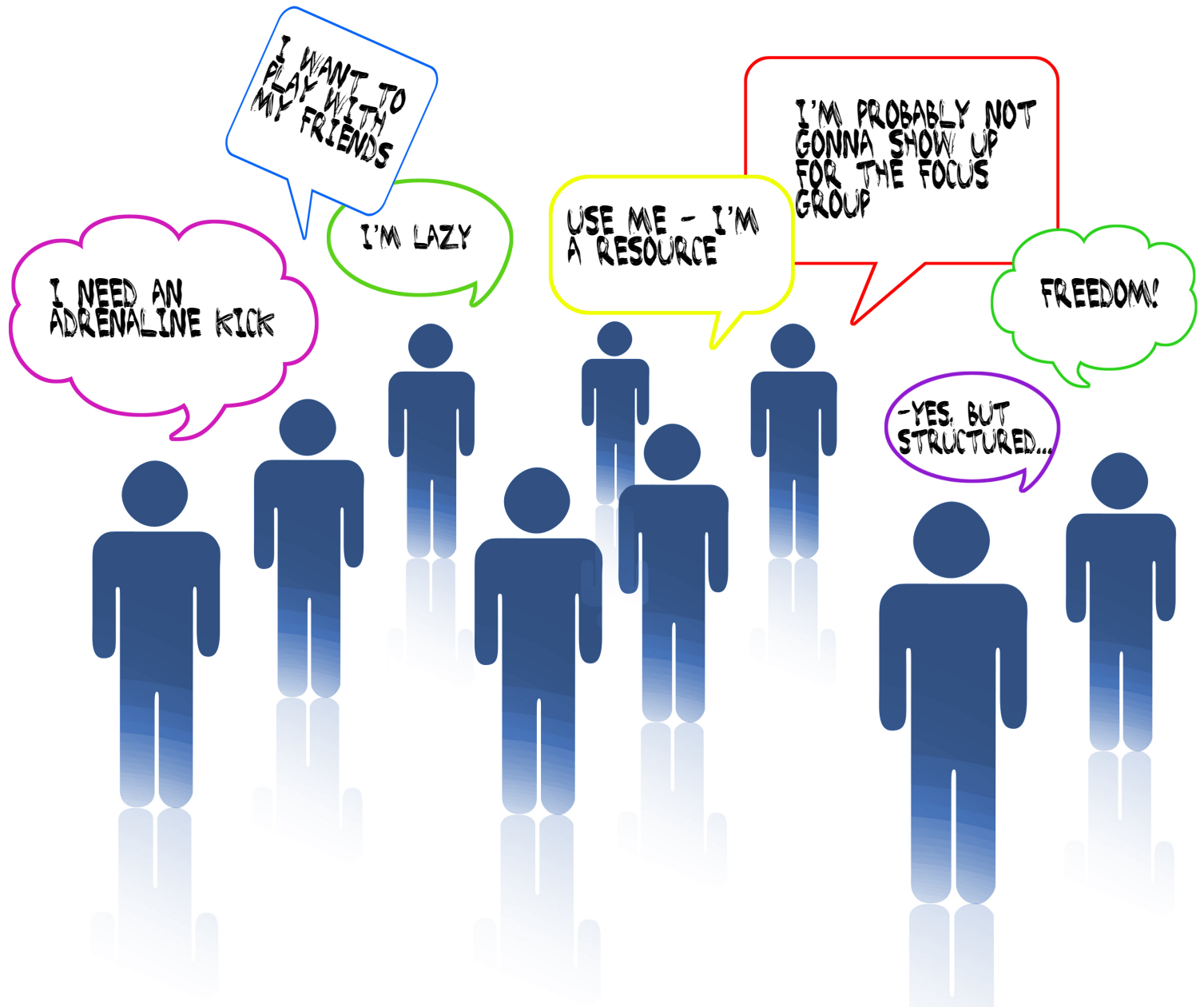# Motivating Teenage Boys

Co-Design BFIB-2010
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EXECUTIVE SUMMARY

This rapport deals with teenagers' habits in relation to physical activity. The topic originates from a thesis which states that 'digital natives' are less motivated in physical activities due to the more engaging activities that digital media offers. A Preliminary interview supported the thesis. Accordingly, the obtained data served as foundation for the subsequent research including a focus group interview and a workshop. The studies reveal that there is an accordance between the teenagers' wishes on which elements that should be present in activities to keep them engaged and motivated. Furthermore, our research suggests that the structure of computer games share many of these elements. Thus, it is recommended to look into this angle for further research.

