

iDECO Proposal: The Amazing Maze

Kathy Qiu, Hanley Weng, Roxanne Phan, Arthur Jing, Nadine Denten

Introduction

The term collaboration centres around the concept of team communication and the motivation to achieve a common goal. Thus, it would be reasonable to build a virtual collaborative environment that focuses on the idea of creating teamwork. Therefore iDECO has decided to build a virtual team building activity - The Amazing Maze. This activity aims to generate teamwork between players through various ways of collaboration in order to finish the maze.

Background

The reflection upon the central concept of collaboration is developed within our virtual environment through the principles of Team Building.

The term 'team' is defined to be "a group of people who have a certain task to complete"(Wikipedia). In more depth, it can be summarized as a group of individuals working together towards a common goal or solving a problem to tackle and issue. The emphasis here falls upon the word "working together" and groups who achieve this are believed to be the most productive.

Such a notion creates a relation that closely corresponds with our key concept of collaboration, which, as a result, established the reasons behind our unanimous decision to construct a virtual environment for a team building activity.

Brief History

The origin of the concept of team building can be traced back a long time in history. It is emerged from the research known as the Hawthorn Studies in the late 1920s and early 1930s conducted by the founder of the human relations movement, Elton Mayo (1993) originally intended to confirm the relationship between productivity and working conditions. However, the most significant outcome of the experiment resulted as the proving of a productivity increase when the awareness of a group identity is raised among the workers. This greatly impacted the way management ran their production plant and eventually led to the birth of the concept of team building.

Reasons

The reasons we chose to create our space parallels the purpose of Team Building; to open up communication between people as to learn more about each other and forge stronger relationships. Strong communication encourages people motivate one another towards a common goal through co-operation. We aim to build an environment that amplifies team building through the free expression of ideas to solve problems through creativity and appropriate risk taking. The environment would be rich with conversational opportunities, this is greatly beneficial to relationships that are often avoided (e.g. new bosses, strangers) and in a business context; usually occurs after a recent Merger.

Through the rise in communication, whether it be implicit or explicit, we gain a deeper understanding of ourselves and one another, gaining trust and consequently, better relationships and a more enjoyable work environment. Learning about each other's strengths and weaknesses allows for the successful utilization of each other's skills, resulting in more efficient and self-regulated strategies.

Our space intends to implement these foundations of team building; opening up the alternative channels of communication and knowledge between people, allowing for better relationships, and in turn, leading to a more effective unit.

Types of Team Building Activities

There are many types of team building activities, including problem solving, outdoor challenges, communication and trust. We have chosen to focus on the areas of problem solving and communication, as these are integral parts of any team (regardless of type e.g. sporting team, business, organization, etc)

Problem Solving includes management skills, working together, delegation and organization. Typical problem solving activities include 'murder mystery' style activities, puzzles and games.

Communication includes better collaborating, understanding and interpreting colleagues or team members. Typical activities in this area include 'get to know you' games, charades and pictionary.

Obstacles and puzzles in the maze will act as problem solving activities for the participants, challenging them to work together to achieve a common goal. Thus, these challenges presented to the participants, along with the unique methods of communication and awareness presented in the maze, will cause team members to re-consider how they communicate with each other and force them to forge new methods of communication. Our aim, is that through our maze, groups of people will either build new skills or enhance old ones, developing a team that is able to work together with improved communication in many areas of life.

Components of Team Building Games

There are three main components in a team building game. There are the instructions, activity and the debriefing stages.

Firstly, the participants are given instructions on the activity they will be completing. This will be introducing them to the different elements of the activity. There could be rules involving the time they have to complete the task set, or limit on the number of items allowed to be used. All of these serve as an information session on what is allowed during the activity and reinforces the notions of cooperative play.

Next is the actual activity itself. Here participants utilise the instructions given to partake in the game.

After the activity, there is a debriefing session. Here the organiser may close the session with a review of the purpose of the activity and how the team performed and accomplished the task. It could be in the form of questions – eg. What was the first sign that the situation wasn't going as planned? How was it resolved? Clarity of purpose and clarity of roles are essential for team performance. How did these two factors influence performance? How did you use your planning time? Was a common language created in order to effectively complete the game together? Was everyone involved in the planning?

The debriefing session is basically a simple social exercise, where the team gets together afterwards and reflects on the things that had happened during the activity. By completing the activity together, it enhances the sense of comradeship through shared experiences.

The three stages of team building are incorporated in our project through different areas and rooms. The instruction stages will be held in the preparation room and tutorial room. The activity itself will be the maze, and the debriefing stage will be held in the debriefing room. These areas utilise the three components of team building.

Team Behaviors

While examining the activity dynamics, we must also analyze how players behave and interact with the activity to get a better understanding of team building. We will closely examine five team behaviors which we will focus on in our virtual space.

Interdependence: refers to the trust between team members. This behavior is essential in team building activity, especially in our main activity, the maze. We used the roles of commander and actives to evoke and build the trust between each player, so they may successfully walk around the maze in the right directions and obtain the keys.

