Chapter 5
ANALYSIS AND FINDINGS

5.1 Introduction
This chapter discusses the case analysis and the result of the case analysis. The analysis of this workshop focuses on the individual experiences of five participants. Each participant has developed their own “Robin Hood” RPG at the end of the workshop.

Two primary sources used in analyzing were from video data and the researcher’s observation during workshop. The researcher tends to designate each participant’s experiences during the game authoring workshop. The participant’s experiences were analyzed for each session. In this analysis, the recreated experiences provide deeper understanding on how student’s perceptions on history facts and game authoring over the workshop.

The field notes from the interviewing sessions with the participants describe each participant’s progress with respect to the underlying history facts. Participant’s behavior during the workshop is highlighted to indicate the interest changed towards the historical topic to be learned. Last but not least, participants’ experiences in using RPG Maker as a tool to develop a historical game had been discussed during the interview session.

All the participants in this study come from different backgrounds in term of programming skills and gaming experience. Thus, each one of them applied different strategies throughout the creation process. Table 5.1 indicates the different strategies that being applied by the participants during the workshop.

Table 5.1: Strategies being applied by each participant

<table>
<thead>
<tr>
<th>Participant</th>
<th>Selected strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mizi</td>
<td>Focused on storyline and context background; in depth studied on the history background.</td>
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<td>------------</td>
<td>------------------------------------------------------------------</td>
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<tr>
<td>Hafiz</td>
<td>Random exploration; emphasized more on the story development.</td>
</tr>
<tr>
<td>Riduan</td>
<td>Focused on technology; emphasized on the tool in creating the games.</td>
</tr>
<tr>
<td>Sadiq</td>
<td>Quicker project completion; shared outcomes with other participants.</td>
</tr>
<tr>
<td>Azila</td>
<td>Random exploration; seek helps when needed.</td>
</tr>
</tbody>
</table>

The details of the case analysis will be discussed in the following section.

### 5.2 Analysis

After completion of the game, the video recordings, interview notes (see Appendix B3), observation, and the games were compiled into case studies as an individual basis. The five participants presented here are Mizi, Ridzuan, Sadiq, Hafiz, and Azila. From the case studies, each participant represented a particular style of learning for game authoring using RPG Maker 2003.

Each game that was created during the workshop was traced using the interview notes. Games were categorized based on their origin, and the iterative changes made to the games’ underlying history. By tracing the origin of each game provides information about the starting points student each used to create the story in the RPG environment and how the game authoring can support a variety learning approaches. Through the observations, it was found that most of the participants created the games fully based on the information they studied online; where else others added with their own storyline which they think appropriate.

#### 5.2.1 Case Study: Mizi

Mizi is an undergraduate who was interested in Multimedia field. He is captivated with computer stuffs. He likes to know about the latest software and hardware technologies.
He has strong interest in world history and would prefer to look at the history events as the story related one to another. He is an experienced computer gamer who enjoyed playing various types of computer games. He is able to explain about the computer games that he had played before. Among all the participants, Mizi is the most active participant in the game authoring workshop and actively discussed the storyline with the researcher. Most of the time, he preferred to work alone during the workshop. He said, “I hope can produce a better work in limited time. It seems to be a lot of things to study while creating the storyline”.

Mizi showed his passionate on developing the game and he was the only participant who voluntarily helped the other participants in tailoring the storyline after the workshop. Mizi compiled the history facts from various resources including from the internet, books and videos. He shared his resources with other participants upon requested.

5.2.1.1 Session One
During the first session, Mizi stated that he likes to play computer game. He likes to play strategic game and RPG which has good storyline. His preference in choosing a good game is based on the storyline rather than the computer graphics itself. Based on his explanation, the first computer game that he ever played was Zork. It was a traditional computer game which relied on text command.
He believed that designing the characters and writing a good storyline are the most important part. He showed positive attitudes when asked to create a RPG in the workshop. The main concerned of Mizi was time allocation, tools being used in game development and the expectation of the end product. He can study independently and search for solutions from the internet when problems encountered during the RPG development.

When asked about the background of history learning, Mizi disagreed with the teaching methods applied at school. He has more interests on the history which based on storytelling, as he said, “I have no interested to study on the Sultanate of every State in Malaysia, but I like to read the story about how Parameswara established Melaka”. Mizi stated that by arranging the history into a storyline, it would be easier for him to remember and more enjoyable to read.

5.2.1.2 Session Two
In this session, the participant found two different sources for the Robin Hood story, first is a historical fact and the second is a myth story respectively. There are some conflicts
between these two stories, he believed on Robin Hood story was begun at Nottingham Shire.

His idea was to start the story from army forces in England. Based on his storyboard, Robin Hood was the protagonist and Price John was the antagonist. He elaborated that, “Prince John threatened people in England at that time, so, Robin Hood fight for the injustice and saved the people in England”.

Mizi put more effort in the story of the RPG if compared to other participants. He read the story about Robin Hood before he came to this session. He said, “Based on the ballad *Robin Hood and the Monk*, there were 12 men followed him in his adventure. But, I only emphasized the main characters in my story, such as Little John, Friar Tuck, and Maid Marian”.

In this session, he aimed to create a fluent storyline for his game. He tried to find from various resources in completing the game, mainly were come from reference books and the internet. He said he would spend more time reading the history of Robin Hood in order to create a better RPG. However, he was concerned about the functions of RPGMaker in supporting his storyline. The obstacles he had in this session were the compatibility of the RPGMaker and his unorganized storyline.

At the end of this session, he has produced the storyline which he planned to develop in the next session. The storyline is represented in the hierarchical form. Figure 5.2 shows the storyline drew by Mizi in this session.
Figure 5.2: Storyline by Mizi
5.2.1.3 Session Four

In this session, Mizi started to work with on the RPG development. He installed RPG Maker in his own laptop and took the initiative to learn it at home. He hoped to overcome the technical issues before he came to the workshop. With the initiative, he could explain the functionalities of the tool very well and shared the experience with the other participants.

He thus discussed about the title for his RPG with the researcher. He had designed few screen titles for selection. He said the visual appeal of the game layout is important to capture attention from people.