The project serves as a recommendation of a new target group for HumanKoncept. The empirical data is obtained using Co-design methods.

Keywords: co-design, motivation, teenagers, game structure, physical activity

INTRODUCTION

Our relation to the people we serve through design (i.e. the "end users") has changed - they are no longer simply consumers of a product. Their roles changed doing the 1980's and 1990' when designers moved toward user-centered design: The "consumers" became active users through their interaction with the artifacts. Today we are entering an even more human-centered design revolution. This is due to the fact that everyday-people no longer are satisfied with simply being "consumers" - they want to be creators as well (Sanders).

The role of the designer as well as the market has changed due to the drastic change of the user role. The designers know-how from designing for a consumptive market is therefore not fulfilling the emerging needs - new design spaces are evolving in order to reach the "users". The designers' task is to amplify the creativity and design a framework that will evoke and amplify the creativity for the users (ibid).

Consumers born into the digital world are very well-informed. They are critical and are used to take advantage of their consumption to control the image they present to the outside world. They are presented with a lot of choices concerning activities, how do we motivate them to prioritize the physical activities?

Teenage boys in the age range of 16 to 18, raised in this revolution, are standing at a crossroad in their lives. They have just started high school and are hence being introduced to a larger workload as well as the expectations for their performances have risen. With the change of institution they have been removed from their usual contexts and put into new ones, and are struggling to find their place. They are in a transition between being a teenager, that is allowed and expected to play, and becoming a man, with adult responsibilities. It is now that they cut the first sod, to what will define them later on as men and as humans. A part of these decisions also include whether or not to prioritize exercise enough to do it at a regular basis.

When looking at this target group with a focus on their unique skills and competences, it is hard not to acknowledge that these individuals are natives of the digital age and as such have a different view on the use and the need for digital media in general.

This rapport revolves around 'Digital natives' and our thesis that they are less engaged in physical activities due to their needs of being social and competitive are being fulfilled through various offers in the world of computer games (Prensky).

The ideal sample would be a statistically probe of teenage boys geographically distributed all over Denmark. Given the natural limitations of this project our studies will contain three to six participants from the Copenhagen area in the age range of 16 to 18.

Research question

By the use of Co design methods we will explore some different possibilities of combinations within digital media and physical activity.

What could help teenage boys, in the age range 16-18 years, feel more motivated and engaged in physical activities?

- Is it possible to give the pallet of exercise activities that are offered a face lift?
- What characterizes motivation for this target group?
  - What influences the target group when it comes to choosing an activity to pursue?

Target group

- Age: 16 - 18 (1.g)

- Education: municipal primary and lower secondary school (High school)

- Occupation: none or possibly a part time job

- Income (for students; average industry income after graduating) pocket money

- Culture/ethnicity: ordinary danish teenagers from Copenhagen

We will answer our research question with aid from

1. Tom Chatfield's theory about what to derive from gaming, to gain knowledge about what motivates people to keep gaming (Chatfield).

2. A preliminary interview with the target group to gain knowledge and inspiration for further research.

3. A focus group to discuss and uncover the target group's attitude towards computer games and physical activities.

4. A workshop to extract the target group's perception of the motivational factors regarding a variety of existing physical activities.

5. A summarizing interview to discuss reoccurring themes.

THEORY & METHODS

7 ways games rewards the brain

The English gaming theorist and author of the book Fun Inc. Tom Chatfield has defined seven things that you can take out from computer games and put into the real world. He looks at the unique characteristics in gaming when it comes to motivating the gamer to keep on coming back and to keep on progressing. He then looks at how the outside world would benefit from taking a closer look at these characteristics, for instance when it comes to motivating students in school. He refers to Professor Jesse Schell from the Entertainment Technology Center and his work concerning the use of experience systems, that involves the students creating an avatar or a profile that follows them throughout the education. This avatar then shows the progress of the individual performances, with the intent that "everything should count in some way towards this precisely-measured, steady individual progression: a far more intimate, involving and nuanced way of measuring progress" (Chatfield).

