JRIODL, (3), 1 (2023):69-81
ISSN: 2964-593X

THE PRINCIPAL – DESIGN AND DEVELOPMENT OF AN INTERACTIVE FILM-GAME ON SCHOOL LEADERSHIP

Ethel Joan Atienza

Seameo Innotech (PHILIPPINES)

Abstract

The paper presents work on a tablet-based and smartphone-based game for school heads and other education stakeholders. The paper highlights the design and development of an interactive film-game on school leadership with regard to its content, storyline, film execution, and leadership game scoring framework. The paper discusses how these elements combine to elicit engagement, reflection, and discussion among players and the possibilities it presents for school leadership capacity building.

Keywords: interactive film game, game-based learning, serious games, adult learning

1 INTRODUCTION

The Southeast Asian Ministers of Education Organization, Regional Center for Educational Innovation and Technology (SEAMEO INNOTECH) is an international organization engaged in research and training for the SEA education system. As an innovation organization, SEAMEO INNOTECH seeks to continuously explore possibilities in education. INNOTECH started the Game On Project, which aims to utilize GBL/serious games to build school heads' capacities. The output is an interactive film game, *"The Principal."*

Game-based learning's potential in increasing the level of engagement as well as improving learning outcomes has long been recognized. Game-Based Learning (GBL) is the use of digital games to support or enhance the fulfillment of educational objectives. While GBL is often applied to teaching children or young adults, the use of GBL for adult learning has been likewise explored for its potential in life-long learning and capacity building (Charlier et al., 2012).

In the game industry, games intended for an instructional purpose other than entertainment are classified as "serious games."

The Principal allows a player to put themselves in the shoes of the protagonist, the school head, decide on courses of action and discover their leadership inclinations and potential positive or negative influence.

Both the content and the form of the story are important in eliciting reflection (Slingerland et. al., 2021). The player's engagement in the game allows them to "experience" different decision challenges and their consequences in a "safe" environment. The resulting leadership inclination profile serves as a springboard for reflection and potentially improving one's own practice.

In the design and development of *The Principal,* there are two key components: 1) the interactive film and 2) the leadership scoring. The succeeding sections will provide details on these two components.

2 THE INTERACTIVE FILM

This section provides an overview of the design and development of the interactive film as an approach to delivering the game's story.

The use of film as a medium of storytelling capitalized on INNOTECH's own practices in using this as a tool in capacity building, both in its face-to-face and online courses. In a study of digital storytelling in adult education, Rossiter (Rossiter et.al, 2010) pointed out the value of the lived experiences, self-direction and having a voice. INNOTECH has long recognized the power of storytelling as an approach to elicit reflection, discussion and learning.

An essential part of developing the film is the development of the screenplay. Another consideration is the envisioned length and complexity of the game as this impacts the overall resources for the project.

The Principal was intended to be a short game, one that a player can complete within an hour assuming it is continuously played. As the game is intended for teaching and learning, the screenplay was anchored on the Competency Framework for Southeast Asian School Heads of SEAMEO INNOTECH.

The competency framework for Southeast Asian Schools Heads is a validated reference document on the essential competencies of a school head. These are:

- Strategic Thinking

- Instructional Leadership

- Stakeholder Engagement

- Personal Excellence

- Managerial Leadership

Given the limitation in scope, the project management team decided to focus on Managerial leadership as the main competency anchor for the film's screenplay.

As defined in the Competency Framework for SEA school heads, managerial leadership focuses on managing staff, school resources and systems, and sustainable school programs and projects. It was deemed that as an anchor competency, managerial leadership best lends itself to integrating the other competencies and is more flexible in developing a storyline.

In developing the screenplay, the project team had to consider both the creative and learning aspect of the game.

Using managerial leadership and its enabling competencies as anchor, surveys and focus group discussions were conducted. In these consultations, the participants were asked to identify the following:

- Specific situations that serve as an example of the competency

- Specific decisions that they make relative to the situation

- Challenges and context of the given situations

The participants were also asked to identify the top three "most difficult but common" challenges. From a screenplay development perspective, the scenarios need to have a clear dilemma but at the same time, be relatable to the players.

The rich input from these consultations enabled the team to develop the branching narrative. The branching narrative is a skeletal and visual representation of the story describing scenes and decision points. This also allowed the team to look at the equivalent leadership trope of each decision point.