His prior knowledge about Robin Hood did help him a lot in creating this RPG. His new finding during the workshop was Maid Marian and Friar Tuck both were actually did not appear at the beginning of the story about Robin Hood. At the same time, Robin Hood did not appear as the nobleman in early story. However, Mizi decided to include both of the characters in his game. Besides, he agreed with Robin Hood’s motive of helping the poor. So, Robin Hood would be the hero in his game.

5.2.1.4 Session five

Mizi pointed out Little John met Robin Hood while crossing a narrow bridge. Mizi said, both of them were fighting in the bridge and Robin Hood conceded the battle. Then, Robin Hood invited Little John to join the Merry Men group to fight for justice. Little John agreed to join the party.

In this session, Mizi found that changing party in hero was not included in the tasks that been given to them. So, he referred to the researcher on the possibility of changing hero party during in the game mode by using RPG Maker. The researcher had given a short briefing on this matter. At the end of the session, Mizi found the solution, and he was happy with it. At the same time, he finished all tasks given in this session.
5.2.1.5 Session seven

Mizi started to study on climate in England in the past. He found a special function in the RPGMaker which can change the weather effect in the game mode. Figure 5.3 shows the command that allows changing the weather effect in RPG Maker.

![Figure 5.3: Weather effect in RPG Maker](image)

He started to search from the internet about the climate information in England, but due to the time constraint, he failed to find accurate information which reflects the weather in England during that time. So, he did not include this feature in his RPG.

5.2.1.6 Session eight

Mizi is volunteered to be the first presenter in this session. He began his presentation by showing the flow of his RPG. Then, he started to present the RPG that he created during game authoring workshop.

Most of the time, Mizi was presenting about the history of Robin Hood. Then, he showed how he developed these events into the RPG. He prepared few save points in his game. So, he did not present his game from the beginning until the end because it would be time consuming.
Other participants were impressed with his ability to translate the history facts into RPG form. Mizi explained that he gained deeper understanding about Robin Hood during the RPG development.

During the post-presentation discussion, Mizi mentioned that he loves to learn history by using game authoring method. The main reason is that he likes to express his idea through the game platform. RPG authoring is a good approach for him to express his finding and share it with friends.

Mizi did not encounter any problem using RPG Maker during this workshop. However, he pointed that the arrangement of “Event Commands” is poor. He spent a long time to find out command that he wanted. However, the tasks given at the early stage were helpful in starting the game. Figure 5.4 shows the Event Commands arrangement in RPG Maker.

Figure 5.4: Event Commands in RPG Makers
5.2.1.7: Case analysis

As earlier mentioned by Mizi, he like to study history if he could find the relevance between the events. He has been exposed to different history learning methods including watching video, role-play, and site visit. Game authoring was a new method for him.

He was more interested in creating storyline of Robin Hood than exploring the functionality of RPG Maker. So, he explored more on the detail events about Robin Hood and tried to apply his finding to his RPG. Then, he would find the functions in RPG Maker to support his finding.

Mizi encountered problem while he was trying to create the prelude of his RPG. It was because of the command prompt on the RPG Maker did not provide enough scaffolding and meaningful arrangement for Mizi to achieve this.

5.2.2: Case study: Sadiq

Sadiq is an undergraduate in Multimedia and he had the programming knowledge as well. However, he was never exposed to game programming environment. He volunteered to join the game authoring workshop and he hoped to learn something new apart from what he is studying now.

Sadiq is a natural at writing story. He always came out new ideas that hoped to fit into the history events. He worked very fast in game development. Indeed, he was the first participant who completed the game in the workshop. After that, he shared the experience with other participants, as he said, “I want to show it to my friends that I am able to create a game, although it is just a simple one”. However, he found that his game consists of few errors during the presentation, but he managed to fix it easily.

5.2.2.1 Session one

At the introductory session, Sadiq said he enjoyed playing RPG. The main reason is because he can become as the hero in the game. He likes the environment of RPG which
allowing the player to walk through the maps and to discover for the answer. He also likes the RPG feature which allowing the player freely control the progress of the game. Player doesn’t need to rush with the time limit in completing a task. However, he preferred the middle-range RPG instead of long-range RPG. Sadiq disliked spending long time playing a game. He likes to play games which are rich with graphics presentation. If being compared, he would prefer three-dimension (3D) instead of two-dimension (2D) games, “Games without nice graphics is boring, although it has nice storyline”.

Sadiq’s worry was about the end product of the workshop. At the beginning, he posted a question to researcher, “Are you asking us to develop a complicated RPG?” However, he was willing to take up the challenge and he was confident on game development. At the same time, Sadiq did worry about the tool being used in the RPG authoring. He hoped the tool is easy to learn because he hoped to write a good storyline.

When asked about his learning experience in history, he said it was a tough subject for him. The main reason was the structure of the textbook is boring. He only browsed through with the content which had pictures, “I felt sleepy when I read facts which are full of words and lack of pictures”. But, he was excited when he knew he would create a history-based RPG in the workshop as an innovative way in learning history.

5.2.3.2 Session Two
Sadiq claimed that he did not have much knowledge about Robin Hood, so he had made few discussions with Mizi before he started planning the story of Robin Hood. Thus, his storyline was influenced by Mizi’s story. However, he said it would be different in the details of the game after he did his own finding and analysis. He said his first exposure about Robin Hood’s story was from a movie starring by Kevin Costnel (Reynolds, 1991). He watched when he was at standard five.

He planned to include few special game scenes which never appeared in the history into the RPG. He said, “I brought these scenes into the game to make the game’s play became
more smoothly. Of course, I have considered the suitability of the extra scenes with the original story”.

In this session, he was still exploring on the functionalities of RPGMaker. In his opinion, RPGMaker is easy to get started after few introductory lessons with other participants. He requested for more time to further explore on the advance mode in RPGMaker such as Command Event and event-driven scripting.

He was facing problems in creating maps and working with the chipsets. He couldn’t get the chipsets that he wanted to create for England map. He would like to create a big England map on his game to make the game more realistic.

