I am here as well

Cyberbullying Prevention Game

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Introduction

I Am Here As Well (IAHAW) is an anti-bullying game to help children realise that they are not alone in this world. Therefore the international students of The Hague University Of Applied Sciences have done research on "***How does Media and Information Literacy (MIL) affect cyberbullying amongst today's youth.***" Which was a research report on the international background information of cyberbullying and MIL. Besides this, the report was focussed on kids aged 11 till 15 years. Thereupon comes the result of this report, for the substantiation of the game IAHAW and the initial report substationation. (Helvoort, 2019a, 2019b) In the introduction, the topics are as followed: problem solving, important findings initial report and explanation of the problem solvability. (Holsteijn, Jeong, Lee, Sandoval Rodríguez, et al., 2019)

The following objectives will be conveyed throughout the report:

- Describing the aim of the final product IAHAW.
- Justification on the technical decisions.
- Content description of the final product.
- Usability test process outline.
- Description of the development process.

(Holsteijn, Jeong, Lee, Sandoval Rodríguez, et al., 2019; A. Wieman, personal communication, 10 May 2019)

The main purpose of the game is getting children familiar with various globally used forms of cyberbullying. For instance: cyber-impersonation and cyber-slander are currently the main topics within the game. Because, these were the most prominent results in the previous report. Next are the most findings were important throughout the development of the game. (Holsteijn, Jeong, Lee, Sandoval Rodríguez, et al., 2019)

To begin with, "cyberbullying differs between countries" was fundamental for the development of the game. For this reason, the development team decided to create awareness in cyberbullying amongst different cultures. Consequently, this meant that the South-Korean and American issues were implemented. Because of the fact that information-leakage is the most cited bullying-form in Korea (Lim Ke Rou, 2016) and for the United States that is name-calling. (Anderson, 2018)

Thereupon, comes the definition of cyber-slander (abusive language or offensive messages) and cyber-impersonation (pretendations of a person) (Willard, 2007), In referral to the netiquette rules of the report. (Hambridge, n.d.; Park, Na, & Kim, 2014) Which in this case, provides a solution to the concept of cyberbullying. For the purpose of reducing various negative feelings, for instance: distressed, fear overwhelming or embarrassment. (Nixon, 2014)

In spite of this education on cyberbullying prevention is important, but games should make learning fun instead of boring. Therefore educational games are usually accompanied by other gaming genres, with the intention of providing fun. A way to do this is to use multiple choice questions, for the verification of the educational material that has been learned. (Hurst, 2015)

In conclusion IAHAW is not solving a problem, since cyberbullying will not become extinct. Although that kids can still be informed on cyberbullying prevention methods. With the intention that they will become more independent to protect themselves from online terror. Especially in South-Korea and the United States, where cyberbullying varies per continental region. Nevertheless, kids will need to be educated in with a sense of enjoyment, in order to get their attentio Holsteijn, Jeong, Lee, & Sandoval Rodríguez, 2019; Holsteijn, Jeong, Lee, Sandoval Rodríguez, et al., 2019)

Gaming product: I Am Here As Well

Product aim and product description

The target group is children between 11 and 15 years old (Helvoort, 2019a, 2019b) IAHAW is a game with various educational mini-games, which aims to educate children on international cyberbullying concepts. With the intention of kids learning from textual-explanation within the game. (All, Van Looy, & Castellar, 2013) The game features two stories (The first game is located in South Korea and the second in the United States). Each story focuses on the most prolific form of cyberbullying in that country. The purpose of the stories are to teach children that throughout the world people are being cyberbullied even though the form of cyberbullying might be different, the effects are all the same. (Holsteijn, Jeong, Lee, & Sandoval Rodríguez, 2019)

Programming choices

For the choice of the programming language the following things were considered: learning time-consumption (Wiley, n.d.), programming language purpose (Richardson, 2019) and licencensings (Free Software Foundation, 2017). With that knowledge the following products where chosen:

Mainly JavaScript is the fundamental programming language. For the programming of the game, because it is a web-oriented programming language. (Theisen, 2019) In contrast, Microsoft's TypeScript was compared to Javascript, but TypeScript often can be found with large declaration files posted by the community. However, bug are frequently found in these files. (Feldthaus & Møller, 2014) Beside, this JavaScript is international standard defined by the World Wide Web Consortium (W3C) organisation. (W3C, n.d.)

