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1. Purpose of the Document

The purpose of this document is to describe the scenarios that are being developed for eCute, both for primary school children (Mixer) and for young adults (Traveller). Based on this document, the other project partners should be able create an evaluation approach (WP7), design the interaction modalities (WP4), and implement the scenarios into the existing game (WP6) and agent architectures (WP5). While this document will contain some specifics about the scenarios, others will be further developed as part of a user-based design approach.



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2. Executive Overview

In chapter 3 we will give a description of the main differences between the two scenarios that are currently being developed for eCute: *Mixer* (children between 9 and 11 years) and *Traveller* (young adults between 18 and 25 years). The structure and content of these two scenarios will be presented in a high level of detail respectively in chapter 4 and 5. Each of these chapters is comprised of a section describing: the learning goals, the game flow, user interaction, and an outline of the story. Chapter 5 ends this document by making some concluding remarks. The annex contains a specification of some of the critical incidents and the story that will be used in *Traveller* (these are still contingent upon the technical implementation in game and agent architectures).

The specifications of the synthetic cultures that drive the virtual intelligent characters are not described in this document. This specification will be the basis of Deliverable D3.3 (due November 2012).

3. Introduction

Within eCute we are developing two scenarios for intercultural training, for two different target audiences: *Mixer* and *Traveller*.

Mixer is aimed at late primary school children (between 9 and 11 years) and focuses on in-group/out-group dynamics, the misunderstandings that cause them, and how they can be overcome. *Traveller* is aimed at young adults (between 18 and 25 years) and shares the same goals as *Mixer*, but also focuses on culture-general concepts: empathy, knowledge and skills for intercultural communication. In this deliverable we will cover three important elements of both scenarios: the game flow; the learning process; and the story outline.

We use a logical progression between the two. The crux of conflict between groups of different cultures is a combination of two elements: the protagonists develop in-group / out-group dynamics, and they act according to different implicit rules. The second element fuels the first by giving rise to negative interpretations. Users can deal with these conflicts by becoming aware that different groups have different hidden rules – whether these are because of cultural reasons, or different ways of playing a game. For *Mixer* we only focus on the in-group/out-group dynamics, and misunderstandings are limited to different game rules. For *Traveller* we add culture-general knowledge that is relevant to a range of everyday situations.

Traveller users will be able to interact with intelligent interactive graphical characters embodying models of culturally-specific behaviour in virtual world simulations. The models for culturally-specific behaviour will be a part of the FATiMA affective agent architecture (Deliverable D5.1).

4. Mixer

The goal of the Mixer scenario (as described in Deliverable D2.1 and D2.2) is to extend the concept of moral circle membership. This should educate children to move away from a narrow conception of who is in the in-group/out-group and help them to adopt more flexible boundaries.

In Mixer two groups of characters try to play a game, but they get into a disagreement about the proper way the game should be played. This happens because both groups use a different set of rules for the game. The aim of the Mixer scenario is to encourage children to deal with this conflict in an effective and appropriate way. As a part of one of the groups, the children should discover that the other group has different rules for behaviour and interpretation than their own. Learners should be able to comment on those differences and explain how the misunderstanding makes them feel. These skills will strongly contribute to the development of conflict competence as learners negotiate possible ways out of the discord.

In this chapter we will discuss three important elements: a) the game flow, which will describe how the user progresses through the game and the style of interaction; b) the learning process, which focuses on the learning goals and their integration within Mixer; and c) the story outline, which describes the narrative framing of Mixer.

4.1 Game Flow and Learning Process

The game flow shown in Figure 1 is constructed based on the learning objectives. We start by introducing the groups and characters that form the basis of the scenario (Step 1). This is followed by having one of those characters and the user interact (Step 2). The goal in this step is to allow the user to develop an empathic relationship with the character (i.e. becoming friends). That character will then interact with other characters to play a game. The user interacts with the character during the game and advises the character and thus becomes emotionally involved in the game. This is then followed by a situation where the friend character has to leave his/her group and plays the game with the other group where he gets into a conflict situation (Step 3) and has to ask for the user's advice. Based on the user's advice the character decides on how to resolve the conflict. After the conflict is resolved the user is then asked to reflect on the experience.