At the end of the session, he produced an outline for his Robin Hood RPG game. Figure 5.5 shows the outline of the story. In his outline, he has drafted the main characters that would appear in his game. Besides, he put “things to download” into his list. Based on his explanation, he hopes to develop an interesting historical game. At last, he put a rough sketch of the map.
5.2.3.3 Session four

Sadiq had build up the understanding on the functionalities of RPGMaker when he came to this session. He said the tool is not difficult to use but the interface is complicated especially at the “Database” section. Figure 5.6 shows the “Database” interface in RPG Maker. He said it is not easy for a novice game developer to use the interface like this. He spent some time reading the material from the Internet and resolved the problem.
He was searching for the character set from the internet because he could not find a suitable character to represent Sheriff of the Nottingham in the default character set. In his opinion, the sheriff is antagonist. Sadiq wanted to use monster to represent Sheriff. He also found that, Friar Tuck was an overweight person. He hoped to find a suitable character set to represent Friar Tuck in his RPG. The process of importing character set into RPGMaker was an easy task for him.

Sadiq was very helpful in this session. He taught Azila about the technical part and shared his story about Robin Hood with Mizi. At the end of the session, he tested the game and he was satisfied with the progress. Figure 5.7 shows the beginning of the story in Sadiq’s RPG.
5.2.2.4 Session five

Sadiq’s progression was faster than other participants. In this session, he had finished all the maps for his game. He had finished the planning of the path for the player to traverse in his game.

At the end, he did not import extra chipset into the game. But, he was concentrate on the game flow design and the game events. In this session, he spent time on structuring the flow of the game. He created few villagers to give information about the Sheriff. In his RPG, he described the Sheriff’s servants as “Rogue Knight” to indicate them as the villains. Robin Hood had to defeat all the “Rogue Knights” before rescuing Maid Marian from the Sheriff.

Sadiq did create few characters based on his own imagination. For instance, Aggron who joined in the Merry Men was never mentioned in any historical sources. Aggron was the imaginary character in his Robin Hood RPG. Robin Hood needs to help Aggron solving a problem before he could adsorb Araggon as one of the Merry Men. This was the reason...
Sadiq described Aggron as a troublemaker in the game. But, Aggron didn’t play any important role in affecting the progression of the story.

Sadiq also created the scene where Robin Hood met Little John at a narrow bridge. Follow with the progression of the story, Robin Hood has to defeat Little John and need his help to rescue Sheerwood Village. Based on Sadiq’s game design, the player controlled character, Robin Hood has to defeat Little John in order to pass through the bridge. Little John will join the party after defeated by Robin Hood. He has the same thought with Mizi who mentioned that creating battle in RPGMaker is easy.

5.2.4.5 Session seven

Sadiq finalized his RPG during this session. At the last chapter of his RPG, Robin Hood arrived at an isolated island. Robin Hood was informed that Maid Marian was being arrested in the castle. At the end of the dialogue, he had to fight with the Orge Magi to rescue an old man. The old man was the one been mentioned at the beginning of the RPG where the daughter asking Robin Hood’s help to rescue her father from the Sheriff. In this scene, Sadiq tried to connect the characters in his game with the progression of the story, and make a holistic relation between each scene. At the end, the old man gave the direction where Maid Marian resided.

At the last chapter, Sadiq mentioned the Sheriff of Nottingham wanted to marry Maid Marian and to rule England. So, Robin Hood had to rescue Maid Marian and spoilt the Sheriff’s plan in ruling England. There are two different stories about the Sheriff. First version told that Sheriff was a single man, second version told that the Sheriff was infatuated to Maid Marian. Sadiq decided to choose the latter version to match with the progression of story in his RPG.

Sadiq designed many rooms for the Sheriff’s castle. Robin Hood had to travel along the castle to find Maid Marian. At the same time, Sadiq assigned different guards against Robin Hood. At this point, Sadiq tried to search suitable chipset to be used in
representing this setting. At the end, Robin Hood found the Sheriff and Maid Marian at the throne. Figure 5.8 shows the scene where Robin Hood meets the Sheriff at the throne.

Based on Sadiq’s RPG, Robin Hood met King Richard after defeating the Sheriff. The game then tells the story about King Richard that he had left Nottingham for 10 years because he was at the battlefield against Scotland. The game ended when Robin Hood married Maid Marrian. Figure 5.9 shows the conversation between Robin Hood and King Richard.

At the end of the session, Sadiq was busy testing his PRG. He was concentrating on the coming presentation. He hoped to get positive feedbacks from his friends.

![Figure 5.8: Robin Hood meets the Sheriff at the throne](image-url)
5.4.2.6 Session eight

This was the session where participants had to present their end product. Sadiq was stuck at the middle of the presentation because of errors. However, he was able to fix the errors during the presentation.

Participants gave positive feedbacks for Sadiq’s RPG as he has added new storyline based on the actual context of Robin Hood story. Hence, it has become as extraordinary from the others. Besides, the multiple-choice questions appeared in the game were able to attract attentions from the other participants.

During the post-presentation discussion, Sadiq addressed that he likes this learning method. During the process of RPG development, he put more afford in finding the history facts than before. The game authoring method motivated him to create a better story for his game. However, he also mentioned that the duration for this workshop was short. He did not have enough time to complete the game as what he planned.
While talking about experience using the RPGMaker, Sadiq described the tool as easy to be used to create RPG. However, the options in the Database are complex and unnecessary in this context. At the same time, he was not satisfied with the arrangement of “Event Commands” dialogue box. It has too much unnecessary option which is not required for creating this game. This was caused much time were spent in completing the RPG.

5.2.2.7 Case Analysis

Sadiq didn’t have problem in using RPGMaker to build the game. He was motivated with this learning method during the workshop and showed his interest in helping his friends to overcome the problems. He started with the tasks that given during the game authoring workshop and finished all these tasks at the earlier stage.

Apart from spending time in creating the story of Robin Hood, Sadiq spent most of the time in events plotting. Plotting events in RPGMaker can be done by using simple scripting in Event Command. The event plotting can be categorized into four tabs in the Event Command. There are 30 selections in each tab. So, he encountered problems in making the proper selection for the event plots.

Sadiq showed his enthusiasm in creating Robin Hood RPG from the beginning of the workshop. He is a goal-driven person. Once he decided on the particular plot event, he would work until it was completed. Through this process, he learned how to work in RPGMaker’s Command Event environment.