Besides this video game technologies tackle visual challenges, therefore a game framework was chosen. Coincidentally, there was a discussion on Unity (Unity Technologies, 2019a) and Phaser (Davey, 2019). Which has conquense for both frameworks. Below are the advantages compared in order of importance for the development team.

Phaser 3

Advantages	*Disadvantages*
JavaScript was a common programming language within the development team, since 5 out of 6 had a familiarity with it.	Their community is not as large as Unity's. (Google, 2019; Unity Technologies, 2019a)
MIT License which is a free software license (Massachusetts Institute of Technology, n.d.; Open Source Initiative, n.d.)	JavaScript is frequently improperly used. (GitHub, 2015)
Covering of basic abilities that are important for development: Temporary caching images and sounds Sprites (Coordinates on images) Legacy audio support (Davey, 2019)	
Focussed on mobile development (Davey, 2019)	

Unity

Advantages	*Disadvantages*
Large community, because it is supported by professional companies. For instance Sony, Nintendo, Google; And Microsoft. (Unity Technologies, 2019a)	Can have a steep learning-curve for users. (Unity Technologies Forum, 2016)
Professional instructions are provided at multiple universities with game courses. (Bosch & Stikkolorum, 2017; edX, 2019)	Proprietary, so over annual revenue of $100.000 it requires a license. (Unity Technologies, n.d.)
Unity is available on various digital devices(Unity Technologies, 2019b)	
C# is a programming languages which provides the Object Oriented Programming (OOP) concept. Which means, that self-describing logic is important. (Microsoft & Green, 2017)	

Software implementation

The game is browser based because schools have strict policies on installing software on school computers, since they are afraid of people installing malicious software. Next JavaScript is a good scripting language for makings small game. Also the programming team who was working on the game was most familiar with the scripting language.

Story

The story was based on countries of How does cyberbullying differ between countries. In the game, there are two countries which have different types of cyberbullying.
In Korea, most of students like to playing their social network services. Therefore Korea students are suffering cyberbullying which has huge relation with Social Networking Site.

On the first chapter, there is a girl whose name is Mi Sun living in Korea. She traveled a lot with her family to nice places and went to fancy places often. She always took pictures of traveling and daily things. She was also being happy with uploading her pictures on the social networking service such as Instagram and facebook. However, her classmates started to feel jealousy about Mi Sun's life. They thought she showed off by putting those pictures upload there. So her friends started to write hateful comments on her Social networking service. Moreover, bullies deliberately spread her personal information such as phone number, address, and photos. They had now not only bothered her on the cyber but also bullied her at school.
In this chapter, the game has on the purpose of giving some advices to children.

1. Spreading deliberately other people's information is not just a playing. It can make big problem.
2. It is not good to put too much of your daily routine in public Social Networking service.

In United States, the most common type of harassment youth encounter online is name-calling.

On the second chapter, there is a boy named Kevin who lives in Manhattan, New York. His mother ran a bakery in Manhattan. Similar to his mother, he was a young child who loves making food and trying new cultural foods. He always goes to her mother's shop after school to make bread and take it to school the next day to share with his friends. Then one day, as usual, Kevin went to school with his own cookies. His friends who saw him began to tease Kevin that he always had food and could not live without it.They teased Kevin about the smell of bread and began calling him a "baker pig". They could use the Internet to harass him anytime, anywhere. he began to feel ashamed of his appearance. Thinking that everything he could be a joke to the children, he always started wearing a hat and big clothes to cover himself up. He became less and less proud and reluctant to go to school.
In this chapter, the game has on the purpose of giving some advices to children.

1. Teasing someone for bad word can hurt their feeling.
2. Children should avoid and ignore people that are trying to hurt them by teasing them on social media.

Visual designs choices

Style

The game is made in a pixel style, there were several reason for doing it this way. The first one being the fact that children find this type of art attractive, because it is something they do not commonly see in everyday life, so they are struck by something that is new to them and has striking colors. As a 2d game the consensus was that this would suit the game better. The other reason was more practical the teams designer found it better to design and find assets which used a pixel style.

Assets

The game is partly being built with pre-made design assets. These design assets are all royalty free and do not necessarily need acknowledgement. Bits of design wich could not be found have been made specially for this game. For instance the level designs are all built specifically for this game. This was done because the consensus in the team was that, the assets that were available were not good enough or did not fit the overall design of the game.