The second thing that he mentions as being a motivational factor is the multiple long and short-term aims, in which you break everything down into parallel tasks, in order to help people take ownership of their progress. This method also keep them feeling that they constantly are progressing in the tasks at hand. Another benefit from this method is that you can look at where the student is weak and assign tasks to strengthen them in this particular area.

The third point that is given is to reward effort and not to punish failure, and thereby motivating people to keep on trying until they succeeds with the given tasks.
He also argues the importance of rapid, clear and frequent feedback, by implying that when there is too much distance between feedback and consequences it gets almost impossible to learn the lessons. When it comes to the element of uncertainty he refers to it as "the neurological gold mine". He substantiates this with the fact that the brain gets elevated by dopamine when you get a prize for doing something, and the brain really lights up when the prize is unexpected, or was not predicted.

He then moves on to speak about windows of enhanced attention. As this research is still in its very early days we will not go too much into details on it but we can briefly mention that the brain at some points has an elevated dopamine level which possibly can be used to give enhanced learning.

Lastly he talks about the key factor of why gaming is such a success. Other people. That people can get an intense validation in comparison and in collaboration with others. Or in other words, that the gamers constantly are comparing themselves to the team mates and other players and wants to do better than them.

We will use these points through out our research and convert them, in order for us to use them on our target group.

Research Plan

To get an overview of how to go about our research, we created a research plan with focus on the two main stakeholders; HumanKoncept and teenage boys. According to Kuniavsky a research plan includes:

1. Collecting issues and presenting them as goal
2. Prioritizing the goals
3. Rewriting the goals as questions to be answered.

When focusing on HumanKoncept we found these goals:

1. A new target group to focus on,
2. An approach to the target group,
3. A strategy for execution.

For the teenage boys:

    1.Greater motivation for exercise

    2.Use knowledge about video games as approach

    3.Use skills acquired by playing video games, gain knowledge about target group.

After prioritizing[1] the goals it was clear that our main focus was on the teenage boys, we wanted to gain knowledge about them and discover how they could gain greater motivation for exercise, we would also like to use the knowledge we have about computer games as an approach but it was not an immediate concern (Chatfield). Then we changed the goals for the teenage boys into questions. This was so we could figure out what we might try and uncover with the research. The reason for not changing the HumanKoncept goals to questions is that we felt the goals would be reached by answering the ones concerning teenage boys, as they are clearly related.

Recruiting

To give a brief summary of our recruiting process we have to start by saying that this was not our first target group. Our first target group was cancer patients in rehabilitation. Sadly this target group was hard to get in touch with, as doctors and others working with them generally are not allowed to give information about their patients. We visited a rehabilitation center and talked with some of the patient, but despite positive attitudes about the project none of them felt up for participating. Therefore we chose to change the target group, as we did not have the time to keep on trying to get in contact with the cancer patients.

We then turned our attention to one of the other target groups that we discussed earlier in the process; teenage boys. Here we used our social network and got in contact with our participants. He was positive about participating, but sadly he did not have the time to be part of any more than the preliminary interview and therefore our strategy for getting him and his friends to participate failed. Instead we decided to visit Ørestad Gymnasium, where we talked to some of the students and found four boys who wanted to participate in the focus group and workshop.

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[1]Appendix 1

Unfortunately two of them did not show up, therefore we ended up with only two participants for the focus group and workshop.

Preliminary Interview

To gain some knowledge about what activities teenagers in Copenhagen are doing an interview with a teenager was conducted. The goal was to get the participant to reflect on, and discuss his online and offline activities. By letting the participant focus on the different aspects of his virtual and real world, he was able to compare and uncover his needs.

As this interview was a preliminary interview (Kuniavsky, pp. 117), it was structured with a loose interview guide[2] and conducted at the participant's house to make him feel safe and comfortable. The loose interview guide made it possible for us to ask questions about thesis and subjects we had not thought about before, such as the link between offline and online activities i.e. role-play and World of Warcraft, soccer and Fifa and that supported our thesis and resulted in a lot of ideas about combining elements from teenagers physical activities with elements from computer games.