Throughout the workshop, Sadiq was able to form his own personal meaningful goals by given some scaffolding and examples. He had added few branches in the story but keep the originality of Robin Hood story at the same time. Other participants liked his creative ideas as he presented his RPG.
5.2.3 Case study: Ridzuan

Ridzuan is an undergraduate in a multimedia course. He is the youngest among the participants. He studied in United Kingdom for his elementary level schooling. He came back to Malaysia to further his study when he was 16 years old. He joined the workshop because he wanted to learn how to create RPG.

Compared to other participants, Ridzuan preferred to play simple computer games. Examples were Tetrix and Street Fighter series. He explained he doesn’t like to play RPG and strategic games, but he likes to see others playing it. Furthermore, He preferred to play games on computer rather than in game console.

During the workshop, he was easily distracted by other matters. For instances, he would surf other websites while he was trying to develop the RPG and find information about Robin Hood. He spent a lot of time interacting with Hafiz during the game authoring session to discuss about game development techniques. However, he was able to complete the RPG on time.

5.2.3.1 Session one

During the introductory session, Ridzuan doesn’t like to play complex game such as RPG because he had no patience to spend a long time for playing computer game. However, he likes the entertainment values of the computer games. He would like to play simple games and can play repeatedly for many times. He would prefer 3D games rather than 2D games.

While asking about game authoring, he worried about the tool being used for developing the RPG. In his impression, game authoring needs a lot of time and a lot of programming work. He said that he didn’t have much experience in programming, and he expects intensive programming background was needed in game authoring. When he has been told that they were allowed to discuss with each other, then he had more confidence to join this workshop.
Ridzuan prefers the history which is related to his interests. For instances, he likes to read about cultural history followed by the development of an Empire. He shared his prior history learning experiences when he was in UK. Most of the time, he preferred to attend history class when teacher played historical related videos in the class. He said that watching the video was not only enjoyable, but also easier to memorize the facts. However, when the teacher asked to perform a play for the historical event, he would be passive and more likely to avoid it.

Ridzuan had pointed out the history textbook is wearied to read, “They (textbook) always started the sentence with the year, and then followed by a ton of facts. I am getting fed up in history classes”. He wished the history textbook to be written in more descriptive way and makes it more pleasurable to read.

5.2.3.2 Session Two
Ridzuan asserted that the internet was the main source for his storyline about Robin Hood. He found masses information about Robin Hood, but he had to summarize the story to become simple. According to his plan, he would develop two main scenes only in his game. The first scene would be about Little John being kidnapped at Nottingham Shire. Then, the second scene would be the story after Little John being rescued. He would like to add some battle scene so that the story could run longer.

He learned about Robin Hood’s story during his elementary schooling. The story was part of the academic syllabus. He said, “Everyone knows about Robin Hood in England, just like Malaysian learns about Hang Tuah history”. So, he had some basic understanding of Robin Hood and just need to organize it into a more presentable way for the game. Besides, he claimed that his knowledge about Robin Hood was not detailed; he would spend more time exploring the detail part of the story.

In this session, he didn’t spend much time in exploring the RPGMaker. He explored more on the functionalities of the RPG Maker in compliance to his RPG. He emphasized that his hopes on the RPGMaker would be an easy-to-use tool for RPG development.
At the end of the session, he didn’t figure out a clear storyline. So, he drew an imaginary picture about Robin Hood based on his imagination about Robin Hood. He said, “Robin Hood traveled across the country for helping people. So, the character I drew is mixed up in his attire”. Figure 5.10 shows the sketch of Robin Hood by Ridzuan.

Figure 5.10: Sketching of Robin Hood by Ridzuan

5.2.3.3 Session four

In this session, Ridzuan started by defining the attributes for each character on the Database for his RPG. He tried to reduce the length of story because he afraid he couldn’t meet the submission deadline. He said, “I am not familiar with the RPG environment. I may take more time to capture ideas in creating my RPG”. He tried to group the storyline into the segment. After he made into the segment, he started his work based on the stages.

However, he was losing his patience while setting the attributes for game’s characters in the database. Hence, he was distracted by surfing the internet or doing things that irrelevant to the topic. Then, the researcher tried to give suggestions to Ridzuan to help him get through of characters database.
At the end of the session, he managed to change the title screen on his RPG. He shared the same screen with Hafiz.

![Figure 5.11: Title Screen by Ridzuan](image)

5.2.3.4 Session five

At first, he decided to include a frictional character in his RPG. He said most of the other participants did not include Sir Guy of Gisbourne into their story. Based on Ridzuan’s finding, Sir Guy of Gisbourne was one of the important characters in hunting Robin Hood for the Sheriff of Nottingham. So, he would start the game by presenting the conflict between Robin Hood and Guy of Gisbourne. At the end, Sir Guy Gisbourne was killed by Robin Hood at that scene. Thus, Ridzuan started this session by looking for the battle function in RPGMaker. He quickly looked for the reference when he was told that this function was being discussed in the task given.
Creating a battle mode was an easy task for Ridzuan. He completed the desired scene as planned. Later in the session, Ridzuan was walking around to see what other participants have created.

5.2.3.5 Session six
Ridzuan felt frustrated with his progress. In the past session, he was unable to concentrate on the RPG development. He was nervous after seeing Sadiq’s work at the beginning session. So, he paid more attention in completing his RPG in this session.

In this session, he was focused on the details of historical events of his RPG. Ridzuan sought helps from Sadiq when he encountered problem in creating the event.

5.2.3.6 Session eight
Ridzuan did not attend session-seventh. He was rushing to finish his RPG for today’s presentation. He said, “I hope I could present a better work during the presentation”. He came in while Sadiq was presenting in the half way.

Ridzuan only produced a short RPG, but he could explain the detail of Sir Guy Gisbourne during presentation. He was excited to present this because he was the only participant
who included Sir Gisbourne in the game. All the participants gained in-depth information about it.

During the post-presentation discussion, Ridzuan mentioned it was a great experience to learn history topics by developing a RPG. However, he hopes to develop a 3D game instead of 2D RPG.