The characters in the game are all made from pre-existing (free) design assets. This was done for two reasons. Reason 1 was that it would save time, it would have taken (more) valuable time to actually make the characters. The second reason was that the expertise to make a complete 2D character was not available so instead of trying to make the different characters the designers opted for using pre-made character assets.

Font

Characters used in the game were already in pixel form and so were the background of the levels. Because it was important to maintain consistency the decision was made to also use a font that was pixelated. It was important to keep continuing the overall flow of the game (so that every bit of design was the same). By doing this the user would feel like it was one thing and not different segments

Colors

The ingame colors are overall dark, this was done because the game focuses on cyberbullying and the consensus was that if the game because to light this would take away from the subject matter. This being said a conscious decision was made to primarily use base colors.

Royalty free

During the development of the game it was important that every assets that was used was royalty free. Seeing as the game could potentially be used in classrooms. This meant that if someone was to play the there wouldn't be any problems with compensating the owners of the used assets. This was important seeing as the product was made by students and that it should always be free to play.

Content

Netiquette

The South-Korean game is on respect others privacy, where a thief steals someone's belongings, And the character is logged in on her phone, what gives him the opportunity to send messages to the friends of Mi Sun. With IAHAW the message of the first game is to respect others privacy. Next the United States has a minigame in IAHAW, the use of scholars language is more effective than the use of swear words. Also the respect of privacy is important in this chapter, since the user is being cyberstalked. What means that his personal space is invaded. (Cole, 2016)

Textual choices

The story was based on countries of How does cyberbullying differ between countries. Each country has its own story. However these stories are connected to each other in the sense that they all highlight a different aspect of cyberbullying. Because each country has a different form of cyberbullying which is more prominent there for instance in the United States it is more common to use foul language to bully someone. That is why the story for that level focuses on that. The reason behind was that by doing this the user can learn about the difference in cyberbullying across the world. This then serves two purposes first it shows that cyberbullying is a global issue and second it shows that no matter were in the world you live unfortunately you can fall victim to it.

Translations

The game was originally designed to only work in English. English was chosen because that was the language that every group member speaks. During the process and coding there was also talk about potentially making the game in a different language. This resulted in the game also being in Dutch. This was also party done because the usability test would be done in Dutch so the people who were going to test the game also needed to be able to understand what it was about.

However due to time and coding related issues the game has not as of yet been made in English. Which meant that the usability test was a bit harder to actually do. This was resolved by translating the usability test into Dutch and helping the participants if they had any questions.

Usability test

The usability test was held with 5 participants with different educational levels. Ranging from specialized education to gymnasium. There was also a variety of ages the group was between 11 and 15. (Helvoort, 2019a, 2019b) For the execution parental permission was required, in order to do any data-gathering on kids under years of 16 year old. Which is required by the European General Data Protection Regulation (GDPR) law. Therefore, a electronic-form was send to collect the permissions. Only five of the the twelve parents have gave permission to undertake the test. (Autoriteit Persoonsgegevens, 2017; Intersoft Consulting, n.d.)

For the testing of game three computers were used. Each of these computers had Microsoft's Windows 10 as its operating system. Nevertheless the computers used were very old the reason for using old computers was that it was important to test if the game also ran on older systems. The game was designed on newer systems so it was already know that it would run on newer systems.

Describe how you tested your product among your target group (include your test plan in the annex), what results did you have and what changes did you implement to the product based on your test results.

The test consisted of 3 different scenarios each scenario had an introduction text and tasks that need to be completed. Each scenario picked up were the previous one ended, so when the user finished one task it felt like they were going further with the overall story.

Post test results:

Introduction screen

An introduction screen to show the controls for each level and how the level works. This screen will be shown immediately after the story screen. The user will have the option to click the screen away when they are finished reading it. Putting a timer on the screen (till it goes away can potentially annoy users).

Controls

One of the main things that came out of the test was that the controls were not really explained. This was the case for all the levels, the user wasn't not aware of the controls. This meant they were left to their own devices to figure it out.

To be able to make it more accessible and easier to use for the user the controls need to be displayed at different stages of the game. In the main menu under controls (so that when the user starts the game it is clear how it works. Then at the beginning of each level (after the introduction text). Then there could come another screen explaining how the controls work and how the game is to be played.