We wanted the obtained data from this interview to act as the foundation of further methods and research.

Focus group[3]

One of the concerns about using a focus group is that this will be far from representative in the bigger picture, it is only the attitude of a small group, and hence can not be used for anything else than inspiration when it comes to insights in the target group.Therefore we will use it to get a better understanding of our target group and some more in-depth information about their attitudes and perceptions, with regards to computer games and exercise (Kuniavsky). We decided to do this before the workshop, in order for us to gather some impulsive thoughts about physical activities, computer gaming and motivation.

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[2]Appendix 2

[3] Consent forms Appendix 7

Based on the preliminary interview with one of our participate, we had a thesis saying that the target group might feel that skills like teamwork, some social skills and language are, if not acquired, then at least refined, through this media. We wanted the boys from the focus group to comment on that. We also asked a series of questions revolving around what kind of sports they find rewarding to explore how and if this might motivate and engage them. Is the reward, that sport makes you healthy, or is it only about having fun? What is the main focus and what is the secondary bonus?[4]

We expected the focus group to be an idea generator that, in the end, would work as the basis, in a session at the work shop.

Workshop

We wanted to use the workshop to gain a more immediate understanding about our target group, through a more creative way of thinking. This was done by allowing the participants to be creative and thereby removing the interpretation process which made the produced material more immediate and valuable.

The target group is accustomed to being stimulated through digital media and not only through conversation with others. Teenage boys are playful and inquisitive. Based on this we wanted to create a playful framework where the target group can unfold their curious nature through a digital element: a design game with videos (Sanders).

As stated earlier, the workshop was held almost immediately after the focus group. This had some pros and cons. As this was done the same day with the same participants, they would not have a fresh view on the subject when doing the second method. This could be a problem, but it could also help because they then already were in the mindset of thinking about this subject, thereby making it possible to use the covered themes from the focus group. The reason we chose to do the focus group first and then the design game was because we rather would like them to

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[4]Appendix 3

have a fresh outset on the subject when doing the focus group, since doing it last would probably cause the focus group to mostly be about the things they had come up with in the design game.

Design Game

Design Games are a method that can be used for participatory design. This method can have many different aspects depending on what the goal with the game is - therefore the games can be very different all depending on the purpose (Brandt).

Video Card Games are a design game method using small clips of video, where each clip has a corresponding card. Video Card Games gives everyone an equal chance to show their perspective on the material, which can help give a focused understanding of problems (Ylirisku & Buur).

The design game we have created is inspired by video card games. Because our video material is not of the selected target group we have chosen to change the video card game. The game will contain clips of different types of physical activities. We split up the participants into two roles in which they will discuss and connect with different words/themes regarding the activities - two of the participants take on a criticising role while the other two have to be enthusiastic about the activity. The words they assign to the various activities are written down on post-its which are then organized in a priority schema by the participants, thereby understanding which aspects of the activities the target group finds interesting and vice versa. In doing so, the participants help us co-create an idea of how to create a framework for the ideal activity which the target group finds engaging.

ANALYSIS

In the following section we will summarize and analyze our findings.

Preliminary interview[5]

The participant is an average teenager. He lives at home with his parents and just started high school. When we started exploring his interests and daily activities we found that he is a gamer. He sometimes plays street soccer and other 'street sports' with friends. Yet, most of his spare time is used playing MMORPG's (Massively multiplayer online role-playing games). For him, the most engaging factor is playing online and socializing with other people - especially with friends. He can then share his passion and improve his communication- and teamwork skills by playing. What excites him is the unlimited possibilities of the interactive world and the mental challenges the games facilitate.

His interest for computer games was grounded in the childhood. He began playing games on a GameBoy as a child and his interest in gaming has since evolved on to online computer games. His interests are also influenced by friends and the rest of his social circle.

The participant acknowledges that it is not healthy to play computer games all day and that you need to be physical active to avoid health issues and physical damage. However, he argues that he finds it hard to prioritize sports in his busy schedule, other than playing leisure games with friends. He is open to try new sports that fits his preferences including: activities that can be obtained with friends and where the purpose is to have fun. It does not have to be a sophisticated activity, for instance he enjoys every activity with a ball. He seeks out new activities through different medias - mostly online.