Overall, he was satisfied with the interface of RPGMaker. This was because he only used the simple functions in RPGMaker to create his RPG. He found that tasks given by the researcher were enough for him to develop a simple game.

5.2.3.7 Case Analysis
Ridzuan learned about history of Robin Hood when he was studying at the elementary school. He still likes this story until now. Compared to other participants in this workshop he had different history learning experience. However, this was the first time that he learned history by creating a RPG.

Ridzuan prefers to create an appealing game rather than exploring the details about the whole history of Robin Hood. That was the reason he was reluctant to create a long RPG. After a few sessions of workshop, he started to enjoy the process of creating RPG. He was enjoying creating different ending of the story. He lacked of patience in many circumstances; so he was not able to create special scene in his RPG that he planned to do. Researcher played an important role in motivating Ridzuan to continue his work.

One of the ways that he used as the communication channel with other participants was walking around in the lab when the workshop commenced. He wanted to see what other participants had developed for their RPG. He would like to create things that differed from other participants by adding his perspective toward the history event. In his game, he added a secret tunnel to Sheriff’s mansion because he found that most of the mansion
at that time had a secret tunnel to outside. Figure 5.13 shows the secret tunnel in Ridzuan’s RPG.

![Figure 5.13: Secret tunnel to Mansion](image)

Toward the end of the workshop, he was unable to translate the history events that he planned. Researcher found that the low quality of graphics produced by RPGMaker became as an obstacle for Ridzuan. However, he had presented his finding about Robin Hood during the presentation.

### 5.2.4 Case study: Hafiz

He had strong programming background before he took the Multimedia course. He joined the workshop because he wanted to develop a game.

He is the quietest participant compared to the others. Most of the time he was spoke with Ridzuan and Azila only. He is a person who willing shares his finding with other
participants. He wished to author a game which could share with his friends. At the end, he was the second participant to finish the RPG.

5.2.4.1 Session one
Hafiz likes to play computer games during free time. This could help him to release the tension of study. He likes to play various types of computer games, but he is more likely to play RPG and strategic games. He enjoyed the RPG environment which allowed him to find treasures, upgrade character’s levels, adventurous and fantasy elements in the game. He admitted playing RPG is time consuming, but he is able to manage time for studying and time for gaming.

He thought that would be intensive programming knowledge involved during game authoring. So, he was worried about the tool being used in the workshop. Besides, he was also concerned about the story being developed. He hoped to author an interesting RPG with great storyline. In his opinion, storyline is important in determining a good game.

Hafiz believed that creating historical game for history learning would be very interesting. He didn’t like reading a history textbook. In his words, “I was forced to study history subject I only read it for exam only”. The reason which given by Hafiz is because the textbook is not interesting to read. Thus, it is crucial to find a better way for youth in Malaysia to learn history.

5.2.4.2 Session two
Hafiz placed making good story as the first mission that he wanted to achieve in this workshop. But he only watched movies and cartoons about Robin Hood during elementary school. Thus, he wanted to search for more information about Robin Hood before he could start to create the RPG.

He planned to start the RPG with the Sheriff in England who applied lofty tax towards the people. In his opinion, Sheriff was the antagonist while Robin Hood was a good
person who robbed the rich to feed the poor. However, he believed that the Sheriff of Nottingham Shire was controlled by Prince John. Based on his explanation, Prince John was the brother of King Richard who would be the ultimate antagonist in his story. The story of King Richard is not being included in his RPG. He pointed out the story that he read from the book was slightly different with the source that he found from the internet.

He had the confidence in completing the storyline by using RPGMaker. However, he would prefer to discuss with other participates about the technical expect of RPGMaker. Most of the time, he was working alone during developing the game to avoid distraction. In this session, he put more time on the map of the game.

At the end of the session, he produced a simple flowchart for his RPG. Based on his flowchart, the story would begin at village. Then, that would have text to tell about the context of the story. The game would be ended after the sheriff was defeated. Figure 5.14 shows Hafiz’s game flowchart.
5.2.4.3 Session four

Hafiz worked hard on the tasks given. At the beginning of the session, he did not communicate with other participants but paying full attention on his RPG development. He encountered a number of technical problems. He was frustrated during this session. However, he did not give up but continuing on his RPG development. He did seek helps from Mizi and Sadiq.
Based on his reading from “Robin Hood and the Monk”, there were 12 best friends called “Merry Men” who followed Robin Hood in the adventure. This was the finding that he did with Mizi. Both of them shared the same concept.

At the end of the session, he decided to start his RPG with a village which was attacked by the Sheriff. It was almost similar to Sadiq’s RPG. After the session, he came to discuss the functionalities of the RPGMakers with the researcher. The researcher had given him the direction on how to resolve his problems. Figure 5.15 shows the beginning of Hafiz’s RPG.

![RPG beginning point by Hafiz](image)

**Figure 5.15: RPG beginning point by Hafiz**

5.2.4.4 Session five

Most of the participants were discussing about how to end their RPG in this session. However, Hafiz was still encountering several problems in developing his game.

He had a good story about Robin Hood to tell but he was unable to translate the story into RPG environment within the given time. This was because he could not apply event plots in the Event Commands. As a result, he was unable to achieve his personal goal at the end of the session.
However, he mentioned it was easy to create dialogue and battle mode using RPGMaker. So, he had created a lot of battle mode in his game.

5.2.4.5 Session eight
Hafiz did not attend the past two sessions due to personal problems. But, he attended for the presentation and discussion.

There were few errors occurred during the game presentation. He failed to remove the extra character from the player’s party. So, there was an extra player appeared in the party list. Figure 5.16 shows the error occurs in Hafiz’s RPG.

![Figure 5.16: Errors in Hafiz’s RPG](image)

Hafiz tried to explain the story of Robin Hood because he was unable to finish the game on time as he missed the last two sessions of the workshop. However, he had completed the main map of his RPG, but it was not fully connected to the detailed maps. So, he often quit the game and presented his RPG in the development environment. Although he could not present the completed RPG during the presentation, but his Robin Hood story
did capture attention from the audiences. Figure 5.17 shows the main map for Hafiz’s RPG.