Team Shape: refers to specialization and communication. This is the key factor that refers to team collaboration. In our maze, we make sure that every team member is able to communicate with each other, no matter if it's a commander role or active role, implicitly or explicitly.

Team Scale: refers to the number of members in a team. This factor directly affects the level of difficulty to establish teamwork and collaboration. For our maze we aim to make sure that the balance between the number of commanders and number of actives, as well as the total number of players are just right so teamwork could be established, but not without effort.

Role Clarity: refers to the role each member plays. This directly refers to the commander and active role in our maze. Understanding what the player's role is important in order to create coordination and trust. The active must know that it is the commander's job to order people where to go and it is your job to follow the orders clearly and quickly.

Group Pressure: refers to the forces that members act on other members. In this context, we are referring to the positive influence of group pressure. It acts as a driving force for team members to succeed their goal since they do not want to be the one dragging everyone back. In a way, the higher the team scale, the higher the group pressure and the higher the influence. However if the group pressure is too high negative influences may also appear so it is our job to make sure that the players don't experience too much group pressure in the maze.

Upon examining these factors of team behaviors, it helps us understand how players behave in a team and with those factors taken into account, we could make a collaborative activity that greatly and effectively encourages teamwork.

Our idea of an Amazing Maze is forged from these principles and concepts of Team Building. Concepts that detail what we believe to be important skills in every-day life.

Design

Overview

The structure of our virtual environment can be divided into four space components.

The initial area users are going to enter is known as the preparation room, in which users will be acquainted with other users through self introduction and be divided into teams with assigned roles.

Once a team is created, users will be teleported to a tutorial room where they will be instructed on the rules and the goal of their task, along with the functions of features of which they will encounter.

After having warmed up, the users will be transferred to their destined position in the main area, the maze, according to their role and work together through collaboration and win the game.

The commanders have to fulfill their duty of guidance in the maze as their team members, known as 'actives', search their way out of the maze conquering various obstacles.

The game automatically terminates when all the 'actives' have exited the maze and scores will be rewarded according to the time used. This will take place in an evaluation room where every member will be teleported to at the end.

Preparation Room

This area is generated to achieve three purposes, acquaint with different users, separate into teams and determine users' role.

Upon the users' arrival, they will automatically receive an interactive name tag created by us to wear so that while they observe their surrounding and introduce themselves to the other users via the in-built chat system, other users could click on their tag for a detailed personal profile.

Two options will occur after a certain time for the user to familiarize with each other. Users can decide to be either placed in a team and role using the voting system where all members have to press a certain button for a majority decision or, select the random option and be placed in a team and role systematically.

Tutorial Room

Consideration has been taken into account for users' approach in learning the way the game operates and resulted in the necessity of the 'tutorial room'.

Such an area presents the users with a simpler and more straightforward model of the actual game. The users as a team will be instructed by pop up dialogs to trial all the features within the maze. (E.g. the function of buttons and the methods of communication between team members)

Maze

The Maze consists of many communication features for the participants. Participants can be either a 'Commander' or an 'Active' during gameplay. The role of Commanders is to Lead Actives throughout the Maze to key Objects and Exits whilst Actives help each other in progressing through the maze.

Communication Features

Our architecture focuses predominantly on implicit communication (signals, gestures) rather than explicit communications (such as the in-built features of SL; text-chat and audio). This promotes team-building through an environment that utilizes under-used channels of communication.

Commanders operate from a 'command centre' where they can observe the actives and can explicitly communicate with one another. Within this space, they are also granted features such as a detailed voting systems to decide on various choices they will have to make.

Commanders will also be allowed to implicitly offer suggestions and hints to players through buzzers that emit video and audio effects, as well as screens throughout the maze with pre-defined hints (e.g. arrows).

The Screens within the Maze act as communication between all participants, it can simultaneously act as trackers, message/media boards (providing hints from commanders), and markers. Another form feature that incorporates everyone are signalers (e.g. fireworks, beacons). These act as a locative form of communication between all players (for e.g. when triggered, a particle effect is generated directly above the player's direction); with characteristics of the signal (sound, color etc.) conveying it's meaning (such as "found something", "need urgent help!").

Actives, in addition to using screens and signalers, will be able to more implicitly communicate with one another through the a gesturing system that is a combination of the in-built SL system, objects, and devices with pre-defined animations.

Maze: Collaborative Features & Obstacles

Buttons can light up different colours showing the way people went. For example there could be a green and red button unlit at the fork of the maze, by lighting one colour you could signal which way you went to the next person who happens to chance upon it. It serves as a kind of marker, showing that someone had passed this way. The buttons itself could also set off some mechanism, be it opening doors or passages or it could simply be sending out sounds signalling where you roughly are to the people in the maze.

Collaboration in the form of puzzle solving can serve as a means to promote cooperation between people. As a reward for completing the puzzle, the answer may unlock a previously unpassable area. As they say, two heads are better than one. By utilising the brainpower of two or more people, the problem may be solved much quicker.

Keys can be used to open doors to pathways. However, locating the key and the particular door it opens it might take considerable effort in a maze. So it is important that there is communication between team members in order for them to have a less frustrating time in completing the maze.

