

**BEOWULF WORKSHOP:**  
**MissionMaker Conversations**

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DECEMBER 2014

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\*This article was written in the context of the MissionMaker project, developed in the DARE Collaborative at the London Knowledge Lab, Institute of Education (IOE), under supervision of Prof. Andrew Burn and Prof. Alison Gazzard. More about the author's research: [7luas.com.br/research](http://7luas.com.br/research) More about DARE: [darecollaborative.net](http://darecollaborative.net)

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## **Abstract**

This document is based on a series of conversations with participants of the Beowulf Workshop, specifically about the game creation activity using MissionMaker, a videogame authoring software for creative learning - for more information about the Beowulf Workshop and the MissionMaker project, refer to the previous text "Beowulf Workshop: A MissionMaker Case Study" (FERREIRA, 2014). Rather than a direct transcript, this text is an attempt to register and organize the most relevant information gathered in the conversations, and to present some general considerations and recurring topics.

## 1 Introduction

The Beowulf Workshop happened in October 2014 and aimed to explore this epic poem via creative exercises in a variety of languages and mediums, including digital media. This document is based on a series of conversations with participants of the workshop, specifically about the game creation activity using MissionMaker, a videogame authoring software for creative learning. Rather than a direct transcript, this is an attempt to register and organize the most relevant information gathered in the conversations.

For more information about the Beowulf Workshop and the MissionMaker project, please refer to the previous text "Beowulf Workshop: A MissionMaker Case Study" (FERREIRA, 2014).

The background of most of the participants in the workshop is in English and Drama, and at the time of the workshop they were doing placement, teaching classes to children and teenagers. Many of the students had prior experience playing videogames, mostly when they were younger.

The following section in this document (section 2) explains the methodology adopted in the process. Section 3 contains the summary for the actual conversations, as well as some brief information about the student's games (p. 6). General considerations and recurrent themes identified during this process are presented in section 4 (p. 20). In section 5 there are images illustrating each one of the six games (p. 25).<sup>1</sup>

## 2 Methodology

This section briefly describes the methodology adopted in the process of analysis and selection of the games, as well as the conversations with the students and the elaboration of this document.

The first step was to analyze all of the games according to two criteria: First, how well the game reflects the student's understanding of the tools and functions provided by MissionMaker. Second, how complete their game is, regarding structure, functionality and amount of detail (such as special effects, sounds, music and so on).

There were 20 games in total, created by 26 participants (there were 3 pairs). First, around 10 of the games were selected, and the respective students were contacted. Creators for 7 of the games replied and were interested to talk about their experience in the workshop. Individual meetings were then scheduled between November 21st and 28th of 2014, at the Institute of Education's central building.

This document covers 6 of these games. It should be noted that all of the students featured in this document are female. Although there were some male participants in the workshop, they were very few. The seventh game, by the student Andrew Smith, was covered in a previous text (FERREIRA, 2014).

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<sup>1</sup>A compilation video featuring sections from the games is available at the DARE website: [darecollaborative.net/2015/02/04/playing-beowulf-gaming-the-library](http://darecollaborative.net/2015/02/04/playing-beowulf-gaming-the-library) (Access: Feb 2015)

The meetings lasted around one hour each, and they were loosely based on the following guide:

1. **Introduction and explanation** about the purpose of the meeting and the topics of conversation. Brief summary of the activities and discussions that took place at the workshop.
2. **Playing and analyzing the game.** During the conversation we played the game and explored the file in the editor when needed.
3. **Practical discussion** about the creative process of designing the game using MissionMaker. Discussion of necessary corrections and adjustments to the game.
4. **Theoretical discussions** about the experience, such as comparison to other mediums and languages, application in education and other relevant topics.

After each meeting, the audio recording from the conversation would be analyzed and the relevant information would be transcribed and organized. The games were then edited according to the corrections and modifications agreed upon with the students (also, images and videos were captured from the games).

Finally, this text was written, based on the organized notes from the meetings, expanding the most relevant ideas and identifying recurrent topics and ideas.

## 3 Conversations

### 3.1 Alice Hawkins and Soraya Shabaan

#### THE GAME

The player is in the role of Beowulf, Grendel is already dead and the mission is to kill his mother. The mission is to find a weapon and Aeschere's skull, which leads to Grendel's mother's lair. After the player kills her, a gold chest appears, and opening it wins the game.

#### MISSIONMAKER

The students felt very confident in using MissionMaker. They quickly understood the main workflow, as well as the general idea of procedures, behaviours and triggers. The game had few bugs, and most of the rules and behaviours were functioning properly.

Many details were included, such as sound effects to minor actions, like picking up objects. By viewing the game file in the editor, it was possible to learn that the sounds were included after the main gameplay was defined, showing that their creative process was somewhat structured. Also, the objects were always placed in such a way as to optimize the game flow, making sure that the player could always have a clear idea about what to do next.

They ran into a few difficulties, such as the lack of appropriated 3D models to represent Beowulf's characters (such as the king), and more technical issues such as trying to synchronize certain events or trying to limit a character's position in a certain region of the game world.

The interface of the software itself didn't present a problem for them. Alice considered it to be "formulaic", and cited this as one of the reasons she felt comfortable using the program.

#### CREATIVE PROCESS

Alice had experience playing games before, with titles such as the racing game Planet of Death (Ubisoft, 1997) and the "life simulator" The Sims (Maxis, 2000-). This experience, according to the student, allowed her to easily deal with the 3D environment in MissionMaker. She also had some experience with basic html when she was 8 years old, although this didn't have much of an influence in this exercise, since MissionMaker requires dealing with procedures, while html is a markup language.

The students didn't have a specific storyline in mind before making the game. First the places, objects and characters were chosen, and then gradually the relationships and connections between them were defined.

The dialogue from the characters in the game comes from the synthesized speech provided by the MissionMaker engine. Initially they were going to use popup texts, but later switched to speech in order to improve the flow of gameplay.

Alice is very fond of Beowulf, as well as the style and language used in this poem. Because of this, at first she felt like including more of this kind of verbal language in the game. Soon she realized that this would defeat the purpose of the exercise, which should be a videogame adaptation of a text.