![Main Map](image)

Figure 5.17: Main map in Hafiz’s RPG

### 5.2.4.6 Case analysis

Despite Hafiz’s progression slower than other participants at the beginning, but he was able to solve the problem after discussing with friends.

Hafiz preferred to solve problem on his own during the workshop. In Hafiz’s case, tool being used to develop the RPG was not the primary concern. But, the significance of communication among participants showed in Hafiz’s case. Most of the time, he worked on his own and this causing him to spend more time in learning the historical events as well as the technical aspects of the authoring tool. He joined the discussion group after getting the encouragement from the researcher.

He branched out history topics that he wished to cover in his RPG design during the beginning stage. Then, every topic became as the objective that he wanted to achieve in
the workshop. Due to the time constraint, he could not develop all the stated objectives. However, he had done a detail finding about Robin Hood.

5.2.5 Case Study: Azila

Azila was the only female participant in this workshop. She is a shy girl who seldom talked to others during all the workshop sessions. Besides, she also felt uncomfortable with the recording.

She didn’t have any experience in programming. Formerly, she was studying graphic design. She joined the workshop because of her friends. However, she claimed that she is willing to take the challenge and put efforts in game authoring.

She discussed with Hafiz most of the time. Her progress was slightly slower than other participants. At the end of the game authoring workshop, she was reluctant to submit her game and to present it to other participants. This was because she was not satisfied with her end product. At the same time, she failed to attend the last focus group discussion because she was sick.

5.2.5.1 Session one

At the beginning, a discussion about participant’s preference in computer gaming was conducted. She mentioned that she likes to play mini games rather than complicated games which spent lots of time. However, she would spend time seeing her friends in playing RPG. She liked the computer-aided game and hence she joined the workshop to know more about computer game.

Azila’s first impression about game authoring was it would involved a lot of mathematic calculations. She does not like Mathematics subject in school. She decided to join the workshop after she has been told that the tool does not required a lot of knowledge in mathematics calculation. Apart from mathematics, she hoped the tool would not require a lot of programming knowledge.
She shared the same thought with Hafiz about history learning. She mentioned that learning history in secondary school was just for the exam. For her, learning style at school was not interesting. Most of the time, history teacher supplied notes and read it in class. Then, it is followed by class discussion and exercise.

Azila was positive toward the idea for authoring a historical game. She says, “This is something new that I should try”. She hoped to develop a game which is helpful in history learning and shared the outcomes with her friends.

5.2.5.2 Session Two
Today was the first session that all the participants meet in the lab for game authoring. Even though she was the only girl participant, but she felt comfortable with the environment. She mentioned that she didn’t have much preparation on the story yet this session. However, she had a discussion with Mizi about the storyline, so the story would be similar with Mizi. She hoped to learn more about Robin Hood before deciding the game story.

She was worried about the authoring tool would be the obstacles for her to create the RPG. She says, “Although it looks simple but I still worry because this is my first time using the tool”. However, she said she would ask helps from other participants when she encountered problems. She didn’t produce any concrete storyline at the end of this session because she was lack of preparation. Figure 5.18 shows the rough idea that Azila sketched out in this session.
5.2.5.3 Session four

Azila felt difficult to cope with the progress compared to other participants. This was because she lacked exposure on the RPG. But, she said it was interesting to produce a game and she believed could complete it on time.

The main obstacle faced by Azila in this session was creating the map based on the task given by the researcher. She was trying hard to match the terrain with the real geographical setting. She wanted to build a church in the village for her RPG. Based on her reading, she said Robin Hood and most of his fellows were Catholic. However, she said the church that she puts in the RPG did not have any functionality towards the RPG’s progress, hence she removed it at the end of the session.

For the outcome of this session, she was able to finish the map with the help from Mizi and Hafiz.
5.2.5.4 Session Six
Azila was upset when she noticed Hafiz didn’t attend the workshop. Most of the time she would ask helps from Hafiz.

In this session, she was trying to apply “switch” function based on the task given by the researcher. She succeed to build a simple switch based on the task given. However, she was not able to link the concept in her RPG. Later in the session, she asked help from researcher to solve this problem.

Azila spent half of the time in reorganizing history of Robin Hood that she found from various sources. She updated the storyline in a proper sequence with the helps from Mizi.

5.2.5.5 Session Eight
Azila did not attend the presentation. However, she came for a discussion with the researcher few days after the presentation being held. She felt sorry because she could not finish the RPG on time.

She came to researcher just to show her appreciation for giving her chance to explore an innovative way to learn history. She became more enthusiastic and said will try to create it even though the workshop is ended. She mentioned that the social interaction aspect was the main motivation for her to join this workshop. She preferred to learn in a group and can form discussion among peers. She felt shy at the beginning of the workshop because she was the only female participant.

5.2.5.6 Case analysis
She was being shy at the start of the workshop. However, she was able to communicate with other participants when they had common topics to discuss about. She explored RPGMaker randomly throughout the workshop. As a result, she could not find the
connectivity between the command functions in the RPGMaker. She was frustrated and once, she was planning to leave the workshop.

In Azila’s case, technical aspect in RPGMaker was the primary obstacle in developing Robin Hood PRG. The problems were mainly from the interface design in RPGMaker’s. As a novice, she spent a long time in learning the interface of RPGMakers. At certain time, she wanted to quit the workshop because she felt that the tool is too technical for her to cope with.

5.3 Research Finding
The game authoring workshop was created to explore how to apply a new technology into constructionist learning environment. In this section, the social-technique aspect during game authoring session which could be applied to help learners engaged in history learning will be discussed.

5.3.1 Constructionist in history learning context
The game authoring workshop objective is to seek for a new learning method in learning history subject. Throughout the workshop, the researcher explored different aspects to engage participants in the constructionist learning process. The researcher hopes these aspects can help the learners to absorb the learning content effectively.

5.3.1.1 Engaging student through computer game authoring
Computer game is a motivational topic especially for those students who are familiar with computer. In the current trend, playing computer game was not able to satisfy the needs of these people. They were aiming to create their own computer games. Commercial computer games nowadays have bundled with authoring tool which allowed players to alter the game’s content.