To sum up, the ideal activity for him should enable his network of friends to take part and evolve around of playful, competitive, mind challenging, and captivating elements. Also, the structure of the framework should be flexible enabling the players to choose between different tasks.

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[5]Appendix 4

Focus group interview[6]

Though the boys in the focus group were not gamers, they had tried playing computer games and had a lot of opinions about it. They were very aware of not becoming addicted to gaming and as the participant from the preliminary interview, they knew about the consequences of excessive use of computers too, but by asking them about what they see as motivating, they still pointed out some things that relate to the structure of games. One of the things is the idea of levels and the fact that you can progress with time. They like to identify and monitor progress in their own development which is some of the fundamental principles in game structure. They were also open to the possibility of using the qualities from the computer world to support sports activities. Their choice of computer games is related to their choice of real life activities. Therefore, it could be interesting to make some kind of connection between these two worlds. To them it is just important that the abilities they learn from games are used for a higher purpose.

When talking to these boys we got the impression that a lot of things are ambiguous to them. Money is not an issue to them as long as it deals with interests as soccer, basketball or drawing. When it came to buying online games financial issue were raised, maybe because they have to pay for activities such as computer games out of their allowance. This indicates that the parents can have an economical influence on the participants choice of activities and should therefore be considered as a stakeholder.

One of the boys talked about how gaming provides a break in the routine of the day, sport could be that too, but for these teenagers availability is a key factor. At first they states that time is not the biggest issue, if you really want something it is always possible to find the time, later one of them says that it is convenient to participate in games on Facebook because it is right there and it is non-committally too.

Another thing they seemed ambiguous about was their ambitions. They want structure but with freedom. On one hand they are result oriented and like to show off to friends, they see

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[6]Appendix 5 (Sound file)

commitment as a good thing but still they are not into the club spirit. They play just to play, exercise has to be fun. To them, the secret way to success is some friends and a ball, just as our participant from the preliminary interview states.

Workshop & Design Game

The workshop consisted of two things. First a variation of the Video Card Game and second a design game. As mentioned before only two of the four boys showed up so we had to rethink our strategy a little. The intention was that with four boys we would split them up in two "teams" and ask one team to take a positive stand and the other a critical stand to the sports videos that we would show them. This was modified to be Kristian and Kim on the critical team and the participants on the positive, as we needed their insights on the motivational factors of the different sports.

The different sports that they were introduced to were:
- Badminton
- BMX biking
- Soccer
- Gymnastics
- HipHop Dance
- Handball
- Sleighing
- "Lawn games" (group of people having fun at a lawn party)
- Free Running (Parcour)
- Swimming
- Power Tumbling

Every time a video had been showed, the two teams discussed the activity and came up with approximately three words. These words was written on Post-Its and then read out loud to the other team, who could then ask what the intention was with the different words.

The words, and explanations of them, that came out of this was surprisingly equal to the key words found both in the preliminary interview, the focus group interview and finally in the active interview in the end of the day.

In the end of the design game session we asked the participants to rank the words after importance to motivation. Meaning that they would take the Post-Its and put it on a whiteboard under one of the three indicators that was put there by the motivators (Red, Yellow and Green; with Green being the best). The purpose of this was for us to be able to define what words the target group would put on motivation and from that draw some lines to the future.

The defining words was:
- Cohesion or unity
- Community
- Creativity x2
- Intensity
- Adrenaline kick x2
- Challenging
- Entertaining
- Passion
- Doesn't demand that much (facilities/equipment)

All though the words was defined for different types of sports (and only by two persons from within the target group), we still think that it is possible for us to get an indication of what to look for when it comes to the motivational factors and teenage boys, or at least in which direction to focus when further inquires are made.

There has to be a sense of community and cohesion, meaning that they are busy in their lives. If they have to be active it would be a lot easier for them to get out of the door, if the activity included their network of friends. Also there has to be an element of creativity involved, whether

it is the activity or the way it is structured that is flexible is indifferent as long as the target group has a say when it comes to the decisions. The activity has to be an intense experience, either from the participants view or even from a spectators view. There has to be an element of danger, uncertainty, "super human" for the target group to get the adrenaline kick that was mentioned twice and ranked in the top every time. This we think has to do with the fact that the target group measure them selves in the eyes of the world around them, and as such they are only as good or valuable as in the eye of the beholder. The words challenging and entertaining are very closely linked to the adrenaline kick, and fits well again with the perception that the target group has of a "cool" activity.