Objects

In the word game it was not clear what the different objects meant. The purpose of those were not either increase or decrease the health of the player. During testing users found it difficult to understand what they meant. This meant that there were instances when the collected both objects which meant they were game over.

In favor of usability it was suggested that the information about the objects should be displayed in the same screen as the controls. By grouping the controls and objects information together the user wouldn't have to make any extra steps to understand the game.

Process

The process to carry out the project was in the first instance a minor to a greater development. This can be explained by the fact that the zero sprint has very few hours of work on the platform due to the new use of the Scrum methodology. However, rather than a failure, was a good point because a high retrospective could be found to be applied in next steps. . Below are the results of the first sprint (sprint 0):

Create the Game:

- GAME WORLD
- Start Screen
- To design a structural design
- Making DataBase
- Design assets
- Sound
- Programming Physics
- Debugging

Technical Documentati

- UML class design diagram
- UML class analysis diagram
- UML use case diagram
- User case stories

Website

- Web-site
- Hosting
- Browser optimization
- UI/Ux

Organization

- Have a programming collaboration structure
- Slack
- Github
- Defining the stakeholders (See also Appendix B: Stakeholders)

Usability Testing

- Observing
- Interview
- Usability Testing

Marketing

- How students get into the games

Content

- How do we present cyberbullying through our game
- Educational Part
- Story

It is worth mentioning that these tasks to be performed were collected taking into account that they had to be formulated for the Scrum methodology, besides that to give estimated times the Scrum Poker application was used in which each member of the team had to give priority to each task and to reach an agreement for after each one to estimate the hours necessary to complete this task.

At the beginning of sprint 1 the way of working improved greatly, because the team took into account the failures and improvements that had to be implemented to make the development optimal. During this sprint the daily scrum meetings were very present and even five days a week, taking advantage of the maximum to continue understanding the Scrum methodology. In addition, it was decided that two extra platforms would be used apart from ScrumWise, being those Whatsapp and Slack, this with the aim of improving the communication outside of classes and upload the evidences of the tasks carried out. In Slack, five specific communication channels were designated for the design, fronted, backend, scrum and general.

For sprint 2 the roles of scrum master and product owner were still exchanged correctly among the members, despite the fact that the task was a bit slow so during this sprint the progress of the project declined.

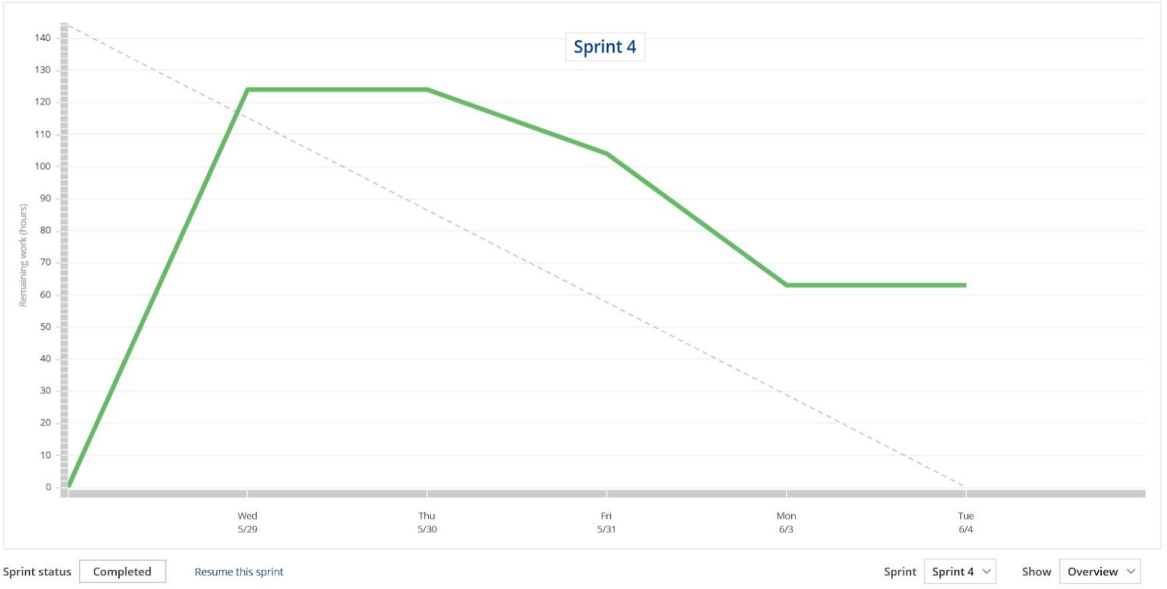
Again and very similar to what was the sprint zero retrospective, new work methods had to be implemented at the start of sprint 3, work in class until completing the minimum 75% of the assigned task of that day and be in constant communication between the whole team because it was a crucial part to know what things were in process and what were still to begin. Once again, the way of working was improved during this sprint, implementing much better communication through the Slack and Whatsapp platforms for the daily Scrum in case any member of the team was unable to attend classes.