The principle concern in this research was to evaluate on how game authoring could engage student in learning history by using RPGMaker. Sadiq’s experience showed that
constructionist environment can foster creative thinking in learning history. Apart of creating the original storyline about Robin Hood, Sadiq attempted to add-on characters which came from his own analysis and imagination.

Throughout the game authoring workshop, participants’ feedbacks had demonstrated positive impacts in learning history. They enjoyed this learning method than the traditional methods. From the exploration in connecting history learning and RPG authoring, it has shown that this is able to engage most of participants to learn history while creating RPG. It could be leveraged to engage students in constructionist learning activities.

5.3.1.2 Facilitator’s feedback to the participants

In this research, participants created RPG at their own paced. They shared their work with others and talked about how it has been prepared. In the constructionist learning philosophy, learner acts a critical role in managing their personally meaningful RPG.

However, there were few cases where the participants were confused on their own creation especially on the imaginary characters. In this case, the researcher would act as the facilitator in helping the participant did the in-depth study on the particular history context. This is important to ensure the participants involvement in their game creation. It also to ensure that the story created does not stray away from the original facts. Eventually led the participants to analyze on the historical facts and they able to obtain better impression after they merged these facts into their RPG.

During the presentation, participants highlighted the historical events that they put more effort to complete. Participant had more confidence while presenting the events that they worked hard on it. They could explain very well on the historical events to the audiences. This proved that participants had grown to a better understanding historical events by creating RPG.
5.3.1.3 Time and schedule
Participants were given chance to create history based RPG on their own meaningful activities. This process took longer time as planned by the researcher. Firstly, participants must learn how to use the game authoring tool. Then, they must study on the historical topics to be developed in RPG. Lastly, they were required to recognize the capabilities of the game authoring tool in supporting the activities that to be developed.

In this study, the participants were allowed to use the tool after the workshop. It was anticipated that the participants will have ample time to engage in this project but due to some usability issues during using the tool, the time given was not enough. Participants barely comfortable in using RPGMaker with few hours a week over eight week’s periods. This research indicates that participants must be given more time to learn the tool as well as the topic chosen. This would allow the participants to truly benefit from a constructionist learning environment.

5.3.1.4 2D versus 3D game environment
At the end of the workshop, the participants have created a 2D RPG. The initiative of this project is to study the leverage of game authoring technology presents as new approach for constructionist learning environment for history subject. However, there are few issues arouse by the participants during the workshop. Firstly, two participants mentioned that they preferred to create a 3D RPG than a 2D RPG. This is because 3D RPG will be more appealing and more realistic. Secondly, the low resolution display produced by RPGMaker did not appeal to the participants and somehow lowered their motivation in creating the RPG. This has showed that visual appealing of RPG plays an important role in fascinating the learner in learning the subject.

5.3.2 Tool being applied in this study
The targeted group for using RPG authoring in learning history is to secondary students hence they have not been trained in authoring a RPG. It is important to have a proper
designed interface to facilitate students while creating the RPG. A survey form has been distributed during the post discussion of game authoring workshop (Appendix B1). The survey intended to find:

i) the capability of RPGMaker to support constructionist process, and
ii) the user experience using RPGMaker.

The following section discusses the feedback received from the survey conducted.

### 5.3.2.1 Capabilities of RPGMaker

Table 5.2 depicts the features of RPGMaker that voted by the participants based on the usefulness in creating RPG.

<table>
<thead>
<tr>
<th>Creating Map</th>
<th>Click-and-draw</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changing Tileset</td>
<td>Import to library</td>
</tr>
<tr>
<td>Assigning Dialogue</td>
<td>Type message directly to Event Command dialogue</td>
</tr>
<tr>
<td>Making selection</td>
<td>Choose from Event Command dialogue</td>
</tr>
<tr>
<td>Assigning combat mode</td>
<td>Choose from Event Command dialogue</td>
</tr>
</tbody>
</table>

All participants in the workshop agreed that RPGMaker had the capabilities to create a historical RPG. They have highlighted the convenience of creating maps in RPGMaker. The simple click-and-draw method allowed them to create a map in short time. The separation of lower tile layer and upper tile layer in tileset gave a better insight in creating the map as well. The function which allowing users to import character set/ tileset create the flexibility in setting the background of the story. Users able to design the environment based on what they have found from various sources.
Most of the history contents are delivered in text-based. RPGMaker prepares an easy way in creating game dialogue and game selection. Thus, users are able to transform the historical facts into the game play with simple process. During this process, participants were required to gather data from various sources and then translate it into game dialogue. The convenience of RPGMaker acted as a catalyst to make the process easier and faster.

One of the participants highlighted a useful function in RPGMaker. The “Change Weather” function in RPGMaker allowed the participant to create different kind of weather in the game. The participant intended to change the weather based on the progression of the story. He claimed that changing weather during game play would make the story more realistic and can match with the climate of the history events. In this case, RPGMaker supports user’s climate opinion in creating a historical game.

Combat mode in RPGMaker is easy to apply, but participants found out the villains in the default setting were irrelevant to the real world. The “monster” or “vampire” as the villains in a historical RPG is not appropriate. Hence, the learner should change the default setting in order to fit to the real world circumstances.

Although not all participants presented their historical game at the end, but their feedbacks about RPGMaker is encouraging. Thus, the features in RPGMaker are suitable to be used in creating a historical PRG.

5.3.2.2 User experience toward RPGMaker

In the game authoring workshop, the participants acted as game designers in designing a historical RPG. Based on the interview and survey conducted, most of the participants agreed that RPGMaker is useful in creating a historical RPG because the tool is able to perform activities set by them.
The participants did not encounter problems when creating the basic game structures such as maps and dialogues. However, several difficulties were encountered while defining the attributes of characters because of the keywords used in RPGMaker since everything is stored in “Database”, the participants were facing difficulties in finding the correct attribute to use. Confusion arises with the division of **Hero tab**, **Class tab**, and **Skill tab** at the Database selection. Due to these, the characters’ attributes configurations only focused on character’s Health Points (HP) and Attack Points. These attributes are used to determine the character’s ability in the RPG. Participants also commented on putting character’s attribute under the “Database” was misleading. Also, the interface in the Database option is “tightly packed” and causing them to spend more time to identify the suitable function to be used.