The first time the word passion was mentioned was when we asked one of the boys why he plays soccer. He told us that he had been fascinated about soccer his entire life, and he shares this passion with his father, who supports him. Passion was therefore one of the words he used when being positive about an activity.

It does not demand that much of facilities and equipment, is also interesting. This is a another way of saying that it has to be easy and convenient to carry out. The target group was very clear on this point both in the workshop session as well as in the preliminary interview, the focus group interview and last but not least in the summarizing interview. They do not have time to spend three hours (including transportation, change of clothes, the practice, shower and transportation again) for a one hour soccer practice. For them it would be much more motivating to just hook up with a group of friends in a park and play.

The summarizing interview[7]
The summarizing interview was impulsively conducted and therefore lacked an interview guide. The interview was done just after the workshop to get the participants to reflect on their motivation for activities, to discuss some of the reoccurring themes as well as getting answers to some of the things we felt had not been covered already.

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[7]Appendix 6 (Sound file)

A big portion of the interview kept being about the balance of seriousness and unseriousness they wanted in sports activities. They wanted people to take it serious enough that they showed up and took part in the activity but at the same time they did not want it to be too serious, they did not want to be there because they had to play tournaments and win them. This corresponded with them saying that they would like for someone to organize the activities, but they did not want a coach yelling on the sideline. Their attitudes towards sports clubs was that the intentions of the players and the club usually did not match. The sports clubs wants to be the best but the players just wants to have fun. A part of the reason they felt like this was that to practice a sports activity at a high level, would take up too much time and they prioritized, friends, school and other things higher.

The two teenagers admitted that they were simply lazy, which was why they did not feel that the perks of doing physical activities were worth all the obstacles.

A large part was also that they preferred to do the activities with friends, they did not feel the need to enter a new social network in a club. This created a bit of a problem as it could be difficult to gather enough friends around one activity, also because there are so many different things to choose between. The main thing was that it needed to be convenient and fit into their schedule, a schedule that they felt should be somewhat flexible. They felt that it was much easier to gather friends for a game of World of Warcraft or something similar, because people would only have to turn on their computer and log on, whereas a physical activity usually demanded a bit of transportation, if it was not in their immediate neighbourhood. Generally activities should be about it being convenient and practised together with friends.

In addition to having someone organize the event they preferred to still have a say in what they would be doing and would like to be part of the creation of the activities.

They were positive about the possibility of combining activity on a WII with something like Skype, so that they did not need to go anywhere, but still could interact with their friends.

They also came up with the idea of making a game out of a treadmill, where you could put a screen on it where you had to run from something and controlled it by e.g. running faster.

Computer game structures

A pattern start to form when looking at these observations. Many of their conceptions about what could make physical activities more motivating or engaging are identical, whether the participants played computer games or not. Their principles about progressing and evolving as individuals, the fact that they want a flexible framework that allows them to be creative and co-creating competitors are very similar to many of the principles of computer games.

In this section we will try to categorize our findings according to game structures inspired by Tom Chatfield's talk "7 ways games reward the brain". The seven elements he presents consists of:

Experience Bars

They want to be able to track their individual progress themselves to promote motivation and engagement in an activity - they do not want coach or sport club to facilitate this. This also provides a way for them to compare and identify them selves to 'competitors' and 'team mates'.

Multiple short and long term aims

In many sports the highest goal is to become part of the elite. Teenage boys under education is not motivated by this - it is way too binding. Instead, they want meaningful goals which can be simplified and divided into individual beneficial activities - they will avoid complexity and activities should be as simple as a couple of guys with a ball. To avoid complexity, a framework should be established. The framework should be flexible, permitting the players to make "free" choices within its boundaries.

Rewards for effort

None of the participants were talking specifically about rewards. However, all of the

participants found it rewarding when they were able to share passions and get acceptance regarding their interests from their friends and parents. The concept of 'rewarding for effort' should be investigated during further research.

