zit. Ik ben grappig bij vrienden maar niet bij vreemde mensen en dat zou ik wel graag willen. De antwoorden die gegeven werden had ik al voorspelt omdat het wederom common sense antwoorden waren. Deze werkte niet voor mij omdat deze mensen onvoldoende informatie over mij hadden om mij goed te helpen. Wat je zag was dat er een upvote was naar common sense thinking antwoorden waren. Zelf had ik ook op deze vraag een reactie gegeven die onconventioneel was. Deze reactie werd meer gedownvote dan de andere reacties. Voor mij was dit antwoord wel in lijn met wat ik dacht dat voor mij zou werken. Ik denk dat de doelgroep van de app kleiner moet zijn zodat de mensen uit de app binnen hetzelfde perspectief werken. Een streng gelovige moslim die het over drugs heeft zal een ander type advies nodig hebben dan een Nederlandse atheïst. Geloof zal toch een bepaalde rol hierin spelen als je het verschil tussen deze twee partijen bekijkt. Wanneer mensen van gelijke achtergronden komen zal dit zal de kwaliteit van antwoorden moeten verbeteren.

Als je kijkt naar de kwaliteit van de antwoorden denk je dat mensen wat hebben aan de adviezen?

Persoonlijk had ik niets aan de antwoorden op een directe manier. Echter, op een onverwachte manier, had het wel nut in de zin dat het mij een kort sample gaf van de algemene gedachtegang van de gemiddelde nederlander. Hoewel je normaal denkt te weten wat mensen gemiddeld denken zie je het nooit. Met deze app wordt het zo voor je neus geschoven. Het is daarom een reflectieve reflectieve tool voor mij omdat ik hiermee beter kan zien wie ik ben en hoe mijn gedachten zich verhouden met de

gemiddelde gedachtegang van andere mensen. Dit is een effect wat ik eerder gemerkt heb toen ik een vak over feminisme volgde. Als enige jongen van dat vak merkte ik dat mijn gedachten anders waren dan die van de rest van de groep. Hiermee krijg je misschien wel dat de gemiddelde normen en waarden veranderen als je alleen maar een groep drugs verslaafden zou hebben als gebruiker.

Hoe vond je de vragen en antwoorden bij quests van anderen?

Ik vond de vragen die gesteld werden erg sterk. Bij vele vroeg ik mij af of ze, ondanks dat tijdens experiment vragen verzonden mochten worden, echt op de werkelijkheid gebaseerd waren. De beschrijvingen van mensen waren heel sterk dus ik dacht dat, als het geen een-op-een verhaal van de quest maker was, het op zijn minst leek op iets wat de quest maker had meegemaakt en/of mee zat.

Je kreeg veel 'common sense' antwoorden maar deze waren wel heel goed en sterk. Wel merkte ik dat ik mij vaak afvroeg wie de quest maker was omdat mij de antwoorden sterk leken maar ik niet zeker wist of ze paste bij de persoon wie het antwoord moest ontvangen. Als ik bijvoorbeeld iemand advies moet geven hoe hij meer gemotiveerd wordt om te studeren dan wil ik die persoon beter kennen om daar een passend antwoord op te geven. Plus misschien heeft de quest maker wel een bepaalde vraag opgeschreven maar is hij eigenlijk opzoek naar het antwoord op een hele andere vraag.

Wat zou jij voorstellen om de kwaliteit van de antwoorden te verbeteren?

Ik zou daarvoor twee oplossingen zien. Als eerste, wat ik intuïtief zou denken, is dat je priv moet kunnen chatten met de quest maker. Elke persoon die een quest maker wil helpen heeft behoefte aan zijn eigen informatie. De ene wil misschien meer over zijn woonomgeving weten terwijl de andere meer wilt weten over zijn studie/werk omgeving. Er zullen natuurlijk ook gebruikers zijn die een generiek antwoord willen geven op basis van de beschrijving van de quest maker omdat die er vanuit gaan dat de quest maker de meest relevante informatie voor hem in de beschrijving erbij zet.

Een tweede optie zou zijn om de gespreksvoering openbaar te houden. Hiermee wordt de oplossing wel meer algemeen, wat tegen de individuele informatie behoefte van de quest helpers in gaat. Ook irrelevantie wordt hier een probleem omdat je veel meer tekst aan het maken bent. Dit kan maken dat je teveel informatie moet lezen die je niet wilt lezen. Omdat deze app bedoeld is voor mobiel gebruik (daar ga ik vanuit omdat het

een mobiele app is) gaat dat in tegen het gemak en de snelheid dat de app nu biedt. Aan de andere kant zorgt het publiek maken wel ervoor dat de quest maker minder vaak antwoord hoeft te geven op dezelfde soort vragen, wat minder intensief is voor die persoon.

Wat deed de app met je gevoel?

De eerste keer dat ik de app bekeek bedacht ik mij: een app waar je anoniem en laagdrempelig andere kunt helpen en je eigen probleem kunt blootstellen is voor sommige mensen echt een uitkomst om inzichten te krijgen. Het is bijvoorbeeld een stuk lastiger om voor je problemen de kinder-telefoon te bellen omdat dit veel enger is en je anonimiteit hier meer in gevaar is. Op internet durven we ons allemaal als bazen te gedragen, zolang je maar anoniem bent. Daarentegen durven mensen zicht juist ook meer kwetsbaar op te stellen op het internet als je anoniem bent. De app voelde daarom voor mij als een zeer nuttige tool voor mensen met sociale problemen.

Wat vond je van de categorieën die in de app gebruikt werden?