The students were both satisfied with the game that they made. Alice pointed out that she was glad that it stands as a contained unit, with well defined structure and actions for the player.

### **LANGUAGE**

One of the reasons Alice enjoyed the experience was because it allowed her to leave her "comfort zone". By dealing with a certain language and set of tools that she wasn't familiar with, this allowed her to tap onto different approaches to creativity and to the poem itself.

When asked about her thoughts on digital media, Alice mentioned the interactive aspect. She argued that this aspect is specially significant in this case, since Beowulf is a text about a hero - a concept easily translatable to the common idea of what a videogame experience is, usually putting the player in control of a main character.

Interestingly, although Alice was able to become very fluent using MissionMaker during the workshop, she still doesn't believe that she is able to deal well with technology.

## **3.2 Harriet Piercy**

### **THE GAME**

The player, in the role of Beowulf, begins the game next to a chest containing a sword, which prompts the mission to kill Grendel's mother. A teleporter leads to a corridor, but a door closes and blocks the passage. By going back the player is able to eventually find a weapon and pass through the door, which leads to the beast's lair. Grendel's mother attacks the player, and the game is won after she is killed.

### **CREATIVE PROCESS**

There is an interesting and carefully constructed situation in the second room of Harriet's game, where there is a corridor. As mentioned above, when the player tries to go through it, a door closes blocking the path. This requires the player to backtrack and figure out how to reopen the closed door.<sup>2</sup>

Harriet's game, like many of the other projects, is relatively linear and straightforward. However she did recognize the potential for a more "open world" approach. As most of the other students, she opted for the more linear narrative because this was the approach encouraged in the workshop.

### **MISSIONMAKER**

Harriet remembers that her previous experiences with videogames were usually with titles containing creative aspects in the gameplay, such as the Theme Park (Bullfrog, 1994) simulator. Despite this background, she still found the logic behind MissionMaker quite difficult to grasp.

Analyzing the game file in the MissionMaker editor revealed some of the difficulties that the student had in making the rules work. In the list, several of the rules contain broken associations, and they

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<sup>2</sup>This behaviour wasn't actually working properly at first, but after the conversation with her it was possible to identify the problem and make the correction in order for the puzzle to work the way she intended it to. The game had some other minor design issues, such as the timing in a text message, for example (it was appearing after the event it was meant to introduce).

were abandoned. The student did eventually understand the logic and workflow of the software, and was able to include successful rules.

Harriet found the methodical aspect of the game creation process interesting. She pointed out the fact that the designer needs to describe every specific element, relationship and behaviour in detail in order for the system to work.<sup>3</sup>

### **CONCEPTUAL ART**

Harriet also made a comment relating the modular approach to the assets in MissionMaker, which is considered by many to be limited, to the concept of intention behind the creative process. This idea closely relates to the creative approach in Conceptual Art, more specifically in Declaration Art, in which the "[t]he idea becomes a machine that makes the art" (LEWITT, 1967 In STILES & SELZ, 1996:822) - that is, the idea (or intention) behind the artwork is more important than its materiality.

This observation came naturally to Harriet, since she is particularly interested in the more conceptual aspects of art in general.<sup>4</sup>

It should be noted that Harriet was also careful not to altogether disregard the importance of the visual, audio, musical and other aspects and elements of a digital experience. Although the underlying systems can indeed stand on themselves, in the more conceptual approach mentioned previously, there is of course a great expressive potential in the choices related to the less abstract elements. For example, to choose the ape character model for the king, instead of a human adventurer, can have a strong significance in the context of a certain game . Again, this will depend on the creator's intention.

### **EDUCATION**

Harriet believes that MissionMaker can be a valuable tool for use in the classroom. She pointed out the importance of having the proper supervision from a teacher, specially in the case of younger students, because of the complexity of this software.

Also, to Harriet, ideally a game creation software such as MissionMaker should be introduced in the curriculum very early on, in the elementary stages.

She thinks that the connection between the first and second days of the workshop is in the fact that all the activities - from improvisational theater, drawing and filmmaking to game creation - provide a different lens through which to read the same text.<sup>5</sup>

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<sup>3</sup>It should be noted that a designer that is more familiarized with the medium should be able to create in a more dynamic manner. For example, it is possible to create placeholder elements or functions, that can be implemented in a later time. Either way, the more general observation made by the student, that in digital media every single element and aspect must be described, even if not directly, still stands.

<sup>4</sup>She also commented the possibility of going beyond the actual assets and dealing with digital media in a more abstract level. For example, the possibility of a game without graphics or sound, but still keeping the meaning (or intention) inside the logic of the algorithm. Although such an extreme approach isn't required in order to justify procedural expression, the situation described by Harriet would be in fact the logical ultimate consequence behind the algorithmic approach.

<sup>5</sup>Some of the other students suggested that the game creation activity should have taken place side-by-side with the other activities. Harriet thinks that this could be problematic, since most of the students didn't have much familiarity with game creation.

## **PROCEDURAL LANGUAGE**

Although Harriet was able to explore most of the creation tools in MissionMaker, she still considers herself to have difficulty in actually understanding the metacreative logic behind this kind of procedural approach.

On the other hand, the student did recognize this concept when we talked about the differences and similarities between Cinema and videogames. For example, when talking about a movie, we often mention specific scenes or lines of dialogue. When talking about a videogame experience, on the other hand, we also talk about behaviours, functions and systems - not only specific instances of interaction. That is, the metacreative approach possible in digital media is in a way reflected in the viewing experience itself.

We also talked about the similarities between game design and the improvisational drama exercises from the first day of the workshop. In that exercise, the actor (or student) doesn't receive a script with a detailed description of their lines and actions. They receive more general instructions, such as to react to a certain situation, or to act in a way that a certain character would. Although in a way these are also scripts, they don't represent linear static instructions. They represent behaviours and processes instead. That is, in that exercise the instructor was in a way "programming" the actors, in a similar way that a game designer programs characters in their games.