For the retrospective of sprint 3, it was largely a matter of making concrete decisions about what to do about the Usability Test and whether it was worthwhile to continue working on new scenarios of the project or to finish completely those that were already there. In addition new recommendations were found to mention reasons why it was not possible to perform a task.

After sprint 3 there was a gap of 2 weeks in which the exchange of roles of the methodology was not performed although the daily scrum was still being implemented, during this time the ScrumWise platform was not used and the way of working was focused on tasks that were incomplete and required to be completed. Despite this, the way of working was largely through WhatsApp where the progress of the tasks and the necessary changes that were required were reported. Contrary to what one would think, good results were obtained.

For sprint 4, the use of the platform was retaken in order to finish all the unfinished tasks so that the project would meet the client's requirements, during this sprint the results were only uploaded to the platform until they were completed just to take maximum advantage of the time and focus on the report and project details.

Below the Backlog completed list is shown:



The final sprint had some uncompleted tasks on the platform, however, those tasks were completed without using ScrumWise.

Obstacles during development

The group experienced a variety of different challenges during the whole project. These problems were always solved. Despite that it did make it difficult at times to create the game and the reports. In the beginning of the project the main problem the team faced were cultural differences. Differences such as a different ways of giving feedback, work ethic, being on time and vacations.

Feedback

Feedback was something that in the beginning of the project was really difficult each team member was used to giving feedback a different way. An example the Dutch team members sometimes were a bit to straight forward in the giving off feedback. Which was something that the Korean members of the team struggled with a bit in the beginning.

Work ethic

Because the team consisted of 6 members from 3 different countries there sometimes was also the issue of work ethic. Even when members from the same country went to work it differed. Because of the different work ethics it made it difficult in the beginning to find a way to all work together. Where one team member preferred to do a lot of research and then start to build others preferred to do this simultaneously or a little bit of research and do more during the building of the game.

Time

Being on time for meeting was a thing that throughout the project was difficult. There was no clear answer as to why this was difficult. That being said there was always an effort made by the person who was late to work hard to fill in the lost time. Resulting in the other team members not clinging to the fact that that particular member was late.

Vacations

Throughout the project different members of the team went on vacation during (mostly) different times. However sometimes two members were on vacation at the same time. Because of this there needed to be a tight planning to make sure that were no extra delays in the development of the game. Overall this went very well there were hardly no delays in the development, the only thing that did occur was that sometimes because of the fact that a team member was on vacation it made it a bit more difficult to come in contact with them. This meant that sometimes the development laid still for a bit, but in the end it all worked out well.

Technical challenges

For the implementation of the project on a server first had to solve previous problems as to decide on which platform would be uploaded the project for evaluation, first took into account a web that is dedicated to hosting video games for computer or web, however faced the problem that said page called Kongregate does not support the framework in which the game was developed, so it was decided to use a domain at a low cost to implement the project and could be accessed through any web browser.

Design challenges

The final product needed designs, most of these designs were a combination of own made and already available assets. It was sometimes difficult to find the correct assets which would fit the game and at the same time also be free (and royalty free). Having to find assets that fit the aforementioned parameters caused some delays. It meant spending a lot of time searching the internet, because the assets needed to be searched for online meant that time could not be spent doing other design related things. Fortunately this was something that mainly occurred in the first stages of the game development.

Conclusion

In conclusion, the product made, more than solving the problem of cyberbullying among high school children, aims to function as a creator of conscience in which a child can learn about what to do when they suffer some type of cyberbullying.

In addition, the target group is reasoned that it is not just a problem, since with previous research it was shown that cyberbullying is present around the world. So to make the child notice how to prevent cyberbullying is the key to create awareness.