Als informatie organiserend principe denk ik dat het voor geen meter werk maar voor de selectie die je moet doen is het erg leuk! Je begint bijvoorbeeld aan een nieuwe quest en wat voor categorie ga je kiezen? Je denkt ik weet het niet maar deze ziet er leuk uit en je klikt er op. Het ziet er leuk uit en voelt vrij. Dat gevoel is goud! Misschien gaat je quest niet om de drugs of social category die je geselecteerd hebt maar het belangrijkste is dat jij die keuze hebt gemaakt naar wat je leuk vindt. Je kiest voor iets wat jij wilt, daar gaat het om.

Waarbij ik wel wil zeggen dat zelfs als veel gebruikers random op icoontjes gaan klikken je nog steeds voor de andere gebruikers een vorm van organisatie heb. Hierbij is iets dan natuurlijk beter dan niets, zelfs al is het effect niet heel sterk.

(Enjoyment) Vond je het leuk de app te spelen, motiveerde het?

Elke keer als ik minpunten kreeg bij mijn reacties gaf dat voor mij wel negatieve gedachtes. Hierbij dacht ik dan stelletje losers, waarom snappen jullie het niet?. Het zien van deze negatieve punten was voor mij welk erg confronterend. Aan de andere kant was ik ook wel weer heel bij met elk plus punt bij mijn reacties. In het begin werkte de punten voor mij heel verassend. Het waren niet zo zeer de punten die het hem deden als meer het feit dat er een soort van beloning was voor hetgene wat je deed.

Minder leuk was dat ik mij bekeken voelde door de kleine groep gebruikers van de app. In een echte versie van deze app, waarbij meer gebruikers zouden zijn, zou dit waarschijnlijk verholpen zijn. Vragen en antwoorden vond ik het begin heel leuk maar hoe meer ik er mee bezig was hoe meer het mij tegenstond dat ik grote hoeveelheden tekst moest invoeren op mijn smartphone. Als je twee zinnen typt is dit ok maar bij tien begint het wel als werk te voelen. Wellicht als je het anoniem zou kunnen inspreken of iets dergelijks dan zou ik het geweldig vinden.

(Inzicht) Kreeg je het gevoel dat je inzicht had in je progressie?

Ik moet eerlijk zeggen dat ik de app niet heel intensief gebruikt heb op de momenten dat ik het gebruikte. Meestal gebruik ik apps vluchtig tussendoor voor 30 seconden tot een minuut zonder dat ik daarbij uitzoek wat alle functies precies zijn en doen. Deze app wilde ik gelijk behandelen als al mijn andere apps. Hierdoor heb ik vrij weinig aandacht geboden aan de statistieken. De punten waren hierdoor te uitgebreid voor me en deden daardoor soort van zeer aan mijn ogen. Ik kan me wel voorstellen dat als je hier serieus elke dag mee bezig bent dat dit wel hele interessante gegevens/statistieken. Voor minder serieuze gebruikers zoals ik zou je dit op een leukere, subtielere manier verborgen kunnen houden. Wat ik dan zou willen is dat je een soort avatar zou hebben dat over de tijd sterker of groter wordt met je punten. Voor mij boeit nu alleen welk level ik ben. Echter wat nu in de app zat is nog altijd leuker om te zien dan saaie alternatieven. Het punten systeem en eventueel levels daaraan toevoegen is wellicht niet voor iedereen een even bekend concept maar het maakt wel een app die zichzelf niet compleet serieus neemt. Dit is er goed omdat dit soort apps, die gebruikt worden voor zorg en/of academische doeleinden, vaak erg clean zijn. Waarbij clean dan inhoud dat er heel veel wit gebruikt wordt, de rondjes allemaal perfecte cirkels zijn en het geheel te klinisch en foutloos is opgezet. Dat soort klinische apps geven gelijk een gevoel dat je er serieus mee bezig moet zijn. Niet alleen dat maar het geeft ook een gevoel dat het veel focus en tijd gaat kosten om de app te gebruiken. Dit verhoogt de drempel om zo een type app te gebruiken omdat het je gelijk afschrikt en je negatieve attitudes ten opzicht van het programma ontwikkelt. Dat deze app dat niet deed maakte het, zeker in het begin van gebruik, een perfecte app. Alleen zodra je een nieuwe quest moest invoeren kwam je bij een leeg scherm waar je tekst moest invoeren. Dit was dan een veel minder speelse manier dan de rest van de applicatie waardoor dat onderdeel weer meer klinisch

aanvoelde. Tegelijk, met de punten- en ranking systemen werd de app erg anti-klinisch en werd het een veel socialer geheel.

(Competence) Denk je dat je je skills kunt verbeteren m.b.v. dit spel?

Ja, ik denk dat je stukken beter kunt worden in het oplossen van je problemen. Als je kijkt naar de huidige klinische behandelpraktijk krijgen mensen te weinig behandelingen. Om deze reden kan deze app heel behulpzaam zijn: je krijgt meer behandelingen en training met je begeleider als gids, de quests als je repetities en de punten als reflectie. Dit kan heel makkelijk omdat het voor de gebruiker allemaal geen geld kost en het geheel laagdrempelig is. Als we in een utopische wereld zouden leven waar je begeleider elke minuut van de dag beschikbaar zou zijn dan zou deze app lang niet zo krachtig zijn. Juist in onze distopische wereld vindt deze app waarde en in de toekomst zal dit alleen nog maar meer worden omdat de aandacht in de zorg steeds meer verdwijnt. Je leert in deze app ik kan het zelf! Het enige wat ik nodig heb is iemand die af en toe met mij meekijkt of alles goed gaat.

(Autonomy) Denk je dat m.b.v. dit spel patiënten zelfstandiger hun problemen kunnen oplossen?