### **3.3 Katie Smith**

#### **THE GAME**

The game begins with a long text message explaining that the player's (Beowulf) mission is to avenge Aeschere's death. The player advances through a corridor, while a climatic soundtrack plays, as well as voices encouraging Beowulf and advising him of the dangers he will encounter. There is a room with a gold crown and a guard, but he only attacks if the player picks up the treasure. Later, after picking up Aeschere's skull and going through a couple of gates and rooms, the player reaches Grendel's mother's lair. When the player kills her and picks up a medal, the game is won.

#### **CREATIVE PROCESS**

Katie's previous experience with videogames was mostly a social one, being around friends who played. Although, like many of the other students, she did play The Sims, describing herself as "obsessed" with it when she was younger.

Her game excels particularly in the sound and music design. There are many moments in which different sounds and themes are triggered by the player's location or actions. For example, Katie included sudden gasps and sighs as the player enters a new location, reflecting the character's own reaction to its surroundings. This results in a very rich and engaging experience.

Like most of the other projects, the game had several minor issues and bugs, probably as a result of the very short time they had to both learn the tool and make their own production. Katie noticed that it was common for the students to miss certain evident issues and bugs in their own games, such as a closed gate that can be walked through (which happened in her game). She suggested

that this probably happens because the creator usually assumes that certain rules and elements will work as expected.<sup>6</sup>

Although Katie was satisfied with her game, she also wished she had more time to fix some issues and add more details, as well as additional characters and situations. She mentioned, for example, that she wanted to have a final section in the game, after the player had beaten the final enemy, with all the villagers applauding Beowulf.

### **MISSIONMAKER**

Katie had some difficulty in grasping some of the basic features and functionalities of MissionMaker, such as using trigger volumes in order to accomplish certain behaviours.

The general concept of procedural creation was discussed for a while, after which Katie suggested a possible parallel between the concept of triggers in game design and the more general idea of creating associations between events and situations in other mediums and artforms. In Cinema, for example, the synchronization between image, sounds, music, actions and other narrative elements is a fundamental part of the experience.

Katie commented on the difference between these two manifestations of the concept of causality (or triggering), in Cinema and in videogames. In the case of videogames, these associations exist as part of a dynamic system, allowing for a greater flexibility as well as combinations of rules in more complex configurations, which could lead to emergent behaviours and outcomes. In Cinema, on the other hand, although in theory there isn't an actual limitation to how complex the causality systems could be, the final product (that is, the finished movie) can contain only one of its possible instances.

The student also mentioned that, in the case of videogames, this process is more complex, or at least required a more methodical approach, since the designer must describe and define every possible association as well as any relevant properties between the participating elements of the given system. Similar observations were done by some of the other students, as mentioned further in this document (p. 22).

## **3.4 Laura Scott**

### **THE GAME**

Laura's game begins with Grendel's mother daring Beowulf to go after her. The player then needs to go past the mere and find some items, including a weapon. A teleporter appears in the mere, through which the player can reach the monster's lair. The game is won when the player kills her.

### **CREATIVE PROCESS**

Laura's overall game design is very straightforward, and there is nothing unusual about the narrative - the player must find a weapon, then kill the beast. There aren't many details, such as sounds or music. In the original version there were some minor problems and implementation bugs, such as

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<sup>6</sup>Some of the issues in Katie's game were: the timing of the text popups, the position of certain elements (as well as the player's starting position) and certain behaviours (for example, one of the characters was supposed to begin attacking the player once the crown is picked up, but the enemy was only shooting once).

broken or misplaced rules. Also, there were some important elements missing, such as an end game situation.<sup>7</sup>

The student suggested an analogy between the creative process behind game design and the collage technique. She explained that in both cases the process involves the combination of previously existing elements or modules (such as the rooms, objects, characters, their body parts and so on), as opposed to building all the content from scratch.

Of course, in many ways these limitations mentioned by Laura are relative. As Harriet, one of the other students, pointed out, the intention of the creator must also be considered (p. 7). Also, it should be noted that in most mediums and artforms a similar approach, based on a modular and layered creative process, can take place.

Another thing to take in consideration is the fact that the artist that designed MissionMaker's assets can be considered a collaborator. In Cinema, for example, most directors are not directly responsible for most of the elements and aspects of the movie itself, such as the scenery, music and the actual acting. In a way, game creation in MissionMaker could be seen as following a similar approach.<sup>8</sup>

Laura also pointed out similarities between using MissionMaker and her own work as a teacher, in the lesson planning stage. Much like collage, this activity requires finding the right combination of content (which already exists, such as particular teaching modules or examples), according to a certain goal or curriculum, and based on the interests and background of the students.

When asked about the main differences between videogames and verbal language, Laura said that in digital media there are many choices, while in traditional languages the artwork is static and linear. Even in the case of books that allow for branching, such as the series *Choose Your Own Adventure* (Bantam Books, 1979-1998), these ramifications always happen along linear and predefined paths.<sup>9</sup>

## MISSIONMAKER

Not unlike most of the other participants in the workshop, it took several tries until Laura was able to define rules and behaviours successfully in MissionMaker. Most of the time she was learning the software instead of actually creating the game. She recalls being confused by minor particularities of the game editor, such as remembering the right sequence of actions in order to complete certain tasks, as well as knowing where to find certain elements in the user interface, such as objects and characters that were already part of the game world.<sup>10</sup>

When asked for suggestions of how the MissionMaker editor could be improved, Laura said that a "cheat sheet" would have been useful, meaning a document or page with information about how to proceed to implement certain specific basic functions and actions.<sup>11</sup>

<sup>7</sup>One of the issues with the game was that the teleporter to Grendel's mother's lair could be used even before picking up the items. This in turn allowed the player to be stuck in a dead end, since there is no weapon available in the lair, and killing the mother is the only way to progress (that is, to end the game).

<sup>8</sup>Laura also compared the game creation process in MissionMaker with the gameplay in *The Sims*, which is based on creative input from the player.

<sup>9</sup>Laura considered having some kind of bifurcation in her own game, but she chose to keep the original storyline.

<sup>10</sup>This difficulty was confirmed by analyzing the game in the editor. Laura's game file had several rules that were created but not completed. They were probably abandoned because the student didn't realize that, even though the rules didn't work, they were still being kept in the game file.

<sup>11</sup>Although there are manuals for MissionMaker available in the project's website, there doesn't seem to be an equivalent to the "cheat sheet" suggested by Laura.