To make the decision on which issues to tackle in the videogame, the previous research was taken as a starting point in which key countries are highlighted on this problem and it was decided to focus on the countries where the members came from, taking into account that the video game would only be for the children of the Netherlands.

As a reflective part, we have a background that manages to situate children in the context of the problem, having as an opening an introduction to what is happening in cyberbullying globally. Once the child is immersed in the situation, he / she will be able to understand ways of preventing it through first to have moments of entertainment when playing, because as a team it was concluded that children prefer to play instead of having something educational, so it was decided to include minigames that would draw the user's attention and then include the content of which you can inform what to do when they or some relative is suffering from cyberbullying.

In favor of this videogame being for the Netherlands, in the development of the project, the decision to have the option to change the language was made because during the Usability Test carried out in the scouts it was notorious that the children had a basic level of English, so it was clear to make the decision to add both English and Dutch languages.

Bibliography

All, A., Van Looy, J., & Castellar, E. P. N. (2013). An Evaluation of the Added Value of Co-Design in the Development of an Educational Game for Road Safety. *International Journal of Game-Based Learning (IJGBL)*, *3*(1), 1–17. https://doi.org/10.4018/ijgbl.2013010101

Anderson, M. (2018, September 27). A Majority of Teens Have Experienced Some Form of Cyberbullying | Pew Research Center [Internet & Technology]. Retrieved 14 March 2019, from Pew Research Center website: http://www.pewinternet.org/2018/09/27/a-majority-of-teens-have-experienced-some-form-of-cyberbullying/

Autoriteit Persoonsgegevens. (2017, July 7). Mag ik onder de AVG gegevens van kinderen verwerken? Retrieved 5 June 2019, from https://autoriteitpersoonsgegevens.nl/nl/nieuws/mag-ik-onder-de-avg-gegevens-van-kinderen-verwerken

Bosch, H. van den, & Stikkolorum, D. (2017). 2017 GAME Development and simulation. Retrieved 9 June 2019, from https://blackboard.hhs.nl/webapps/blackboard/execute/announcement?method=search&context=course_entry&course_id=_68612_1&handle=announcements_entry&mode=view

Cole, J. (2016, April 15). Are You Teaching Good Netiquette? Retrieved 12 April 2019, from TeachOnline website: https://teachonline.asu.edu/2016/04/teaching-good-netiquette/

Davey, R. (2019). Phaser. Retrieved 6 June 2019, from Phaser - A fast, fun and free open source HTML5 game framework website: http://phaser.io

edX. (2019, June 9). Search Massive Open Online Courses edX [My edX Search | 3 search results for ‘unity game’]. Retrieved 9 June 2019, from edX website: /course

Feldthaus, A., & Møller, A. (2014). Checking correctness of TypeScript interfaces for

JavaScript libraries. *Proceedings of the 2014 ACM International Conference on Object Oriented Programming Systems Languages & Applications - OOPSLA '14*, 1–16. https://doi.org/10.1145/2660193.2660215

Free Software Foundation. (2017, April 4). Various Licenses and Comments about Them - The GNU Project. Retrieved 9 June 2019, from Various Licenses and Comments about Them website: https://www.gnu.org/licenses/license-list.en.html

GitHub. (2015). The purpose of JavaScript · WebPlatform Docs. Retrieved 9 June 2019, from https://webplatform.github.io/docs/concepts/programming/the_purpose_of_javascript/

Google. (2019, June 9). Google Trends - Unity Gaming Engine compared to Phaser. Retrieved 9 June 2019, from Google Trends website: https://trends.google.com/trends/explore?hl=en-AU&tz=-120&q=%2Fm%2F0dmyvh,Phaser&sni=3

Hambridge, S. (n.d.). Netiquette Guidelines. Retrieved 28 March 2019, from https://tools.ietf.org/html/rfc1855

Helvoort, J. van. (2019a, January 1). *Project Media or Information Literacy Game*. Retrieved from https://blackboard.hhs.nl/bbcswebdav/pid-2696747-dt-content-rid-21450030_2/xid-21450030_2

Helvoort, J. van. (2019b, January). *Kick off presentation Media and Information Literacy Game*. Presented at the Kick Off European Project Semester, The Hague University. Retrieved from https://blackboard.hhs.nl/bbcswebdav/pid-2701367-dt-content-rid-21492193_2/xid-21492193_2

Holsteijn, H. van, Jeong, H. W., Lee, J., & Sandoval Rodríguez, A. I. (2019). I Am Here As Well (Version 1) [EN, Webbrowser accessible]. Retrieved from

http://iamhereaswell.ga/

Holsteijn, H. van, Jeong, H. W., Lee, J., Sandoval Rodríguez, A. I., Park, J., & Voyle, L. (2019). *Cyberbullying prevention*. 24.