Nee, ik denk niet dat dit zomaar kan. Echter als supplementaire behandeling is dit geniaal: het kost minder geld want er zijn minder behandelingen nodig en/of de kwaliteit van de behandelingen wordt hoger. Echter vervangt het niet de behandelingen van instituten omdat je een proactieve houding nodig hebt om jezelf te verbeteren. Deze is moeilijk te behalen/behouden, zelfs al is de motivatie er. Als voorbeeld: ik wilde toen ik nog tien jaar was al websites leren maken. Ik was nog jong en had net pas een half jaar een eigen computer. Bij wijze van spreken was het openen van Microsoft Word nog te moeilijk voor mij. Ik heb toen twee dagen elke minuut van de dag geprobeerd te leren hoe het allemaal moest. Uiteindelijk begreep ik het niet, zakte de moed mij in de schoenen en ben ik met de poging gestopt. Twee jaar later lukte het mij na zes uur leren wel om een website te maken dat een plaatje inlaadde. Voor mijn gevoel wist ik toen genoeg om weer zelfstandig verder te kunnen. Echter stuitte ik iets later op PHP en ik kreeg het niet voor elkaar daar iets mee te doen waardoor ik wederom stopte met webdevelopment. Pas twee jaar later pakte ik het weer op en lukte het uiteindelijk. Mijn punt is dan dat die roadblocks die je tegen komt in je leven voor mensen vaak moeilijk zijn om te overkomen, zelfs al is de motivatie er. Dit maakt dat je misschien toch naar

andere, makkelijkere wegen gaat zoeken en zo kan je op een verkeerd pad terecht komen. Een begeleider/behandelaar heb je dan nodig op dit soort momenten om te zorgen dat er toch doorgezet wordt. Zonder begeleider ga je afstand doen van de app op een gegeven moment en het is makkelijker in oude patroon te vervallen.

(Mindfulness) Denk je dat mensen meer met hun problemen bezig zijn als ze deze app gebruiken?

Apps en computers waar je mee omgaat zullen een bepaalde vorm van integratie nemen met je identiteit. Als je kijkt naar vrouwen: ze ademen WhatsApp. Natuurlijk is dat wat kort door de bocht en genuanceerder maar die stereotypering komt wel ergens vandaan. Ze hebben er zoveel behoefte aan ze zien de wereld door je ogen van WhatsApp. Kijk bijvoorbeeld naar dat 'Googlen' een werkwoord geworden is. Stel jezelf dan ook de vraag: is google je beste vriend of is het een systeem waar je je info vandaan haalt? Als je Google als tool ziet zit je er verder vanaf en is je perspectief anders. Als het meer gintegreerd is dan denk je er meer levensvraag-achtig over en anders veel tool-matischer. Zo kan je ook de wereld zien door deze app: problemen worden quests en advies geven wordt een spelletje. Het zou net zo goed kunnen dat ze er toolmatisch naar kijken. Dat is hele andere ervaring en hele andere manier hoe je met app omgaat. Vermoedelijk heb je wel grote integratie nodig om dat wereld beeld aan te passen met deze app.

Toch zal je niet meer met je probleem bezig zijn. Neem google: mensen denken minder over hun probleem na omdat ze het gewoon opzoeken dus het wordt juist minder. Aan de andere kant ben je wel actief met je probleem bezig op het moment dat je het op gaat zoeken. Je staat er denk ik dus evenveel bij stil alleen op een andere manier. Wel ben je oppervlakkiger bezig met de informatie die je tot je neemt. In het geval van deze app is dat een positief iets omdat je veel common sense antwoorden tegenkomt ga je vanzelf mee in wat de mainstream gedachten zijn.

Wat wel zo is is dat deze app vereist dat je je probleem onder woorden brengt. Als dit gebeurt ga je van een intuïtief perspectief op je probleem naar een talig perspectief. Taal help je makkelijk nieuwe dingen te leren en brengt een logisch proces op gang. Dit dwingt je om het probleem te organiseren en structureren. Het is juist vaak de intuïtie van de doelgroep welke verkeerd is waardoor problemen ontstaan dus deze app helpt om deze intuïtie te structureren en te verbeteren.

Welke drie verbeterpunten zie je voor deze app?

- De eerste is dat er meer mensen zouden moeten mee doen. Omdat de groep die de app nu gebruikte vrij kleinschalig was had ik het gevoel dat ik minder anoniem was.
- Ten tweede zou ik een beter manier van input willen. Het typen op een touchscreen duurde voor mij te lang en als ik een goed advies wil geven wil ik veel tekst kunnen plaatsen.
- Als laatste zou ik een beter reactie systeem willen. Je kunt nu alleen maar reageren op de quest zelf en het lijkt mij handiger als mensen ook op elkaar kunnen reageren om meer achtergrond informatie naar boven te halen.

C.2 Interview with a 22 year old female master psychology graduate - Caroline

Geef korte introductie over jezelf

Ik ben een net afgestudeerde 22-jarige S&O psycholoog (Sociale en Organisatie psychologie) en ook mijn bachelor heb ik gedaan in de psychologie. De master S&O psychologie is een combinatie van die twee onderdelen. De sociale psychologie betekend dat je kijkt naar mensen mensen in groepen en hun interactie. Organisatie psychologie betekend dat je kijkt naar hoe mensen in een organisatie staan, hoe je ze kunt motiveren enzovoorts. Qua spelletjes speel ik momenteel Duolingo om Spaans te leren. Soms, als er een spelletje weer populair wordt, speel ik ook wel andere spelletjes, bijvoorbeeld Angry Birds, Trivia Crack en Candy Crush.

Wat zijn je initiale opmerkingen over de app?