The branching narrative was reviewed both from the perspective of creative storytelling and fulfillment of the leadership inclination profiling.
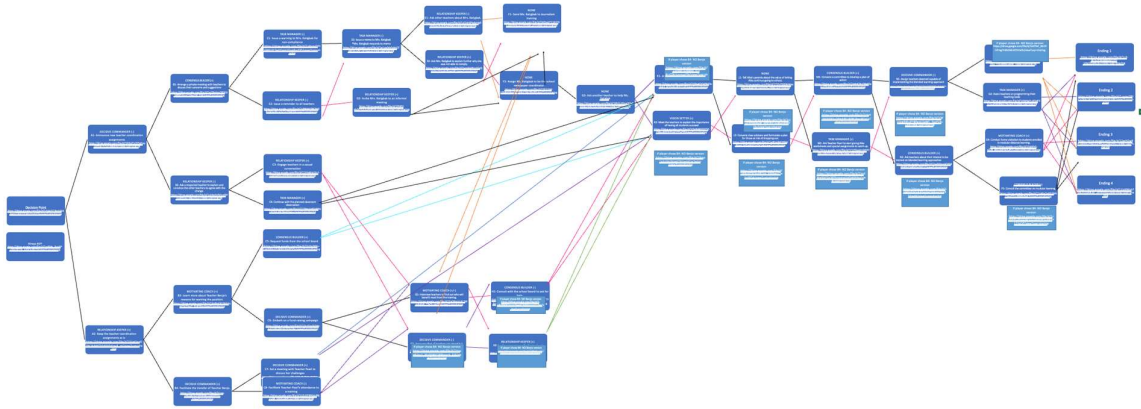

Figure 1. The interactive film's branching narrative

Once the player selects the next course of action in the film, the same scene continues. During the filming, this meant shooting the same scene twice with variations in the dialogues or character interactions.

3   THE GAME SCORING FRAMEWORK

Scoring within the context of GBL/serious game is a means to provide motivation and feedback to the players. The scoring framework of the game, *The Principal* aims to evaluate the types of decisions that the school leader is to make. Towards this goal, specific Leadership Tropes were defined, referred to under the umbrella term "Influential Leadership" because these tropes describe how leaders are perceived by their followers based on a specific activity they do.

Derived from literature on Primal Leadership (Goleman, et. al, 2013), Transformative Leadership (Bass and Riggio, 2014) and Destructive Leadership (Einarsen et. al., 2007), six tropes were used to describe a leader's potentially influential behaviors:

- *Vision Setter*
- *Relationship Keeper*
- *Motivating Coach*
- *Consensus Builder*
- *Task Manager*
- *Decisive Commander*

For each trope, a description of a typical behavior was defined, as well as the extent by which it may affect followers positively or negatively, based on the aforementioned reviewed literature.

Vision Setter

Leaders are seen as vision setters when they are able to set a clear vision, anchor decisions on it and communicate it frequently and clearly.

POSITIVE INFLUENCE: When followers are inspired by the presentation, reiteration and alignment to the organization's vision and mission.

NEGATIVE INFLUENCE: If the leader is new, this can be perceived negatively by followers who are of seniority or who may hold more expertise than the leader, but are not acknowledged or given a voice. Another instance where this may have a negative effect is when the vision is set, but clear direction may not have been provided.

Relationship Keeper

Leaders are seen as relationship keepers when they spend time and make an effort to forge personal relationships, and keep relationships within the team intact.

POSITIVE INFLUENCE: These leaders often easily win the hearts of their followers. Followers often feel motivated because of the strength of relationships, most especially in challenging times.

NEGATIVE INFLUENCE: Some situations force leaders to choose between preserving harmonious relationships and giving honest feedback that will improve the work. When relationships are chosen, this sometimes results in mediocrity of work. Sometimes, leaders may also be perceived to use the relationships built to manipulate followers.

Motivating Coach

Leaders are seen as a motivating coach when, in dealing with their followers, they consider individual members' interests and long-term goals.

POSITIVE INFLUENCE: In being a motivational coach, leaders are able to help their followers see the value of their work not just for the organization, but also for their own individual progress and development. Because of this, followers feel heard and their needs recognized.

NEGATIVE INFLUENCE: Although the coaching provided is often positively received, it presumes that followers have some level of desire to improve. At times when the follower's need may not be coaching, this may be perceived negatively.

Consensus Builder

Leaders are seen to be consensus builders when they often consult stakeholders in making decisions.

POSITIVE INFLUENCE: This often results in greater ownership for the work.