Hurst, J. (2015, February 18). 12 Types Of Computer Games Every Gamer Should Know About | Thought Catalog. Retrieved 29 March 2019, from Thought Catalog website: https://thoughtcatalog.com/jane-hurst/2015/02/12-types-of-computer-games-every-gamer-should-know-about/

Intersoft Consulting. (n.d.). Art. 8 GDPR – Conditions applicable to child's consent in relation to information society services. Retrieved 5 June 2019, from General Data Protection Regulation (GDPR) website: https://gdpr-info.eu/art-8-gdpr/

Lim Ke Rou. (2016, January 8). Cyber Bullying and Cyber Bullying in South Korea [Blog]. Retrieved 14 March 2019, from http://kerouinternetcultures.blogspot.com/2016/01/cyber-bullying-and-cyber-bullying-in.html

Massachusetts Institute of Technology. (n.d.). Software and Open Source Licensing | Massachusetts Institute of Technology Technology Licensing Office. Retrieved 9 June 2019, from https://tlo.mit.edu/learn-about-intellectual-property/software-and-open-source-licensing

Microsoft, & Green, A. D. (2017, July 1). C# language specification. Retrieved 9 June 2019, from https://docs.microsoft.com/en-us/dotnet/csharp/language-reference/language-specification/introduction

Nixon, C. L. (2014). Current perspectives: the impact of cyberbullying on adolescent health. *Adolescent Health, Medicine and Therapeutics*, *5*, 143. https://doi.org/10.2147/AHMT.S36456

Open Source Initiative. (n.d.). The MIT License | Open Source Initiative. Retrieved 9 June 2019, from https://opensource.org/licenses/MIT

Park, S., Na, E.-Y., & Kim, E. (2014). The relationship between online activities, netiquette and cyberbullying. *Children and Youth Services Review*, *42*, 74–81. https://doi.org/10.1016/j.childyouth.2014.04.002

Richardson, D. (2019, June 7). Guide to Programming Languages. Retrieved 9 June 2019, from ComputerScience.org website: https://www.computerscience.org/resources/computer-programming-languages/

Theisen, K. J. (2019). Programming languages in chemistry: a review of HTML5/JavaScript. *Journal of Cheminformatics*, *11*(1), 11. https://doi.org/10.1186/s13321-019-0331-1

Unity Technologies. (2019a). Unity. Retrieved 9 June 2019, from https://unity.com/frontpage

Unity Technologies. (2019b, April 15). Unity - Manual: Supported platforms. Retrieved 9 June 2019, from https://docs.unity3d.com/Manual/UnityCloudBuildSupportedPlatforms.html

Unity Technologies. (n.d.). Unity Personal. Retrieved 9 June 2019, from Unity Store website: https://store.unity.com/products/unity-personal

Unity Technologies Forum. (2016, April 16). Newbie learning curve? Retrieved 9 June 2019, from Unity Forum website: https://forum.unity.com/threads/newbie-learning-curve.397465/

W3C. (n.d.). JavaScript Web APIs. Retrieved 6 June 2019, from https://www.w3.org/standards/webdesign/script

Wieman, A. (2019, May 10). *2018 European Project Semester 2: Template final report*.

Wiley. (n.d.). Project Management: How to Define Project Constraints. Retrieved 9 June 2019, from dummies website: https://www.dummies.com/careers/project-management/project-management-how-to-define-project-constraints/

Willard, N. E. (2007). *Cyberbullying and cyberthreats: Responding to the challenge of online social aggression, threats, and distress*. Research press.

Appendix A: User test plan

Usabilitest

Template

Overview

This test plan is for the EPS game. In this document the various scenarios for each aspect of the game are written down. This document is to be used a the guideline for the usability test.

Goals

The purpose of this test plan is gain insight into how the users of the product experience it.