Ik vond het leuk dat mensen op een anonieme manier elkaar konden bereiken. Omdat het ook nog punten opleverde zat er ook een competitief element in. Het competitieve hierin vond ik voornamelijk dat ik mijzelf uitdaagde het steeds beter te doen. Wat ik dan erg leuk vond is dat al mijn acties mij steeds meer punten opleverde en mijn grafieken veranderde. Hoe dat precies gebeurde of wat het betekende maakte mij eigenlijk niet eens zoveel uit. Als je bij drugs bijvoorbeeld nog geen punten had vond ik dat ik daar wat in moest verbeteren door of te helpen bij een quest van anderen of door zelf daar een quest over te plaatsen. Door deze punten werden mensen erg gemotiveerd om het spel te spelen. Toch was het punten systeem mij niet altijd even duidelijk. In uitleg stond dat de Trust Scores gaat niet van dag tot dag maar waar die score dan toch vandaan kwam snapte ik niet helemaal.

Het design was leuk, eenvoudig en de plaatjes en dergelijke waren erg kleurrijk. De app was erg zakelijk in de zin dat het een bepaald doel had en niet veel toonde behalve de dingen die nodig waren om dat doel te kunnen behalen. Toch was de app niet saai door alle plaatjes en kleuren die werden gebruikt. Het plaatje van het kasteel in de achtergrond van het hoofd menu vond ik een beetje misplaatst. Dit gaf voor mij een gevoel dat het spel een echte game was in plaats van een platform waar toevallig spel elementen in werden gebruikt. Zo een kasteel geeft mij een gevoel alsof ik Age of Empires

ging spelen, wat dus een andere verwachting schiep dan wat de applicatie uiteindelijk was.

De applicatie deed mij veel denken aan een forum waarbij mensen vragen konden stellen, andere mensen konden reageren en iedereen zich achter een schuilnaam anoniem kon voelen. Door het punten systeem werd dit forum voor mij wel een spelletje. Ik vond het bijvoorbeeld erg leuk dat als iemand een reactie had gegeven dat ik dan voor twee punten mijn mening erover kon geven. Zo was het steeds leuk om bezig te blijven met de applicatie. Als ik zelf een reactie had gegeven vond ik het ook leuk om te zien hoeveel mensen daar positief of negatief over waren. Omdat ik graag veel pluspunten op mijn reacties wilde zien dacht ik goed over mijn antwoorden na. Als ik dan minpunten kreeg op mijn reacties dan kon ik ook gelijk zien wat ik moest verbeteren aan mijn antwoorden als ik het vergeleek met de antwoorden die andere gaven.

Het was goed dat je na een update op je notificatie kon klikken om direct naar de bijhorende quest te gaan. In het begin was dit voor mij een gemis omdat je zag dat er iets nieuws gebeurde maar je wist niet precies waar dus dan moest je alles door gaan zoeken. Hoe meer quests er in de app kwamen des te moeilijker dit werd.

Wat voor vragen heb je gesteld/antwoorden gegeven?

Ik heb zowel vragen gesteld over dingen die in het verleden waren gebeurd als dingen die nog zouden gaan gebeuren. Bij dingen die gebeurd zouden zijn probeerde ik mij dan in te leven in hoe zo een situatie voor mij dan zou voelen en waar ik mee zou zitten. Wat ik dan wilde weten was hoe ik het voldgende keer anders of beter kon doen. Want op het moment dat je een handeling uitvoert denk je misschien dat het het beste was om te doen maar achteraf kan je je hier onzeker over voelen. Dan was het fijn om of bevestiging van andere mensen te ontvangen zodat je wist dat je juist gehandeld had of om tips te ontvangen zodat je de volgende keer een andere beslissing weet te maken, of in ieder geval weten dat er meerdere opties mogelijk zijn. Bij dingen die in de toekomst zouden plaats vinden had ik een vraag gesteld over XTC. Hierin vroeg ik dan hoe ik ermee om moest gaan als mijn vrienden drugs gebruikte en ik dat niet wilde op zo een manier wel dat mijn vrienden mij alsnog accepteren binnen de groep.

Bij het geven van antwoorden probeerde ik mij goed in te leven in de ander zijn of haar situatie. Voornamelijk probeerde ik de ander dan op hun gemak te stellen door het zo

te brengen dat ze nu een bepaalde keuze hebben gemaakt maar dat ze de toekomst nog wel kunnen veranderen.

Als je kijkt naar de kwaliteit van de antwoorden denk je dat mensen wat hebben aan de adviezen?

Meeste mensen hadden vaak goeie omschrijvingen van hun problemen. Het deed mij denken aan mijzelf vroeger waar ik altijd in tijdschriften als de 'Girls' in de brievenbus/rubrieken sectie ging kijken naar mensen die problemen instuurde en de mensen die daarop reageerde. Mensen legte dan uit wat hun situatie was en waar ze over twijfelde. In de reacties zag je dan de verschillende visies van verschillende mensen. Vaak komt er dan ook wel een antwoord naar voren waar de meeste mensen het over eens zijn. Dit zag je in de app ook gebeuren wanneer veel mensen dezelfde reacties gingen liken. Vaak ontstonden er rondom de algemeen geaccepteerde reactie ook reacties welke variaties waren die reactie. Ik was blij verast over hoe serieus mensen reageerde op de quests en ook de lengte van de reacties die ze stuurde. Mensen konden zich goed herkennen in de geschetste situatie of anders konden ze zich in ieder geval goed verplaatsen in de ander. Als je weet wat de ander doormaakt of dat in ieder geval goed kan voorstellen dan krijg je erg begripvolle reacties.