Laura also said that it would be helpful if the user interface in MissionMaker had icons and other visual cues or representations of the different functions and roles for each item or option available. It also bothered her that the assets available were limited, requiring her to select rooms that didn't relate to Beowulf's tale, such as the tropical environment.

Despite her difficulties, Laura found the process interesting, particularly the concept of the "if...then" conditional, that underlies most of the videogame logic.

To Laura, the game creation activity should have been a longer part of the workshop. Although the first day had many more activities, most of the English and Drama students were already familiarized with them. The game creation activity, on the other hand, required the students to learn a whole new approach to language and expression from scratch. The result is that there was very little time left for the actual production of the games.

## **EDUCATION**

Similarly to some of the other participants in the workshop, Laura believes that the introduction of game design in the school curriculum must require a great deal of planning. According to her, a cross-curricular approach would allow the new tool to be introduced without interfering directly with the content of other courses. That way, skills and knowledge acquired in one class could be applied and integrated in other classes in a gradual manner, according to their particularities, practical limitations and requirements.

Laura also suggests one possible model for integrating game design and creative writing. She proposed that both activities could happen almost simultaneously, allowing constant feedback and insights between the two approaches. For example, a student could create a game, then write a script (similar to a theater play or movie) that another student could use to interact with the game - what Laura proposes can also be related to the concept of a videogame walkthrough (BURN In CARR et al, 2014). This process could then inform a new round of game design, script writing and interaction, gradually evolving the narrative associated with this particular experience.

By requiring these two approaches to be pursued practically at the same time and in the same context, Laura believes this could cause these drastically distinct languages to interact in the students mind's in ways that they wouldn't otherwise. This could bring new ideas and ways to use these languages, both individually and as a cohesive unit.

## **SECOND PERSON NARRATIVE IN GAMES**

Laura mentioned an interesting and specific way that she thought MissionMaker could be used in Creative Writing classes. She suggested that the tool could help communicate to students the concept of second person narrative.

In her classes, she often uses videogames as an example of this kind of narrator, since in this medium the action usually happens to the player. Although not many games employ verbal language to communicate the players state, the visual, audio and interactive aspects can be considered as representing a "second person" narrative - **you** run inside the building, **you** shoot the bad guy, **you** open the door, and so on.

To Laura, maybe if the students created games by themselves, designing the rules, behaviours and properties, and dealing directly with the system behind this "second person" narrated experience, the concept could become more clear, or at least be seen through a different perspective.

It should be noted that comparisons such as this one, between languages that are fundamentally so different, should be done carefully, since the correspondences are not so straightforward.

Having said that, the second person narrator does seem to make more sense in most videogame experiences in which the player controls the main character.

A third person narrator can appear to be disconnected from the player's experience, such as in games like The Stanley Parable (Davey Wreden, 2011) or Bastion (Supergiant Games, 2011). To the player, the narrator seems to be talking about someone else, or some other character - "he jumps", "he finds the treasure", and so on. First person narrator, common in most adventure games such as the classic The Secret of Monkey (Lucasfilm Games, 1990), also causes a detachment, since it represents the character's thoughts, not the player's - "I want to go outside", "I don't think this will work", and so on. It is as if the player is in control of a person that is not supposed to represent him or her.

Regardless, Laura's suggestion to use a game creation tool such as MissionMaker as a way to discuss narrative voice in an educational context is certainly valid and interesting.

### 3.5 Niamh Hickey

#### THE GAME

The king requests revenge for Aeschere's death. The player (Beowulf) finds a sword, Aeschere's skull and a weapon. Going into the mere leads to Grendel's mother's lair. After killing her, and finding some human remains, the player is sent back to the presence of the king. He congratulates Beowulf and offers him gold.<sup>12</sup>

#### PREVIOUS EXPERIENCE

This particular student had quite a rich previous experience playing games, compared to the other participants in the workshop. Besides the popular The Sims, Niamh also remembered playing PlayStation games, particularly the popular 3D platformer Crash Bandicoot (Naughty Dog, 1996), as well as some of the older computer games, based primarily on text and with crude graphics.

She also had some experience with programming in html, which she learned in order to be able to customize her MySpace page.<sup>13</sup>

Soraya, Alice's pair in the workshop, also joined this conversation (p. 6). She compared MissionMaker and the visual programming language Scratch (MIT) based on her experience with both tools. She considered Scratch to have a workflow closer to what she believed to be the "actual programming experience" (that is, directly dealing with code). The building blocks available in Scratch correspond very closely to the different functions and commands in a fully featured programming language.

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<sup>12</sup>There is no additional gameplay designed after that point. Whether the player picks up the gold or not, there is no difference to the game's state, and no other events take place.

<sup>13</sup>Alice, one of the other students, had a similar experience (p. 6).

In MissionMaker, on the other hand, the interface is a more distant abstraction from the underlying code. The creative process in this case involves selecting items and building logic sentences using dropdown menus, instead of functions and snippets of code.

Soraya thought that MissionMaker was more didactic and straightforward than Scratch, although this also means that in many ways it is also more limited or restricted, in terms of functionalities and assets.

### **CREATIVE PROCESS**

Niamh enjoyed the overall experience of creating a game using MissionMaker. She mentioned specifically the fact that it is possible to play and interact with the game during the actual development process, allowing the creator to have an idea of how the result is going to be without the need to reload or recompile the whole thing every time. She believes that this makes a big difference in the creative process, since it facilitates the workflow and allows for a more flexible and dynamic design approach.

She was satisfied with her game, although considered it to be rather simplistic and crude. She mentioned that if there was more time she would add some additional narrative to the game's ending, which is somewhat abrupt.<sup>14</sup>

Although the MissionMaker part of the workshop lasted several hours, Niamh said that the actual time she took to create her game was only around 15 minutes. This is because the software kept crashing, making her lose parts of what she had already implemented.

### **MISSIONMAKER**

Like many of the other participants in the workshop, Niamh found it difficult to grasp the workflow in the MissionMaker editor. It took her a while until she understood how to create rules and associate them accordingly with the right elements and aspects of each object, media, place and character entity. She also felt limited by the available assets.