Test setup

The test is setup with different scenarios, each scenario gives a brief description how the user got to the specific stage. Underneath each scenario are the tasks that need to be completed. During the tasks the user shall be observed (how is their body language and what is being said during the tasks). After completing each task the user will be asked a set of questions, each question is specific to the task and the element of the product which is being tested.

Legal

Each participant will be presented a document which gives us consent to let them do the test. This is done because the subject group are minors and permission from parents or a legal guardian is needed. All gathered data will be anonymized.

After the test

When all the tests are finished the results will be assessed. The results will be put in a report from this report changes to the product can be made. When these (potential) changes have been put through the usability test will be held again. The results from that test will be assessed again. This will be done to see if the made changes had any positive effect.

Scenario

Menu

You have navigated to the website and want to play the game but before you can do that you want to know the controls. You like to learn as much about a game before you start playing it.

Task 1

Taak 1

1.1 Navigate to the control screen, read all the controls.

1.2 Navigate back to the main menu.

1.3 Turn off the music

1.3.5 Turn on the music

Give notice when you think you completed the task.

Scenario

Word game

You found out what the controls for the game are. After reading what they are you feel confident that you can start playing the game. From the main Menu you click on start game.

Task 2

2.1 Play the game and answer the questions.

2.2 Now play the game again and chose different answers

then the previous playthrough.

Give notice when you think you completed the task.

Scenario

Jumping game

The first game has been completed. You are now transported to a different part of the world. This game takes place in South Korea. The backstory of the level shall be explained via text at the beginning of the level.

Task 3

3.1 Play the game, try and catch all your stuff the bully stole and is throwing back at you.

Give notice when you think you completed the task.

Scenario

Dodge the bullet (words)

The second game has been completed. You are now transported to a different part of the world. This game takes place in New York. The backstory of the level shall be explained via text at the beginning of the level.

Task 4

4.1 Play the game try and catch all the good words and avoid the bad ones.

Give notice when you think you completed the task.

Appendix B: Stakeholders

Appendix B.1: System users overview

Id	Name of the stakeholder
ST1	Student
ST2	Teachers
ST3	MIL expert
ST4	Development team member
ST5	Team coach

Appendix B.2: System users descriptions

(ST1) Student

Description	A pupil someone who is learning at a school. Next, their age is 11-15. Who are middle school students, which will learn cyberbullying prevention methods.
Responsibility	- To play the game and get a knowledge about cyberbullying prevention
Success criteria	- Clears the goals that are satisfied on every stage. - Make children understand what cyberbullying is. - Make children aware of the dangers of cyberbullying.
Notations / Issues	-

(ST2) Teacher

Description	Manager of the education process, which generally teaches students (ST1) on methods around cyberbullying. Next, teacher has educational contact with the students. Which, means that he/she takes notes and informs students about educational materials and is prone to creates enthusiasm on educational topics. .
Responsibility	- Making sure that students (ST1) play the games. - Criticization of the educational materials. - Advice about education minorities.
Success criteria	- Notes what makes students understand cyberbullying prevention - Becomes less stressed, due to fact that students (ST1) can refocus their concentration on the game.
Notations / Issues	-

(ST3) MIL expert

Description	A professional on information structures, information ethics or media sources. Therefore, he can distinguish if information is false or true. Also, defines the MIL education of students. Next, he can provide information about cyberbullying preventions, such as: user settings on social media, block users on instant messages.
Responsibility	Get information about the MIL progress of the students (ST1) and can check the effectiveness on the learning process.
Success criteria	- Check the learning development on MIL-skills. - Has statistics on the learning process.
Notations / Issues	-

(ST4) Development team member

Description	A development team is cross-functional expertised member within a team. And is responsible of the finalization of the product.
Responsibility	- Communication in between all roles (ST1 till ST 5) - Completing tasks in the development process. - Notify members on issues
Success criteria	- Students (ST1) likes playing the game.
Notations / Issues	Has not role in the final use case of the project, because it is not a functional end-user of the final product.

(ST5) Coach

Description	A person whose job teaches the development team (ST4) on project processes skills. Which, are related to the finalized product. At the same time, the coach is responsible for workproces limininting epidiments. Who can not be fixed within the team (ST4) itself.
Responsibility	Shows opinions and has critical perspective on the outcome of the game.
Success criteria	- A smooth development process
Notations / Issues	Has not role in the final use case of the project, because it is not a functional end-user of the final product.