Soms waren er reacties die vanuit verschillende perspectieven werden gegeven. Ik denk dat zolang mensen op een open en eerlijke manier hun visie schetsen het niet uitmaakt hoe je aan dat perspectief komt. Normaal, in het echte leven, kan je vriendengroep ook bestaan uit mensen van verschillende culturen. Als je dan kijkt bijvoorbeeld naar mijn XTC quest daar kunnen mijn vrienden in het echt ook bestaan uit moslims en boeddhisten enzovoorts. Deze verschillende perspectieven zijn daarin wellicht juist een verrijking binnen de app. Als je erachter komt dat andere mensen andere reacties geven zie je dat er een grote variteit aan oplossingen is. Je moet uiteindelijk zelf bedenken wat het beste in jouw situatie past.

Wat zou jij voorstellen om de kwaliteit van de antwoorden te verbeteren?

Soms ontbrak er een stuk context maar mensen gingen van vanzelf extra vragen stellen aan de maker van de quest om dat duidelijker te krijgen. Deden ze dit niet dan maakte ze zelf wel een aanname van de situatie die ze erbij beschreven. Het probleem blijft altijd dat mensen hun eigen problemen altijd op een andere manier zien dan de mensen die van

buitenaf het probleem ontvangen. Zelf met verdiepende vragen kom je dan niet altijd tot de informatie die je nodig zou kunnen hebben. Echter door de interactie tussen de mensen om dit uit te vragen kreeg je meer het gevoel dat je het met elkaar de problemen aan het oplossen was in plaats van dat de quest maker zijn gehele verhaal opschreef van a tot z en dat iedereen alleen daar op zou reageren. Zelf vond ik het ook veel fijner als mensen minder uitgebreid hun problemen beschreven omdat je het anders niet meer even makkelijker leest. Zijn de teksten langer dan lees je ze alleen als meer tijd hebt en wordt de drempel om de app steeds te gebruiken een stuk hoger. Nu kan je het even tussendoor doen als je naar de supermarkt loopt en even met je mobiel aan het spelen bent. Al met al vond ik de kwaliteit van antwoorden nu erg sterk en zou ik niet weten hoe je dit nog meer zou moeten verbeteren.

Wat deed de app met je gevoel?

Het plaatje van het kasteel in het hoofdmenu gaf mij een gevoel alsof ik een ridder/fantasy spel speelde. Voor de rest waren de plaatjes van bijvoorbeeld de categorien erg duidelijk in de app. Het gaf me het gevoel wat ik nodig heb; ik kan de tekst lezen maar het plaatje is ook al duidelijk en met alle kleurtjes was de app niet saai om naar te kijken. Het spel element wat erin zat was een strijd tegen mezelf en dit vond ik erg leuk.

De naam van de app vond ik goed al vroeg ik mij wel af wat commander in deze context betekende. Ik had er verder geen speciale associatie bij. De naam hoefde niet ergens op te slaan als het maar een beetje leuk klinkt.

In de app voelde ik mij anoniem. Ondanks dat er waarschijnlijk veel bekenden de app ook gebruikte wist ik niet wie wie was. Hierdoor vond ik het ook makkelijker om dingen te schrijven in quests of naar anderen want je werd niet beïnvloed door wie de andere spelers waren.

Bij het 'solven' van een quest vond ik het jammer dat hij dan weg was. Hierdoor kon ik niet terugkijken wat er in het verleden gedaan was en welke oplossingen daarvoor waren.

Ik vond het fijn dat de app zo kort op een dag gebruikt kon worden. Het kon even tussendoor. Omdat je notificaties binnen krijgt ga je toch sneller even kijken wat er bijgekomen is en kan je even kort reageren. Dit vond ik ook leuk wanneer ik zelf een quest plaatste en mensen mij binnen een minuut of drie antwoorden gaven. Het invoeren van de quest duurde wel een beetje lang maar daarbij vind ik wel dat je zelf iets wilt

weten van een ander dus die extra moeite om dat in te typen moet je dan ook maar investeren erin.

Voor sommige mensen zou het handig zijn bij het aanmaken van een quest om hulp te krijgen. Zo kunnen ze geleid worden in het proces van het formaliseren van een situatie. Dit zou bijvoorbeeld kunnen binnen een extra menuutje met hulp of door het aanmaken van een quest op te delen in verschillende schermen waar steeds een ander deel van de situatie wordt uitgevraagd. Voor de testgroep die nu gebruikt was was dit niet nodig omdat deze hun gevoelens en gedachtes goed op een rijtjes hadden maar dat zal niet voor alle doelgroepen hetzelfde zijn. Zeker voor jongere mensen is dit vaak moeilijker, zeker als ze in moeilijke sociale omstandigheden verkeren.

Wat vond je van de categorien die in de app gebruikt werden?

Deze vond ik erg goed want je kon hierdoor beter beslissen of het iets ging over iets waar je zelf ook veel mee bezig bent. Daarbij wist je als je een quest opende van tevoren al een beetje waar deze over ging doordat je de categorie wist waar deze in zit. Als dit er niet was geweest was het waarschijnlijk een grote lange brei met problemen en dan raak het het overzicht kwijt en wordt je misschien een beetje moedeloos. Op deze manier was het mooi gestructureerd.

(Enjoyment) Vond je het leuk de app te spelen, motiveerde het?

Ja, ik had het gevoel van een gezellige interactie tussen alle spelers. Je zag ook steeds dezelfde gebruikersnamen terug komen en dan kan je op basis van schuilnaam een mening over iemand creëren. Zo kan je mensen herkennen of je ziet een patroon in hun antwoorden. Het voelde daardoor als een afgeslote/kleinere gemeenschap.