Despite these difficulties and limitations, she thought that the general idea of game design and its underlying logic was very interesting, and that the engine itself was quite robust. She suggested that the tool could be more appropriate for prototyping ideas.

### **EDUCATION**

Niamh demonstrated a great interest in the idea of using MissionMaker in the classroom. In the school where she is currently doing placement, she had recently given an assignment to her students asking them to write down what kind of things they like, and games were one of the most popular topics. She is currently using Beowulf in her own classes. Because of that, the possibility of applying an approach similar to the one from the workshop in her own work as a teacher made particular sense to her.

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<sup>14</sup>Although Niamh's impression about her own game is somewhat accurate, the same goes to most of the other projects - all of the students had little time to design their games, so their simplicity (or "crudeness") is understandable. Niamh's game had few issues, such as: a particular speech sound effect representing a dialogue from Grendel's mother kept playing even after the character was killed; a teleporter that should be inactive was always functional, leading to dead end situations; the ending sequence was unfinished.

In comparing game design on MissionMaker with the activity of creative writing, Niamh pointed out that the game allows for much more immediate results. She explains that a writer always starts from scratch, not only because the process begins literally with a blank piece of paper, but also because it requires the description of the whole world logic, as well as the structure and style of the narrative. In a creative environment such as MissionMaker, on the other hand, you get most of that by default. The engine works based on a 3D paradigm simulating the real world, with a specific model of physics and aesthetics, to which all the objects, characters and environments will be bound to.<sup>15</sup>

According to Niamh, because of that immediacy, game creation in that context may be a good way to allow children to think and create narratives even before they are able to master verbal language.<sup>16</sup>

She also mentioned an issue that several other students also brought up, which is the difficulty in including this new complex and time demanding subject into a preexisting school curriculum. A way of getting around that, she suggested, would be to include this as an extra-curricular activity.

### **LEARNING DISABILITIES**

Niamh believes that the use of videogames, as well as game design, in the context of the classroom can be specially beneficial to students with learning disabilities, since they have difficulties with the more abstract aspect of verbal language. Because of the intense use of visual and audio elements in videogames, this medium could help make the learning process more accessible.

The student mentioned that she plans to use graphic novels (a particular form of sequential art, or comics) in her classes for a similar reason, in order to make the subjects more accessible. The idea is to ask students to represent certain sections and situations from Beowulf using the graphic novel medium. Niamh pointed out the similarities between this proposal and the exercise done in the workshop, which suggested the use of MissionMaker to represent portions of the text in a videogame format.

One of the possible ways to describe the medium of comics is as an integration between the visual and the verbal languages (MCLOUD, 2011). Videogames combine an even more diverse series of languages, from text, visuals and sound all the way to the kinetic and interactive modes.

This means that both approaches are similar in the sense that, at least in theory, they can be used to bridge the gap between the "real world" and the abstract nature of verbal language.

### **WORKSHOP**

According to Niamh, the first day of the workshop had an important role in the game creation exercise that took place in the second day.

First, because the different presentations of the poem, both in its original textual form and through dramatic interpretation, as well as in other mediums such as drawing, graphic novel, movies and animation, allowed the building of a very complete and rich description of Beowulf's story world.

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<sup>15</sup>Niamh's opinion on this seems to be the opposite of that from some of the other student's (p. 22). Although in a way this also has to do with what aspect of the game design experience you focus on (see next footnote for further elaboration on this).

<sup>16</sup>It should be noted, of course, that this comparison only applies for software like MissionMaker, which offer a significant layer of visual user interface. In the case of low level programming languages, the situation is similar to that of creative writing, in the sense that the creator must build a minimum foundation before dealing with higher level elements, such as a narrative.

Second, because of the creative exercises, in which the participants were encouraged to work in different languages and mediums in order to represent different aspects and situations in Beowulf's tale. When the participants were asked to imagine how Grendel's mother looked like, for example, this encouraged each one of them to come up with their own interpretation of this character. This, along with the many other activities, allowed the participants to arrive at the game creation exercise having a deep understanding of the story, the context and the narrative of Beowulf.

Niamh also pointed out that in many of the activities the participants were placed as active characters in the story world. This helped the students in getting into the mindset necessary for designing a game, since this is a medium usually centered around the notion of an active central character controlled by the player, in which his actions and decisions define or influence the outcome of the experience.

### 3.6 Tracey Matthews

#### THE GAME

The player (Beowulf) is guarding the mead-hall, along with some of the king's warriors. Talking to one of the characters prompts a dialogue, which references part of the original poem: "Eat, Drink, Sleep." Wandering around, the player finds a weapon and a place to rest. If Beowulf goes to sleep, soon he wakes up to find Grendel attacking the hall. The game is won when the player kills Grendel.

#### CREATIVE PROCESS

Tracey's game explores some unique MissionMaker's functionalities, as well as some interesting and sophisticated narrative devices. It is also one of the least linear games made in the workshop, leaving the player free to explore the possibilities of the game world.<sup>17</sup>

According to Tracey, she didn't have an initial plan or overall structure before she began creating the game. The ideas were developed and implemented naturally as they came up. Note that this approach matches the less structured gameplay of this particular project.

The main room in which most of the game takes place, representing the mead-hall, fits well with the descriptions in the original text. Tracey also added items such as the pieces of meat and bottles of wine, which helped to characterize the location. The game also features more than one non-player character simultaneously in the same room. This also helps in characterizing the hall, since this is the place where the warriors gathered.

Tracey still feels that her game is unfinished, since she planned several other features and sections that couldn't be implemented in time. For example, she wanted to further explore the theme introduced by the dialogue mentioned before: "Eat, Drink, Sleep". The initial plan was to allow the player to perform each one of these tasks before the appearance of Grendel.<sup>18</sup>

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<sup>17</sup>It should be mentioned that, according to Tracey, most of her work in the development of the game was in the design and planning aspect. She had help from other students in actually creating the game in MissionMaker, and implementing all the rules and behaviours. Of course, this doesn't take away from the value of her design.

<sup>18</sup>Some of the corrections and tweaks done to this game were: made certain situations clearer to the player (such as when Beowulf goes to sleep); fixed the use of highlighting in characters, which was inconsistent; included an additional weapon, since the first one is hard to find; added a proper ending to the game - a brief popup text message.