When authoring the PRG, participants must deal with the Event Command. The Event Command allows the participants to create an interactive game. The Event Command dialogue is used to trigger a specific event, such as encounter villains or starts a conversation. From the feedbacks, working at Event Command was the hardest part in RPGMaker. There are four tabs in Event Command; every tab consists of 30 functions. The high complexity of Event Command increased the density of the screen. Participants were confused with this high density screen design. Apart of choosing the correct command to trigger the event, participants need to equip with basic idea of event-driven programming and how it works. However, writing simple event-driven scripting does not raise any problem.

RPGMaker minimized the functional selections on the menu bar. However, scrambling those selections into an irrelevant cluster would confuse the participants when choosing the correct selection. From the feedbacks and observation, the participants encountered problems in learning the interface of RPGMaker. They were confused in identifying the correct functions in the Command Event because of the disorientation of the interface arrangement.
As a conclusion, the RPGMaker does prepare a platform for user to create a workable RPG. But, in order to support the constructionist learning environment, there is a need to put more concern on the usability issues. A learnable interface design could lower the mental effort from user in learning the tool. This allows the learner to focus more on the subject development rather than learning on the interface.

5.4 Conclusion of the analysis and finding

From the case analysis above, each participant had different prior experiences in history learning and the exposure in computer game. Generally, game authoring did give them a general perception which related to intensive programming and mathematics calculation. From the analysis in the processes of authoring game in learning history, the participant applied a general strategy during the workshop which is shown in Figure 5.19.

![Figure 5.19 General approaches in RPG creation](image)

Generally, participants tend to form the topic and the objective on what they wanted to achieve during every session. The tasks provided by the researcher gave a helping hand for student to achieve their objectives. However, not all students, like Sadiq and Ridzuan, would begin with exploring the capabilities of RPGMaker instead they concentrate on the tasks given. In every session, Azila often started with the tasks given to guide her in creating her historical game.
Researcher’s guidance played important roles in helping the participants to complete their historical PRGs. Throughout the workshop, Azila actively sought for helps in the matters of technology used in the workshop. Positive encouragement from the researcher did help her to continue in exploring the historical facts and develop it into her game. On the other hand, Sadiq was concerned about the acceptance of his imaginary characters in the game. With the encouragement and help from the researcher on the in-depth finding, he gained a broaden idea in adding the extra characters into his game.

The game authoring workshop gave a supportive environment for student in exploring historical facts and other possibilities that has not been recorded. Participants were engaged during the workshop in creating various style of historical RPG. They were putting different focus on the progression of story. With the efficient supported technology, we were able to provide a different environment for the learner to experience a new type of history learning activity.

5.5 The Game Authoring Framework for History Learning

Nowadays, a lot of learning activities involving computer games can be formed in many subject domains. A conceptual framework for history learning has been proposed in Chapter 2. After several workshop sessions that have been conducted, the researcher has made the refinement on the conceptual framework, and hence a game authoring framework for history learning has been proposed based on this case study conducted. This framework shows that game authoring promotes an active engagement of the learners while learning history subject. The framework is illustrated in Figure 5.20.
Six stages were proposed in this framework, that are, determining the subject matter, working with the authoring tool, study on the subject matter, creating storyline, RPG authoring, and presentation. Each stage is being discussed in the following sections:
1. Determining subject matter

In the principal of constructionism learning environment, the learner should be responsible on what they want to learn. They act as the active role during the learning process and teacher act as the facilitator. The learner determine on the subject matters that are possible to be developed in RPG environment in the first phase. Teacher will facilitate in determining the subject matters.

During this process, discussion among the learners and brainstorming session between learners and facilitators are important to justify the subject matter to be learned.

2.1 Working with the authoring tool

After the topic has been identified, the learners will be working with the game authoring tool to create a simple game. In this phase, the facilitator should prepare tasks that are relevant to the game that will be developed by the learners. This is to ensure the learners can colligate the knowledge being learned from completing the tasks given and apply it for the game creation process. In this study, the research had prepared tasks (Appendix A) to help the learners to get familiarized with RPGMaker environment.

2.2 Studying on the subject matter

Some learners preferred to further explore on the subject matters before working with the game authoring tool. In this study, Mizi and Azila took the initiative to study on the subject matters in the first place.

During this phase, the learners were engaged to find the information about the topic being leaned from several sources. During the information gathering process, the learners have to make their own judgment on the sources. They will exchange information with other participants, perform analysis on the historical events, and synthesis the possible relevant events that from their own imagination.
Facilitator took the position to ensure the story being created do not stray away from the original story.

3 Creating Storyline
After the study on the topic, the learners have to create the storyline based on the information gathered from the previous phase. The learners preferred to discuss and exchange their point of views during this stage. They can contribute their opinions about the historical events, and design the characters that would appear in the game story. When they have a concrete storyline, they can start to create their RPG.

4 Creating RPG
Based on the storyline that has been created from the previous phase, the learners were started to create their RPG. During this process, the learners have to plan for the characters that will appear in their RPG, the time flow and the progress of the game, synthesizing possible events, and their own perspective towards the historical events. This is a dual directions process where the learners can always go back to the previous step to revise their storyline. During the RPG creation, it can stimulate the learners to think like a historian and colligate what they have found from the previous stage into a new history branch. This is a time consuming process. Hence, the facilitator has to motivate the learners when they have obstacles. At the same time, the assistance of facilitator for solving the technical matters that arouse by the learners can reduce the time taken for this stage.

5 Presentation
At the end, the learners were given chance to present their RPG to the other participants. This is the sharing session for the learner to show the outcome of their RPG creation during the workshop. The presenter will then answering questions posed by other students.
The refinements that have been made from the conceptual framework are the process of learning. In this framework, the processes are break into more detail. Few activities were identified and assigned to the respective process. As overall, the learners will be placed at the central of the learning context. The facilitator will be assisting the learners when there is problem arouse by the learner. The finding of this study showed that the participants preferred this learning environment. The framework is hoped to pave a guideline for applying it in history learning context.

5.6 Conclusion
This chapter described the case analysis of every participant in the game authoring workshop. It had given a better insight about the issues when applying constructionist approach in history learning.