Ik vond het leuk dat je kon zien wat mensen van je antwoorden dachten. Als mensen veel minnetjes gaven dan dacht je van onee, mensen vonden dit niet goed maar aan de andere kant als je veel plusjes kreeg dan dacht je echt Yes, ik ben echt capabel op dit onderwerp. Om de punten te zien vond ik leuk omdat je dan ziet hoeveel je ermee bezig bent. Omdat je steeds notificaties kreeg werd ik er vanzelf actiever in. Verder was het zo dat de acties die je kon doen dan snel te doen waren en daardoor stel je het dan niet uit maar doe je het even snel tussendoor.

Ik denk wel dat het heel moeilijk is als iemand alleen maar minnetjes zou krijgen. Waarschijnlijk zou dat op een of andere manier dan ook begeleid moeten worden zodat

je weet dat een minnetje niet een afwijzing is van jouw persoonlijkheid. Dit leert iemand dat het niet is van ik kan het niet maar dat mensen vinden dat er een betere manier is om het probleem op te lossen. Een positieve benadering is hierin belangrijk dus. Je zou het ook bijvoorbeeld deels met zelfreflectie kunnen doen: Als je een bepaald aantal minnetjes hebt dat je jezelf moet afvragen waarom mensen dat dan als negatief/negatiever kunnen zien.

(Inzicht) Kreeg je het gevoel dat je inzicht had in je progressie?

Ik probeerde mijn antwoorden voornamelijk te vergelijken met de plus-, minpunten en de antwoorden van anderen. Bij sommige reacties had ik bijv +4 en andere +7 en dan dacht ik van o, dus dat is een antwoord dat echt veel beter is.

De statistieken waren een beetje onoverzichtelijk. Het was waarschijnlijk makkelijker geweest als elke categorie kopjes onder zich had. Zo voor bijvoorbeeld het totaal, het toevoegen van quests, het toevoegen van reacties en het raten van reacties. Nu stond er een grote lange lijst waar ik geen wijs uit werd.

(Competence) Denk je dat je je skills kunt verbeteren m.b.v. dit spel?

Juist omdat je van andere leert kan je daar de dingen uitpakken die je denkt dat voor jou zouden werken. Omdat je ziet dat mensen bepaalde opmerkingen hoger raten leer je wat de algemeen geaccepteerde gedachtegang is. Ook vind je antwoorden waar je misschien zelf niet over zou nadenken en zo krijg je veel verschillende invalshoeken waar je van kunt leren.

(Autonomy) Denk je dat m.b.v. dit spel patinten zelfstandiger hun problemen kunnen oplossen?

Ik denk dat het een aanvulling moet zijn maar wel dat de patint zelfstandiger wordt. Je hebt niet altijd je coach bij je om advies te vragen maar je hebt wel altijd je mobiel bij je. Juist door de snelle reactietijd binnen de app krijg je sneller mogelijkheden aangereikt. Als je net iets hebt gedaan en je moet nog een week wachten op je coaching gesprek dan is je gevoel al weggezakt. Als het net is gebeurd dan zit je er nog middenin en dan kan je er veel sneller op terugkoppelen en kan je misschien eerder geholpen zijn. Het maakt je dus minder afhankelijk van je coach. Het is goed als je coach dan ook refereert naar de app in de sessies. Niet alles zal je misschien aan je coach willen vertellen, hiervoor is het dan juist handig dat je anoniem in de app kunt zijn. Zo kan een coach je wel helpen

om bijvoorbeeld door het gevoel heen te komen als je veel minnetjes in een week hebt gehad. De coach kan deze relativieren of in ieder geval met je kan bespreken zodat je weer op het goede pad komt.

(Mindfulness) Denk je dat mensen meer met hun problemen bezig zijn als ze deze app gebruiken?

Mensen zijn veel met hun problemen bezig op deze manier maar het hangt ervan wat hun attitude is tegenover de app of dat goed is. Als zij het zien als een tool om iets te leren, zoals dat ik het talenspel Duolingo zie om Spaans te leren, dan denk ik dat het niet erg is dat ze zo met hun problemen bezig zijn. Als ze er negatiever naar kijken dan zullen ze waarschijnlijk de app ook minder gebruiken. Wat je zou kunnen doen is een expert hulplijn in de app zetten. Dit zodat, mochten ze er onderling niet uitkomen, dat ze dan een expert in kunnen inschakelen om te kijken wat die ervan vindt. Wel zouden alle coaches hetzelfde account moeten gebruiken zodat je geen onderling attitude verschil krijgt ten opzichte van de coaches die inloggen. Ik denk overigens dat ze met deze app mensen voornamelijk anders met hun problemen omdat voordat je de app gebruikt je al bezig moet zijn met het feit dat je problemen hebt.

Welke drie verbeter punten zie je voor deze app?

- Statistieken inzichtelijker
- Het invoer gemak omdat het toetsenbord bij het invoeren van een quest over mijn tekst heen ging.
- Het plaatje van het hoofdmenu wat nu te age of empires was.

C.3 Interview with 25 year old male gamer - Adam

Geef korte introductie over jezelf

Ik heb een HBO voeding en ditiek gestudeerd, deze heb ik afgerond. Momenteel doe ik een thuis studie Informatica waar ik nu in het tweede jaar zit. Verder werk ik bij een app development bureau als Android programmeur. Ik zie mijzelf wel als gamer omdat ik er veel plezier uit haal en veel gedaan heb. Thuis heb ik een aantal consoles staan hoewel ik ook op mobiel of de computer spellen speel. Qua spellen veel ik speel first person shooters. Ook heb andere genres gespeeld; casual, rpgs etcetera.