Dual Platforms or other such mechanisms that open pathways can serve as a motivating factor for cooperation between team members. For example one person may have to step on the floor pad to open a gate for another person to go through.

The walls itself are the main obstacles of a maze, they could be varied in opacity to limit or enhance the participants' awareness of others. By completely blocking the view, it enhances the sense of isolation. This can form an invisible pressure on the participant to find other people or have them rely on their communication with the commanders. On the other hand, having the walls transparent to a certain extent can give the participant awareness of the general location of other players. Both types of walls - be it completely opaque or not, all are sources of frustration to the participant if they keep encountering dead ends or aren't getting where they want to be. To get through the maze with in the shortest times would require communication between the commanders and cooperation between the other participants. Through the shared experiences, it would build on their sense of trust and promote good relations with the other people on their team.

Debriefing Room

The third component of team building exercises is debriefing or feedback given at the end of the exercise to the participants. This feedback is vital to the experience and purpose of the team building exercise. Therefore, the third part of our environment will be a debriefing room where scores and feedback are given.

The main features we will aim to use to do this include:

- **Timer** - This will run from the start of the game until certain tasks are achieved. Time is a direct feedback that is easy to understand by team members and will allow them to quantitatively see 'how they went' in the maze.
 - **Individual Player timers** - will time how long it takes for each player to reach their 'key'.
 - **Overall group time** - will time how long it took for the entire team to complete and get out of the maze.
- **Numerical Feedback / Points** -we will aim to have certain elements of the game recorded and presented to the players at the end as another quantitative indication of their progress during the game. Examples include:
 - # times awareness tools were used (e.g. fireworks and buzzers)
 - # times commanders needed to communicate with their team
 - # times people in the maze helped each other with puzzles and/or activities.

These types of feedback will enhance the benefits a team receives from participating in a team building activity, as well as providing opportunities for the team to discuss how they thought they went. We will do this through chat and other means, raising questions and issues that occurred during the maze.

Methodology

Tools to Be Used Further:

- Google Wave: Overview of Collaboration; Current Tasks and Status
- Google Docs: Google Drawing: Collaborative Drawing, Sketching, Mindmapping
- Second Life: To Build Space Collaboratively

Roles:

Head Of Preparation Room: Kathy Qiu
Head of Tutorial Room: Kathy Qiu
Head Of Obstacle Plan: Hanley Weng
Head Of Maze Structure: Roxanne Phan
Head Of Maze Features: Nadine Denten
Head Of Debriefing Room: Nadine Denten
Head Of Presentation: Arthur Jing

Time Plan:

Task Σ \ Week	Week 8	Week 9	Week 10	Week 11	Week 12
Scripted F()s					
Prep Room					
Tutorial Room					
Obstacle Plan					
Maze Structure					
Maze Features					
FeedbackRefine					
Practice Show					

Conclusion

Upon examining the principles of team building, and utilising those concepts in our Amazing Maze activity, we have formed a solid concept in incorporating team building methods in our activity. We believe that this activity will generate teamwork between players and has future potential for companies to utilize as their team training tool.

Evaluation of Collaborative Tools Thus Far (21/04/10)

Google Wave

At our first concept stage, google wave serves as a great tool for group brainstorming. The software allows people to post up photos and drawings that help as visual aids for their ideas. And every idea is available to every member of our team without duplicate information. Furthermore, every member is able to comment on every idea and possibly extend it.

At the research stage, google wave allows people to post up links to websites as well as uploading text documents, serving as a great tool for sharing research information.

At the Idea forming stage, Google Wave serves as a great decision making tool. The voting system is particularly good for a group to decide on an idea. The table sets out a clear result of which idea is the most favorable. The comment and reply thread functions also strengthens the decision making process, having a member evoking an idea and other members listing its strengths and weakness and possible improvements.

Google Presentation/Docs

Serves as a very effective tool when creating our concept presentation. It effectively allows everyone to work on the same presentation and written proposal at different places so it greatly reduces the time for combining individual's work.

However the features of Google Presentation are limited compared to Microsoft Office PowerPoint. For example, once you have imported a slide from an external source, it is not editable anymore. Also, there is no complex slide animation features in this tool. It is a tool that is good for a group presentation but is not effective for creating an individual presentation.

Potential Future Problem & Solutions

- Ability to create scripted objects / complex models
 - Solution: Simplify Ideas and Alter Concepts, Import from 3rd Party Software
- Limits of Collaborative Software
 - Solution: Find Alternate Software (e.g. We may have to use alternate collaborative sketching application as opposed to Google Drawing)
- Availability Of Team
 - Solution: Asynchronous Collaboration Through more Direct Means (Audio Messages (Skype), Main Email)

References

- *Essentials of team building: principles and practices* By Daniel W. Midura, Donald R. Glover
 - *Successful team building* By Thomas L. Quick
 - *Team Building* by Wayne Simmons&Karl Weinrich SIMMONS & ASSOCIATES 1998
 - *What Types of Team Building Will Work for Your Team?* Cornelius & Associates 2004
 - *Four Main Types of Team Building Activities*, John Tar, 2008
-