## NON-LINEAR

Although Tracey's game does feature a series of actions that lead to a specific ending to the narrative, it distinguishes itself from the other games by allowing a more open environment, in which the player is encouraged to explore.

In most of the other games, the player progresses in a more linear fashion. This is achieved through the topology of the environment, mostly consisting of rooms and corridors that connect to each other without many ramifications, as well as the game design choices, such as to have each task happen as a result of a previous task, and usually leading to a next one - pick up the sword, go thorough the door, examine the skull, and so on.

In Tracey's game, on the other hand, the player isn't given any specific mission. He is among the warriors, and they are protecting the hall from Grendel, but there is no particular objective.

The expansive environment allows the player to explore his surroundings without any particular goal in mind. The hall is rather big, with some rooms upstairs. There is a corridor behind the bar that leads to a back room. Finally, through another corridor from the main hall, there is the sleeping chamber. This non-linear structure helps building the atmosphere of the game world. Ideally, the player ends up doing what he believes Beowulf would do in this situation.

If the player talks to a couple of the warriors, they provide information and context to the situation. One of them, after spoken to, even follows Beowulf around, demonstrating his loyalty to him as a leader. This behaviour probably won't be clear to most players, at least at first, since it is implemented in the engine in a rather natural way (it is actually a mix between following and wandering about - which brings more realism). There is no additional cue to the player that this is happening, other than the behaviour itself. Regardless, it does seem to help building a sense of complexity to the overall system.<sup>19</sup>

Tracey also had behaviours planned for some of the other characters. One of the warriors was supposed to show Beowulf the location of the sleeping chamber, for example - for some reason this rule wasn't implemented (or didn't function correctly). One of the other characters, which is wandering the hall by default, stops when interacted with. Tracey's intentions with this particular rule weren't discussed, but perhaps it is supposed to reinforce the idea that Beowulf is the leader.

As mentioned before, Tracey's game has a task that the player must accomplish in order to advance, which is the act of going to sleep. However, because of the way the game was set up, this doesn't seem so much as an objective (or mission) in a traditional sense. It actually makes the player feel like it is their choice to go to rest, following Beowulf's character's motivations and state of mind.

Indeed, according to Tracey, her design didn't require the player to necessarily complete particular tasks or actions. Even if the other planned narrative elements had been implemented (corresponding to the other actions in the theme of "Eat, Drink, Sleep"), she doesn't feel that they would be a requirement. These would be possibilities that could be explored by the player only if they had the urge to do so.

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<sup>19</sup>Indeed, the characters are particularly lifelike in Tracey's game, as compared to the other productions.

According to Tracey, even if players didn't complete certain tasks, or didn't see or interact with particular sections of her game, "it would still work" - or, as the writer and game designer Rob Sherman puts it, what actually happens doesn't matter as much as "its potential to occur." (SHERMAN, 2014)

### **MISSIONMAKER**

Tracey doesn't consider herself to be very familiar with technology. As mentioned before, she had help from other students in order to develop her game. Because of that, although Tracey believes that a tool such as MissionMaker could be very useful in an educational environment, she doesn't think that she could do it herself. She pointed out that younger children would probably like to have this kind of tool in class, since it explores the medium of videogames, which is very popular in this demographic.

It should be noted that, although Tracey is not so familiar with using computers, she does have quite a good conceptual understanding about the medium, particularly about videogames. For example, she said that in designing her game, she constantly drew from certain concepts, such as the idea that relevant elements in the game can be highlighted (and that this is usually communicated by a glow or tint), that certain objects can be picked up and used, the general structure of levels, missions and progression and the role of space and the topology of the environment in defining flow (including the importance of having dead ends and misleading items and events as a way of encouraging rational thinking and to provide a more rewarding experience).

### **PREVIOUS EXPERIENCE**

Tracey's knowledge about videogames comes in great part from observing her own children's experience with them. She mentioned that one of their favorite games is Minecraft (Mojang, 2009), a world-building game based on a minimalistic aesthetic (she describes it as being "amazing").

However, Tracey also played some games herself, such as the adventure Broken Sword (Revolution Software, 1996) and the first Tomb Raider (Eidos Interactive, 1996) game. She liked to play these games because they are slow paced and more "gentle" than most popular titles (Tom Raider is an action game, but she particularly enjoyed the exploration aspect of it).

She also mentioned some other titles that she knew about from her children playing them, such as the Grand Theft Auto (Rockstar Games) and the Call of Duty (Activision) series. Tracey wasn't familiar with the concept of "sandbox" and "open world" games, but she found it interesting, and recognized the similarities between the genre and her own approach to game design.

### **CREATIVE READING**

Tracey wasn't very familiar with Beowulf before this workshop. She said that the experience was valuable in the sense that it allowed her to read the text in a very intense and profound manner, because of the many creative activities and discussions involved in the process.

She wonders, had she already been familiar with the text before, if this previous knowledge (and preconceived ideas) would have hindered her experience in the workshop.

It is true that individual traditional reading of a text does usually involve a natural participation of the reader, in building the world or narrative in the mind based on the words in the page. The role

of the reader is without a doubt significant in this process, which makes every story unique to each reader.

In the workshop, however, the students were being asked to play an even more active role, by reading the text with a purpose in mind, be it to discuss a certain aspect of the story, to create a film or to understand the motivations of a character in order to apply it in a dramatic improvisation. Without a doubt, through this act of "creative reading", the active role of the reader is expanded and amplified greatly.

## 4 General Considerations and Recurring Topics

The following are some general considerations and recurring themes identified during the course of these conversations. This section is divided in three parts in order to roughly organize the information, but there are clear intersections between them.

### 4.1 MissionMaker

Most students took a while testing and experimenting with the software until they understood its workflow and logic. Once they did, they found the process to be interesting and they were able to create fully featured games.

#### DIFFICULTIES

Most of the difficulties that the students had in using MissionMaker were related to more general concepts of game design, such as the definition of rules, behaviours and properties for the objects and characters.

Some students also had more specific difficulties, such as the rule creation process. It wasn't clear how and when each of the elements involved should be selected and included in order to generate a valid rule.