Wat zijn je initile opmerkingen over de app?

Ik vond de app een leuk idee omdat de interactie erg leuk was. Mensen reageerde op elkaar en je zag dat over de reacties goed werd nagedacht. De app was erg overzichtelijk. Zo kon je bijvoorbeeld makkelijk zien wie je al geholpen had. Dat maakte het ook leuker omdat je precies kon zien welke quest je nog niet bij had geholpen of welke je wel al had gedaan maar waar je even naar terug kan komen om te kijken wat andere mensen bij dezelfde quest gezegd hebben, daar leer je zelf ook weer van. Het geeft je een inzicht van : O, zo had het ook gekund. Dat is eigenlijk beter dan mijn eigen antwoord. Dus ook van anderen hun quests leer je veel over jezelf omdat je zelf na gaat denken wat je eigen aanpas zou zijn.

Het design was clean, kleurrijk en speels, zoals een game hoort te zijn. Het spel is geen klassieke game zoals een arcade game bijvoorbeeld is maar het voelde toch als een echte game aan.

Wat minder was is dat de stats op een paar punten niet helemaal goed werkte, dit miste ik wel zo nu en dan. Ook miste ik een vorm van controle; stel dat iemand achter de gebruikersnaam van een ander kom dan kan iemand daar misbruik van maken. Zo kan bijvoorbeeld pestgedrag ontstaan. Ik heb dit niet zien gebeuren maar ik kan me voorstellen dat je vrij gemakkelijk je gebruikersnaam aan een ander verteld als je de gevolgen in de app niet overziet. Dit zou alleen opgaan als de gebruikers elkaar dan ook in het echt kennen.

Wat voor vragen heb je gesteld/antwoorden gegeven?

Mijn vragen gingen over problemen waar ik zelf tegenaan loop. Als voorbeeld had ik zenuwen voor een sollicitatie, hier wilde ik dan feedback over. Ik heb uit nieuwsgierigheid heb ik ook vragen gesteld waar ik zelf niet mee te maken had maar wel erg benieuwd was naar het antwoord. Dit is dan toch nuttig want je stelt de vraag niet zomaar, je wilt het antwoord weten. Wat dat betreft dacht ik ook dat een aantal quests van andere ook niet verzonnen waren maar echt. Net als een 'grapje zonder ernst' zouden dit dan ook quests zijn die mensen wel vragen alsof het bij het experiment hoort maar wat ze ook echt meemaken of willen weten. Dit was bij mij het geval dus ik denk ook wel bij anderen.

Als je kijkt naar de kwaliteit van de antwoorden denk je dat mensen wat hebben aan de adviezen?

Je ziet bij de antwoorden duidelijk dat er over nagedacht was. Wat je wel zag is dat er soms al een antwoord gegeven was en dat andere daar een beetje op aansloten. Dat waren dan antwoorden dat mensen dachten dat wel ok zou zijn en leken er dan niet verder of anders meer over na te denken. Dit maakte dat de gedachten soms in een richting gingen in plaats van heel divers waren. Toch waren deze antwoorden niet verkeerd want ik merkte bij mezelf ook dat het een goede reality-check was of mijn eigen ideeën goed waren. Ondanks dat de quest teksten soms kort waren kon je best wel goed de situaties van mensen inschatten en een passend antwoord geven.

Wat zou jij voorstellen om de kwaliteit van de antwoorden te verbeteren?

Je zag in de app weinig discussie opkomen. Mensen opperde een idee en deze kon je liken of disliken maar er was geen reden voor discussie omdat uiteindelijk het idee door de quest maker gebruikt moest worden en niet door de quest helpers. Het is dan goed als je verschillende mensen met verschillende visies bij elkaar hebben zodat de antwoorden dan diverser worden.

Je zou dus ook geen reacties op reacties moeten kunnen geven omdat dit aanroept tot discussie. Dan krijg je wellicht een te groot en onoverzichtelijk verhaal wat erg verwarrend kan zijn voor de quest maker, juist omdat deze duidelijkheid wil zien. Ik vond het juist als quest maker mooi om te zien wat de verschillende reacties van mensen waren zonder dat daar een heel verhaal van werd gemaakt door reacties op reacties.

Wat deed de app met je gevoel?

Bij het krijgen van dislikes op mijn reacties had ik toch wel een naar/negatief gevoel. Ik miste hier een stukje uitleg waarom ik dan een dislike van deze mensen heb gehad. Dan zou het mooi zijn als de persoon die reactie plaatst een berichtje krijgt met de reden van de dislike.

Gek genoeg gaf de app wel een gevoel van vertrouwen. Als je zag dat je antwoorden geliked werden en dat je iemand kon helpen daarmee voelde ik mij echt goed. Het feit dat mensen snel antwoorden gaven deed ook erg goed omdat je daarmee voelde dat iedereen het serieus nam of iig serieus mee bezig was.

Wat vond je van de categorieën die in de app gebruikt werden?

De categorieën vond ik overbodig. Vaak kwam de categorie ook wel in de quest naar voren. Wel zouden deze handig zijn als je veel meer spelers zou hebben en je kon filteren op de categorieën bij het helpen van een quest. Echter kwam dit ook omdat de statistieken in de app niet geheel klopte dus ik had vrij weinig aan de categorieën. Het aantal quests waren nu ook te klein om een keuze te willen maken op een categorie omdat je alles eigenlijk wel kon doen. Nu waren er misschien de ene dag wel drugs quest en een andere dag niet. Wat je ook zou kunnen doen is het systeem een aantal quests erin laten zetten zodat er altijd quests voorradig zijn.

(Enjoyment) Vond je het leuk de app te spelen, motiveerde het?