NEGATIVE INFLUENCE: A downside of a leader who consults too much is that consultations take time. Too much consultation also means facing varying opinions, interests and agenda. In some situations, quicker decisions need to be made.

Task Manager

Leaders are seen to be task managers when they model, guide, monitor and set the pace for the tasks being done to lead to the accomplishment of a set goal. These leaders are often experts in their field (ex. An exemplary teacher that becomes a principal). Therefore, keeping high standards is important for them.

POSITIVE INFLUENCE: This often inspires excellence. High standards, modeled by these leaders, influence followers to keep up with them.

NEGATIVE INFLUENCE: When done too much, this can cause stress and have a negative effect on the emotions of the followers: such as feeling too pressured, being afraid to make mistakes, etc. This can also result in negative emotions if the leader is seen to take credit for the hard work of their followers.

Decisive Commander

Leaders are seen to be a decisive commander when leaders autonomously make decisions or assign tasks.

POSITIVE INFLUENCE: In times of crisis or emergencies, this decisive leader is seen to be able to help the organization move forward, as they provide the clear direction necessary.

NEGATIVE INFLUENCE: Depending on how "commands" are relayed, this can also be perceived by followers as "abusive supervision"-when leaders are followed because of fear or of their authority. For example, if coarse language is used, and or if followers feel like they are being bullied. These leaders utilize their authority to get their way and get things done faster.

This can also be perceived as being too authoritative, and followers may feel like they should have been consulted.

These descriptions were used as bases in the identification of tropes in the various decision points presented in the storyline of the game. Decision points in the game were tagged to one or more tropes, as well as the prospective positive or negative effect.

Since a top-down approach was taken in developing the Influential Leadership Tropes, there was a need to validate the project team's assumptions. The following section describes the methodology and results of this validation activity.

3.1 Game Scoring Framework Validation

As part of the design and development of the Leadership game-scoring framework, it was necessary to validate certain assumptions:

The reliability of the identification of relevant tropes based on the decision points presented in the storyline; and

The reliability of the assumptions of the design team regarding the positive or negative influence of the presented leadership decisions.

To validate the first assumption (the identification of tropes in the decision points), an online survey was created, wherein participants:

1. Watched a 15-minute interactive lecture describing the Influential Leadership Tropes. The interactive lecture featured a narrated slide presentation, with a few multiple-choice quiz questions to aid their understanding.
2. Then, they answer a series of questions where 36 decision points are presented. For each scenario, they are to identify which of the six tropes was evident. They were allowed to choose as many tropes as they saw recognized.
3. Finally, they were asked how difficult they found identifying the tropes and were allowed to type in any feedback/questions.

To validate the second assumption (positive or negative influence), a Focused-Group Discussion (FGD) was conducted.

Teachers were selected as participants for this activity since the positive or negative effects assumed of the leaders' decisions were those towards their followers, who, in this case, were teachers under the care of the principal in the story. An FGD was chosen as a methodology to gain deeper insights into the rationale for the positive or negative perceived effect and for this

to be compared with the actual consequences that are to be shown in the game's storyline. Although the circumstances in the game's story may differ from the contexts of the rationale presented by the FGD participants, they serve as analogous experiences to inform the reliability of the game design's assumptions.

During the FGD, ten decision points, representing six different tropes, were presented to all the participants. They were asked to indicate whether they thought the decision had a positive or negative effect assuming they were on the receiving end of such. This was then followed by an open-ended discussion where participants qualified their responses.

3.2 Utilization of validation results as inputs to game scoring

The feedback from the survey and FGD respondents reassured the design team of the assumptions held in identifying the tropes as well as its negative or positive effect. During FGD on the positive and negative effect of the decision points, the reasons provided by respondents are aligned with how the storyline in the game situates the decision points. This affirmed the design team's scoring framework.

Although not all decision points were tested, the sample decision points chosen were those that the design team was least confident in. The results of the FGD provide the necessary validation for them.

After analyzing the validation results, a final game-scoring framework was developed.

The game program was designed to compute the accumulation of the tropes based on the selection of the player.

4   CONSTRAINTS

The design and development of *The Principal* are subject to many constraints and limitations. This section discusses some of those constraints.

4.1 Curricular and pedagogical constraints

As the game seeks to facilitate reflection on one's leadership ability, it attempts to create a leadership profile. However, this attempt at profiling is limited to the situations presented in the game and the player's motivation to reflect and analyze the results. Thus, the game is not intended to provide a leadership profile scientifically but instead aims to show the "leadership inclinations" of the player based on the choices they made in the game.