#### BUGS

Although MissionMaker is a powerful and robust software, it is also still a work in progress. Because of that, there are still some bugs, both in the game editor and the engine.

Most of the students said they were frustrated by the constant crashes in the game editor, which often made them lose most of the work they had already done and start from scratch. This issue was minimized by the fact that most of the games were very simple, and the students had the option to save their progress. Even so, the constant need to repeat operations made the learning process more difficult and time consuming.

In the game engine itself, crashes were far less common, though they occasionally happened. For example, sometimes the player would "fall off" the game world whenever the terrain's topology was irregular (such as in the "cave" theme) or be able to pass through doors and gates (this happened more often in the "sewer" themed rooms).<sup>20</sup>

#### LIMITATIONS

One common frustration with MissionMaker among many of the students, such as Niamh and Tracey, was the limited variety of assets available. This made it harder for them to properly represent Beowulf's story world. For example, according to the students, the only powerful weapon available was a futuristic ray gun.

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<sup>20</sup>Some bugs were specific to the system in which MissionMaker was running. In the particular laptop in which this analysis was done, for example, there were problems with the engine's built-in speech synthesizer (the audio came out distorted) and the mouse control for looking around (the screen's resolution had to be lowered to fix that). These issues were not common in any one of the other computers in the workshop.

Despite that, most of the students were able to circumvent this limitation through a creative use of the available assets, along with text messages that helped add to the characterizations. Soraya, one of the students, mentioned that she was surprised with how different the games were from one another, despite having so many assets, rules and even situations in common.

It should be noted that most of these limitations in MissionMaker are intentional. The modular approach allows for a much more intuitive and straightforward workflow, making it easier to quickly build fully functional games (specially to young children). It should also be noted that the software also allows advanced users to implement many complex and varied functionalities, going beyond the default options.

### **UNEXPLORED FEATURES AND APPROACHES**

These are some of the features and functionalities of MissionMaker that weren't explored by the students during the workshop.

- **Item descriptions:** in MissionMaker, objects can have descriptions attached to them, which shows when they are examined by the player in the game. Despite the evident similarities between this feature and the textual nature of the poem used as a reference for the creation of these games, very few students explored it.
- **Alternative narrative structures:** almost all of the games created in the workshop have a relatively linear structure: a series of actions that the player must execute in a particular order, following a specific progression from the game's start to its end. Few of the students explored alternative narrative structures or a more open world approach (this topic is elaborated further in the next section, when talking about the creative process).<sup>21</sup>
- **Groups of characters:** almost all of the games only featured characters individually, usually having one at the beginning to represent the king, and one in the end, as Grendel or his mother. MissionMaker allows the definition of very complex behaviour for the non-player characters, including rules describing how they should behave with one another. This can potentially lead to very interesting emerging systems. Only one of the games, created by Tracey, features more than one character simultaneously in the same room (p. 16).
- **Challenging gameplay:** none of the games created by the students presented any actual challenge to the player. All of the puzzles or missions are straightforward and simple, and the enemies never present a real danger, since the amount of damage that the player can take is much greater than what the enemy can take. This is probably mostly due to the fact that the default settings in the software are intentionally forgiving to the player, in order to make things easier and more accessible. If the students had more time they could have explored a better balance in order to make the gameplay more interesting.

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<sup>21</sup>One of the games that explored a less linear gameplay was the one created by Tracey (p. 16).

## 4.2 Game Design

### CREATIVE PROCESS

The following are some specific observations about the creative process, design choices and strategies adopted by the students, as well as difficulties they encountered in making their games.

- Peaceful enemies: in many of the games created by the students, the enemy (usually Grendel or his mother) only attacks the player if they are attacked first. It is the case in Alice and Soraya's game, for example (p. 6). This makes sense considering the context of Beowulf, since in the text it is ultimately unclear who indeed is the hero and who is the monster - in a way, Grendel and his mother are just defending themselves. An alternative explanation for why so many students made this design choice is for technical reasons - it is a way to avoid the problem of having the enemies leave the room they are supposed to be in to search for the player.<sup>22</sup>
- Backwards design: some students described the game design process as being "backwards", because they felt that often it's necessary to think about or deal with the result or consequence of a certain rule or behaviour, before implementing the elements that go before it. This observation is interesting for two reasons: first, because this kind of approach is also found in other traditional mediums and languages (for example, the sketch that comes before a painting, or the idea of a story before the actual writing). Second, because MissionMaker actually encourages the opposite approach, by allowing the game creation process to happen almost in the same context as the actual gameplay experience (in first person, picking up objects and so on) - probably as a way of making the process more intuitive for the user.<sup>23</sup>
- Many students noted that game design requires an extremely methodical or systematic approach. According to Katie, "a game designer needs to think about everything", meaning that every aspect of every single element and behaviour of the game must be considered, as well as all of the possible consequences and combinations. To these students, in other mediums and languages this doesn't happen. A writer, for example, may describe only the aspects of a scene that interests him, or that helps his particular story. A game designer, on the other hand, must allow and consider all the possible actions and decisions that the player can make.<sup>24</sup>

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<sup>22</sup>The MissionMaker engine has a relatively robust path-finding algorithm, so even if the enemy is far away, it will leave its location and eventually find the player. Of course, this issue can be dealt with by using a couple of conditional rules, which is what some of the students did. For example, the enemy would be set up to stand still until the player reached a certain room, and only then begin the attack.

<sup>23</sup>Katie is one of the students that saw the game design process in this linear way (as opposed to the "backwards" design). Because of this, in her opinion, a traditional medium such as literature would be less difficult to author on than videogames, since a writer can choose to work on any part of the text, in any order. Note that this view that Katie had of this particular aspect of the game design process is limited. However, it is understandable that she would think this since, as mentioned before, the linear approach is indeed encouraged by the software.

<sup>24</sup>Niamh thought the opposite. In her opinion, the writer is the one that begins with a blank piece of paper, while a game designer already begins with several assets and functions available (p. 13). The fact is that digital media is not really that much different than any other medium in that aspect - they are just different. Consider Cinema, for example - compared to literature this medium also usually requires a great deal of additional information (such as the full appearance of a certain character, for example). Like the writer, the programmer also needs to decide how much of the experience he will choose to describe.