Rapid frequent feedback

All of the participants were aware of the health risks when not being physical active. Yet, none of them considered the health risks a motivational factor. Tom Chatfield emphasizes that distant consequences (i.e. when dealing with CO_2 pollution, or in this case long-term health risks) are hard to link to ones actions. When giving players direct feedback they can learn the consequences from their actions. Eating healthier and doing exercise could then be engaging and motivational factors.

They want to manage this feedback themselves. They do not want a coach to stress their absence, flaws or evaluate their performance.

An element of uncertainty

What really gets people engaged is an element of uncertainty (Chatfield). In order to implement such elements the framework must feature external organizers and planners.

An uncertain element can force the players to think more creatively about how to solve a problem or how to get more rewards. All of the participants emphasized that they seek out ways to be creative in activities.

Windows of enhanced attention

Not discussed among the participants, and should therefore be investigated during further research.

Other people

According to the participants, one of the most important elements in activities are simply other people, more specifically people from existing friend communities.

PRE-STUDY AND FURTHER RESEARCH

For further developments of the case we need more information about the target group. As emphasized earlier, our sample is very small, thus our research should only be used for inspiration. We would classify this initial work as the first step of a larger investigation, that should be followed up by digging deeper in the target group.

When we were asked to find and recommend a new target group for HumanKoncept, we were too ambitious. That unfortunately lead to a problem in our time-frame, but positively we learned a lot from it. We learned how to use our target group as experts and involve them in the idea generating process but we have also learned what kind of problems you can run into when involving users early in the design process. Some things could have been done differently and better during our research and we would like to share our experiences with you.

In the initial phase, some inspiration and some knowledge about the selected target group is needed. The preliminary interview worked very well for that purpose. Yet, to gain a more general understanding of the target group, we should have made several interviews with several participants about the same subject. Furthermore, by making contextual inquiry we could have gained some knowledge about how these teenagers actually do in practice and not only taking their words for granted (Kuniavsky). Combining diary studies and cultural probes, where we would ask some of our participants to take notes and to solve picture assignments, would be helpful when exploring their daily routines. We would thereby have a stronger foundation to build the workshop on. At the workshop a video card game based on the contextual inquiry, could be a way to get them to talk about their actual behavior. A result orientated discussion based on what they see and feel, would be both valid and useful in the design process.

When the first prototype of the concept is created, a focus group would be a way to observe the target groups spontaneous reactions to the concept, and to avoid unexpected flaws and evaluate on the concept before further development.

CONCLUSION

We will answer our research question based on the empirical data collected.

When it comes to physical activity, convenience, measurable progress and friends are the main motivators concerning teenage boys. They care a lot about individual goals and they prefer to be able to see their progress as they advance towards that goal. They do not like the structure in sports clubs where the only goal, from our participants' perspective, is to "go pro". Instead they want to have some say in the progress of their activities and to set their own goals. So, the ideal concept for our participants, should offer organised activities that facilitates freedom to adapt, without a coach being in charge. The activities do not have to be created from scratch, it could just as easily be soccer, as long as it is fun, local and can assemble their friends.

When it comes to choosing an activity they are influenced by previous interests and things they have done since childhood. They are also influenced by friends and role models and despite the fact that they are starting to break away from their parents, having the parents' support is still important, also from a financial perspective.

The concept should include excitement. Our participants want something challenging, which can give them an adrenaline kick. They value creativity, which can both be obtained in the activity or just through the flexibility in the way that the events are organized.

When looking at what the participants find motivating and engaging in physical activities and comparing these findings to the '7 ways games reward the brain', we see some very strong indicators that it could be an advantage to take these factors into consideration, when organizing activities for teenage boys. The research within the field shows enhanced performance within the educational system, in the field of business and could therefor very likely be applied to physical activities as well.

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Appendix on CD-R:

Appendix 1: Research plan

Appendix 2: Interview guide for Preliminary Interview

Appendix 3: Interview Guide for Focus Group

Appendix 4: Transcript of Preliminary Interview

Appendix 5: Sound recording Focus Group

Appendix 6: Sound recording Summerizing Interview

Appendix 7: Informed Consent forms Focus Group