De app was erg leuk om te spelen; het motiveert om te zien dat je antwoorden geliked werd en als je dislikes kreeg werd je gemotiveerd om toch beter over je antwoorden na te denken. Ook motiveerde het erg om bijvoorbeeld nieuwe quests toe te voegen omdat je dan toch weer even wat punten kreeg.

(Inzicht) Kreeg je het gevoel dat je inzicht had in je progressie?

Dit was een beetje afhankelijk van wat je doel was. Voor sommige mensen boeien de punten waarschijnlijk niet omdat ze het doen voor het helpen en het lezen van problemen enzo. Aan de andere kant zullen sommige mensen kicken op het halen van punten en die steeds meer verzamelen. Waar die progressie lag is dus een beetje moeilijk want die kan in jezelf zitten of in de punten van de app maar welke het belangrijkste is is dan aan de speler van het spel. Wat mooi zou zijn is als je doelen kon stellen per week hoeveel punten je wilt bereiken. Het zou ook kunnen dat je er soort van levels of andere doelen/achievements in plaatst. Dit vergroot dan ook het game gevoel.

(Competence) Denk je dat je je skills kunt verbeteren m.b.v. dit spel?

Je leert jezelf beter kennen via deze app. Doordat je andere helpt help je bewust ook jezelf. Dit zou dan ook door kunnen vloeien in je dagelijks leven omdat je meer zekerheid krijgt in dat je mensen kunt helpen en op den duur ook dat je jezelf dus beter kan helpen.

(Autonomy) Denk je dat m.b.v. dit spel patienten zelfstandiger hun problemen kunnen oplossen?

Ik vond de toegan tot het spel erg laagdrempelig. Je kon zelf weten hoe je speelde; quests toevoegen, andere helpen, likes/dislikes plaatsen of alleen maar andere mensen hun quests lezen om ervan te leren.

Wel zou er een begeleider nodig nog zijn om te helpen bij het overkomen van de dislikes, zeker in het begin van je gebruik. Zo kan de begeleider wekelijks helpen met reflecteren over wat je in de app gedaan hebt, waarom je bepaalde dislikes hebt gehad en hoe je bepaalde strategien in kunt zetten in je dagelijks leven. Zo is je begeleider dan een soort safety-net in het begin en kan je daar steeds meer los van komen als je skills verbeteren.

(Mindfulness) Denk je dat mensen meer met hun problemen bezig zijn als ze deze app gebruiken?

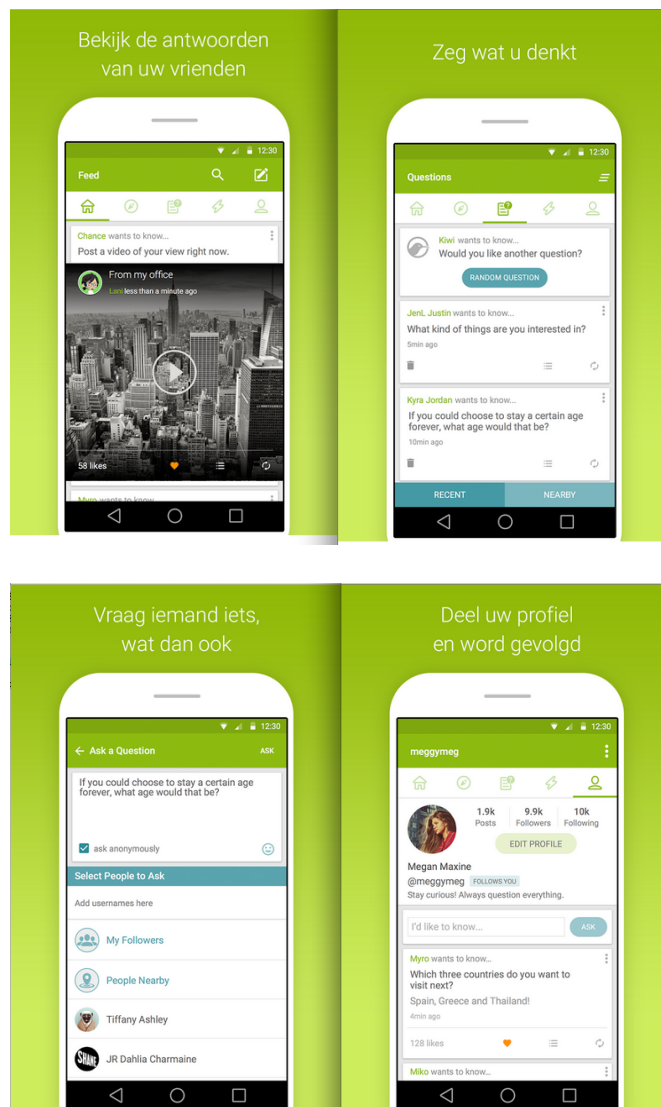
Mensen worden waarschijnlijk wel bewuster van hun problemen. Zeker als met ranking en scores ga je dan toch in je dagelijks leven zoeken naar welke problemen je hebt die je in de app zou kunnen zetten voor punten.

Welke drie verbeterpunten zie je voor deze app?

- De dislikes vereisen wel onderbouwing omdat het nu heel naar aanvoelde. Als je weet waarom het zo is dan is dat meer gerechtvaardigd.
- Het terugkijken van andere/oudere quest zo dat je kan zoeken naar soort gelijke quests of andere dingen waarvan je kunt leren.
- Het kunnen stellen van doelen in de app. Bijvoorbeeld dat je weekdoelen kunt stellen van hoeveel quest je wilt halen of punten.

Appendix D

Screenshots of Kiwi



Appendix E

Screenshots of SuperBetter