4.2 Storytelling constraints

Given the scope of the game as well as creative and pedagogical consideration, the film can only accommodate selected narratives. The scenarios were chosen carefully such that they can show the different tropes, while as a whole be represented as a compelling story. A fictional school, Hiraya High School was used as the setting and presented as neither public nor private school to provide flexibility in storytelling.

4.3 Technological constraints

The Principal is mainly a smartphone and tablet-based game; as such, the gaming experience can depend on the device's capability. It can be used on a PC. However, this will require an emulator. An emulator is an application that allows a user to play android games on a PC.

Because of file capacity concerns, the game assets are saved in the cloud. When players use the game, they are connecting to the cloud, meaning they have to be online.

 The game was intended to be downloadable in both Google Play and Apple App store. As of this writing, the game is only available on Google Play. Application for access to the Apple app store is ongoing.

5   DESIGN DECISIONS AND IMPLEMENTATION

This section documents the design of *The Principal,* subject to the limitations and constraints discussed in the previous section.

5.1 Scope of Contents

The Principal follows the story of Dr. Josephine Cruz, a newly appointed principal at Hiraya High School. In the film story, she will encounter issues and concerns related to teachers, students and stakeholders.

5.2 Translating learning objectives into game mechanics

The principal, as a decision-making game can be likened to a choose-your-own-adventure game format. The overarching narrative unfolds into decision points. These decision points represent a leadership trope. The continuation of the scene or narrative shows if the decision has had a positive or negative influence.

In the game's longest route, the player must make 11 decisions. The shortest route has nine decision points.

5.3 User Interface

The actual game begins after a scene in the film where the school director appoints the principal. This scene ends with the school director asking the principal, *"Are you ready to take on the challenge?"* The player must then choose between "Yes" and "No." If the player chooses "Yes," the game will proceed. If the player chooses "No," the game will return to the main menu. This first scene is intended to subtly put the player in the position of the principal.

The film then proceeds, continuing the scene. At some point in the film, the video will show two decision points, and the player is initially given 30 seconds to decide. The player can extend this time as he/she pleases. When an option is selected, the outline of that option is highlighted.

Recognizing the technical capabilities of the intended players (school heads), the only action required in the game is point and click.

At the end of the film a dashboard showing the top three evident tropes will appear. Clicking on the buttons representing each trope will show more information. A "Learn More" button link is also provided. This button is linked to a website that discusses the rest of the tropes.
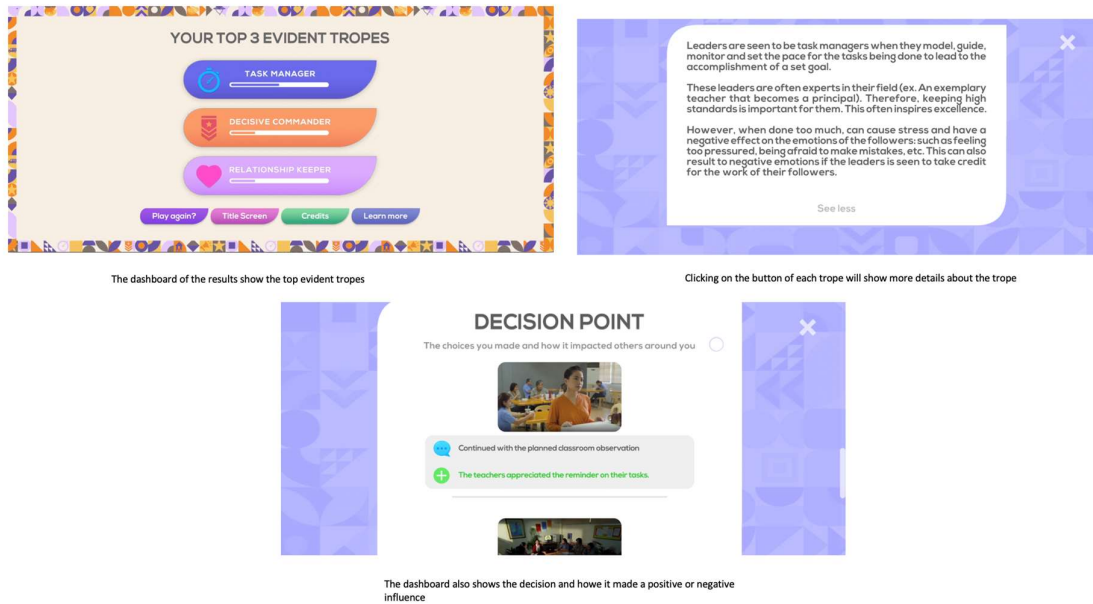
The game was developed using Unity.
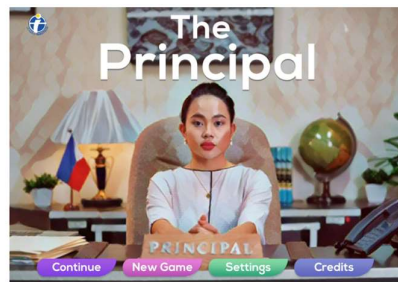
The main title screen
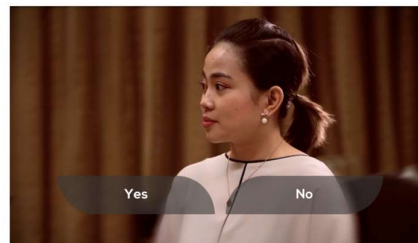
The player will need to choose "Yes" (accepting the challenge of heading a new school) for the game to continue