- The first day of the workshop, which included creative activities such as improvisational drama, filmmaking, writing and drawing, had an essential role in the game creation exercise of the following day. Several students, such as Andrew and Katie, said that this helped them in getting familiar with Beowulf's story world, narrative and characters, as well as to build their own image and perspectives about the original text.<sup>25</sup>
- Most of the games featured a relatively linear gameplay, presenting the player with tasks and challenges that should be completed in a certain order to progress and win the game. This was the case of the games from Alice and Soraya, Harriet and Katie Smith, among others. It should be noted that this approach was actually encouraged in the workshop, as well as in MissionMaker itself.<sup>26</sup>
- Among the most common design problems among these games are: failure to add a proper ending or conclusion, confusion and lack of clarity in communicating with the player (for example, by not giving time enough to read text messages, or by placing items in locations that are hard to see) and incomplete or broken rules and behaviours (although most of the time this didn't seem to happen because of lack of proper design, rather than a failure to correctly implement or test it).

## GAME DESIGN IN EDUCATION

All of the students involved in these conversations agreed that MissionMaker and game design tools in general could be useful in an educational context. On the other hand, most of them pointed out the difficulty to include such a novel, complex and time consuming subject in a school curriculum.

A suggestion for dealing with this issue, given by some of the students, such as Laura and Harriet, is to adopt a cross-curricular approach, at least as an initial stage. By partnering up with other courses, such as Media Studies, it is possible to gradually include game design in the curriculum. Eventually, an even greater integration may occur, with programming and digital media becoming part of the other courses. Of course, since many teachers still have little experience in using technology in this manner, this process could take some time.

It should be noted that there is an important difference between the situation discussed here, which is the use of **game design** (or development) in education, and the more simple and straightforward case of using **games** (the end product). Of course, games can support teaching other subjects and content, such as using a title like Spore (Maxis, 2008) in a biology class, or a strategy game like Civilization (MicroProse, 1991) to explain topics in a History course. However, here the discussion is related to the game design process being used itself as an educational tool.

<sup>25</sup>Some of the students suggested that the game creation exercise could have been done side-by-side to the other activities. This would allow for a more integrated and richer exploration of the different mediums and languages. However, as Harriet noted, this would also be difficult to execute in practice. Since learning how to use the software is such a time consuming process, it makes sense to have it separated from the other activities, with which most of the students are already familiar with.

<sup>26</sup>To some of the students, the choice of a linear narrative for their games comes from the fact that they were supposed to represent an original text. To Alice even more so, since she is also particularly fond of this text, and so she didn't even consider allowing for variations on the poem's original themes and storyline. Soraya, Alice's pair in this project, mentioned that when she played the games from the other students she noticed that many of them were exploring more dynamic and open structures, as compared to their own game.

## LANGUAGE

Throughout the Beowulf workshop the participants were exposed to and encouraged to act creatively in a variety of artforms, from improvisational theater and filmmaking to drawing, creative writing and, in the second day, game design. All of this happened in a very short time span, and often the activities required two or more of these artforms to be combined or integrated in some way. This allowed the students to gain a very unique perspective on each one of these approaches, as well as to the general concepts of language and creative expression.

One of the topics discussed in the conversations with the students was regarding the particularities and similarities between the different mediums and languages, both traditional and digital.

Since most of the students are from the English and Drama course, and almost all of them teach Creative Writing or some other closely related subject, the medium of literature and verbal language was one of the most common examples used in comparing game design (and digital media) with more traditional approaches. The second most mentioned medium was Cinema, a popular artform, which makes it easier to relate, exemplify and find common references and expressive strategies to compare to digital media.

MissionMaker's modular workflow also prompted some students to draw an interesting comparison to similar activities such as the technique of collage and even course planning (the act of deciding the content and structure of a certain class or course).

### 4.3 Impressions

The following is a brief summary of my personal impressions from this experience.

- My main PhD research is about the expressive use of digital media via the procedural aspect of this medium. This workshop allowed me to have a direct contact with many practical cases of this kind of approach to creativity, via the MissionMaker software. The opportunity to talk about my research with some of the students in the context of this workshop was also very productive, and allowed me to mature several aspects of my study.
- Many of the students had very interesting ideas, observations and insights, bringing new and fresh perspectives on certain topics that I am already familiar with. This allowed me to broaden my own view about certain ideas or concepts that I hadn't considered or questioned before (I shared some of these insights throughout this document).
- The process also allowed me to experience and exercise a particular approach to **genetic criticism**, which is one of the topics discussed in my previous masters research (FERREIRA, 2011), specifically based on the work of Cecilia Almeida Salles (SALLES, 2009). This was possible because of MissionMaker's workflow and the way its game files contain information and hints about the creative process. For example, there are the lists, which show the items in the order that they were created. This makes it possible, for example, to tell if a certain rule was created before or after some other rule, or if a certain object was placed in the beginning or in the end of the design process and even how a certain behaviour was set up.

## 5 Screenshots



Figure 1: Alice Hawkins and Soraya Shabaan



Figure 2: Harriet Piercy



Figure 3: Katie Smith



Figure 4: Laura Scott



Figure 5: Niamh Hickey



Figure 6: Tracey Matthews

## 6 References

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### Series

Choose Your Own Adventure (Bantam Books, 1979-1998)

### Games

Bastion (Supergiant Games, 2011)

Broken Sword (Revolution Software, 1996)

Call of Duty (Activision)

Civilization (MicroProse, 1991)

Crash Bandicoot (Naughty Dog, 1996)

Grand Theft Auto (Rockstar Games)

Minecraft (Mojang, 2009)

Planet of Death (Ubisoft, 1997)

Secret of Monkey Island, The (Lucasfilm Games, 1990)

Sims, The (Maxis, 2000-)

Spore (Maxis, 2008)

Stanley Parable, The (Davey Wreden, 2011)

Theme Park (Bullfrog, 1994)

Tomb Raider (Eidos Interactive, 1996)

### Languages and Software

Scratch (MIT)

HTML (W3C & WHATWG)

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