Two options are presented. The selected option will be highlighted with a bolder line. The sun line represent the time available to make the decision

YOUR TOP 3 EVIDENT TROPES

TASK MANAGER

DECISIVE COMMANDER

RELATIONSHIP KEEPER

Play again? Title Screen Credits Learn more

The dashboard of the results show the top evident tropes

Leaders are seen to be task managers when they model, guide, monitor and set the pace for the tasks being done to lead to the accomplishment of a set goal.

These leaders are often experts in their field (ex. An exemplary teacher that becomes a principal). Therefore, keeping high standards is important for them. This often inspires excellence.

However, when done too much, can cause stress and have a negative effect on the emotions of the followers: such as feeling too pressured, being afraid to make mistakes, etc. This can also result to negative emotions if the leaders is seen to take credit for the work of their followers.

See less

Clicking on the button of each trope will show more details about the trope

DECISION POINT
The choices you made and how it impacted others around you

Continued with the planned classroom observation

The teachers appreciated the reminder on their tasks.

The dashboard also shows the decision and howe it made a positive or negative influence

Figure 2. Sample game screens

6   PROTOTYPE AND TESTING

The game's beta version was released on Google Play last October 14, 2022, with the Apple App Store availability pending approval. Access is being monitored through Game Analytics, particularly on the number of new and returning users and game time.

To gather feedback, the game was promoted on SEAMEO INNOTECH's social media pages alongside a link to a survey form that seeks to gather a profile of users and user experience. The beta release is intended for four months. Afterwhich feedback shall be processed to see if any improvements need to be made.

7   CONCLUSION

Initial feedback on the game is consistent with the envisioned reception of the game, to be used as a springboard for reflection and discussion. The design process involved (1) identifying the learning objectives relevant to the primary target audience, the school head, (2) creating the game-scoring leadership framework, (3) designing the story and treatment for the interactive film, (4)constructing an optimized user interface for players to navigate the game using their own devices.

The game will be continuously promoted to generate data on its utilization and gain insights into users' gaming behavior.

ACKNOWLEDGEMENTS

REFERENCES

Bass, B. M., & Riggio, R. E. (2014). *Transformational leadership*. Routledge.

Charlier, N., Ott, M., Remmele, B., & Whitton, N. (2012). Not just for children: game-based learning for older adults. *Proceedings of the European Conference on Games-Based Learning*.

Einarsen, S., Aasland, M. S., & Skogstad, A. (2007). Destructive leadership behavior: A definition and conceptual model. *The Leadership Quarterly*, *18*(3), 207–216. https://doi.org/10.1016/j.leaqua.2007.03.002

Goleman, D., Boyatzis, R. E., & McKee, A. (2013). *Primal leadership: Learning to lead with emotional intelligence*. Harvard Business School Press.

Rossiter, M., & Garcia, P. (2010). Digital Storytelling in Adult Education: Toward a Conceptual Framework. *Adult Education Research Conference*. https://doi.org/10.1002/ace.370

SEAMEO INNOTECH. (2014). *Competency Framework for SEA School Heads*. INNOTECH. https://www.seameo-innotech.org/new-sea-school-heads-competency-framework/

Slingerland, G., Kooijman, J., Lukosch, S., Comes, T., & Brazier, F. (2021). The power of stories: A framework to orchestrate reflection in urban storytelling to form stronger communities. *Community Development*. https://doi.org/10.1080/15575330.2021.1998169