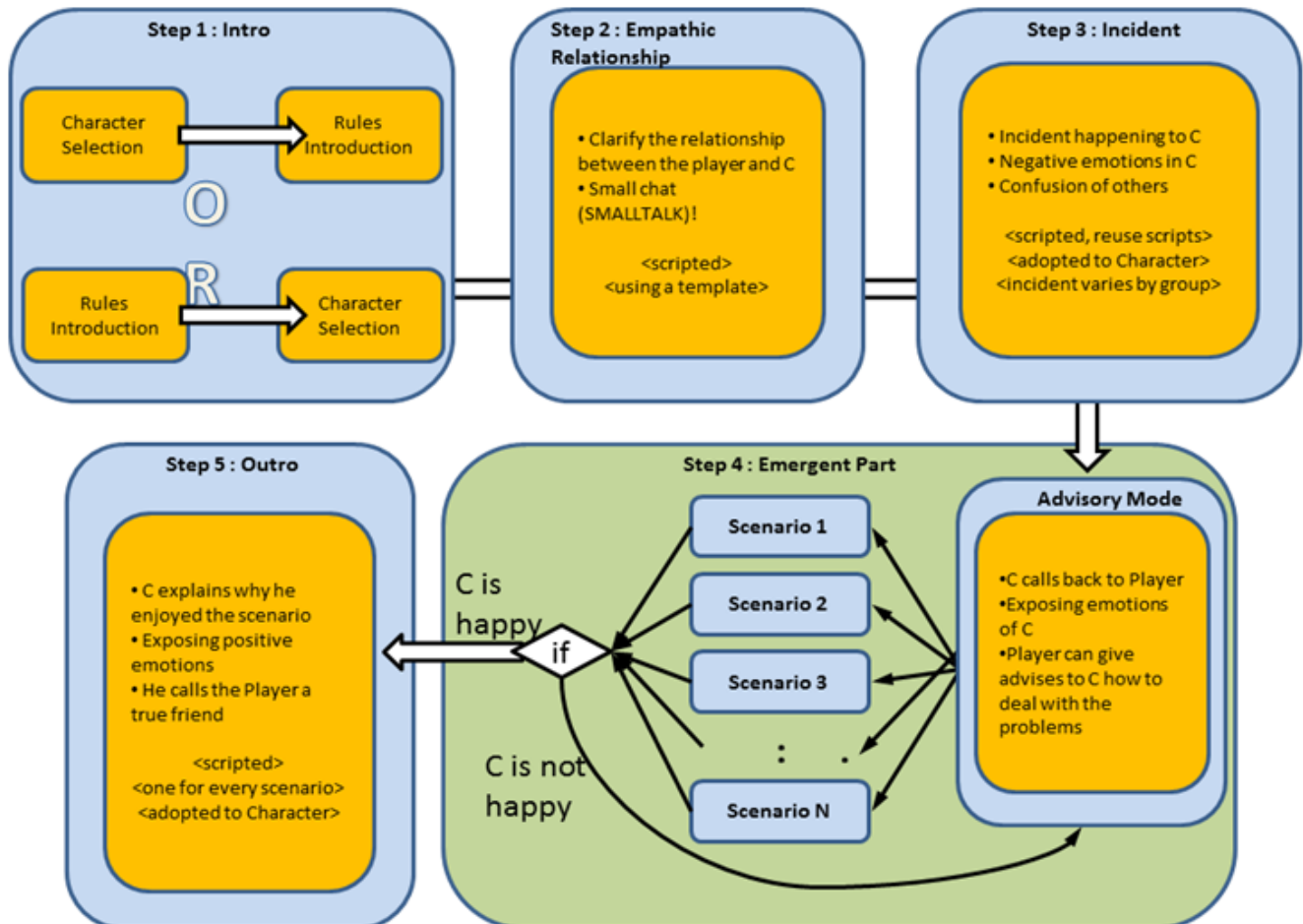


Figure 1: Game flow and learning process of Mixer

4.1.1 User Interaction

Mixer focuses on children aged between 9-11 years old. In Mixer the user is given the role of an Invisible Friend (Spect-Actor). This means that the user is not directly involved in the scenario but is able to advise and interact with one of the characters. The concept is to involve the user in an empathic relationship with one of the characters and advise this character to resolve conflicts.

There are two interaction modes for the Mixer environment: One (**Observer mode**) where the user observes the characters acting and playing in the virtual environment. And the other (**Advisory mode**) where the user interacts with the friend character and advises the character to resolve conflicts and help him to play the game. The Advisory Mode is invoked in two conditions: if the character wants the user to help him with the game they are playing and when the user gives advice to the user after the character has encountered a critical incidence. The advisory mode mostly consists of multiple choices for the user to choose from. Figure 2 and Figure 3 show the two different ways the advisory mode can be invoked.

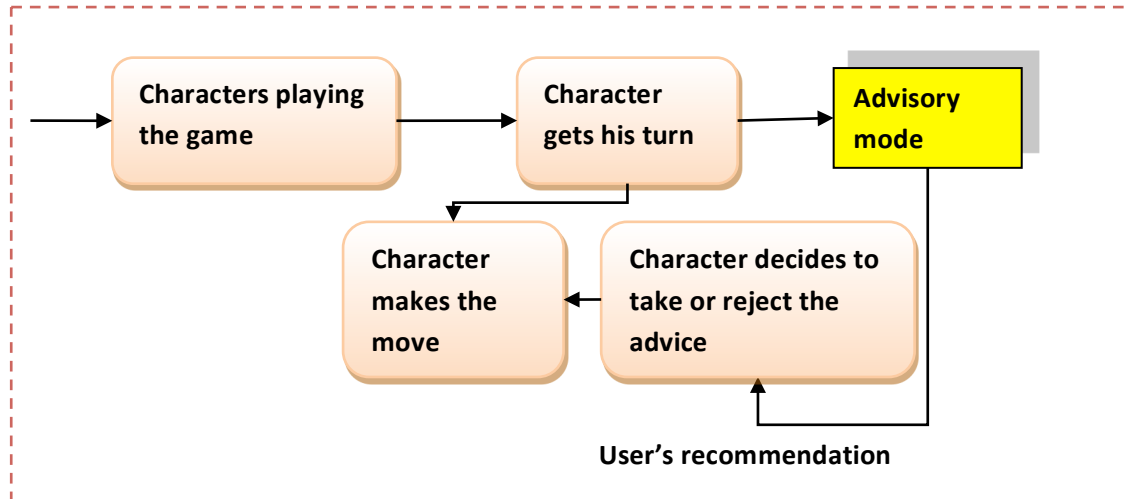


Figure 2: Advisory mode to advise on while playing game

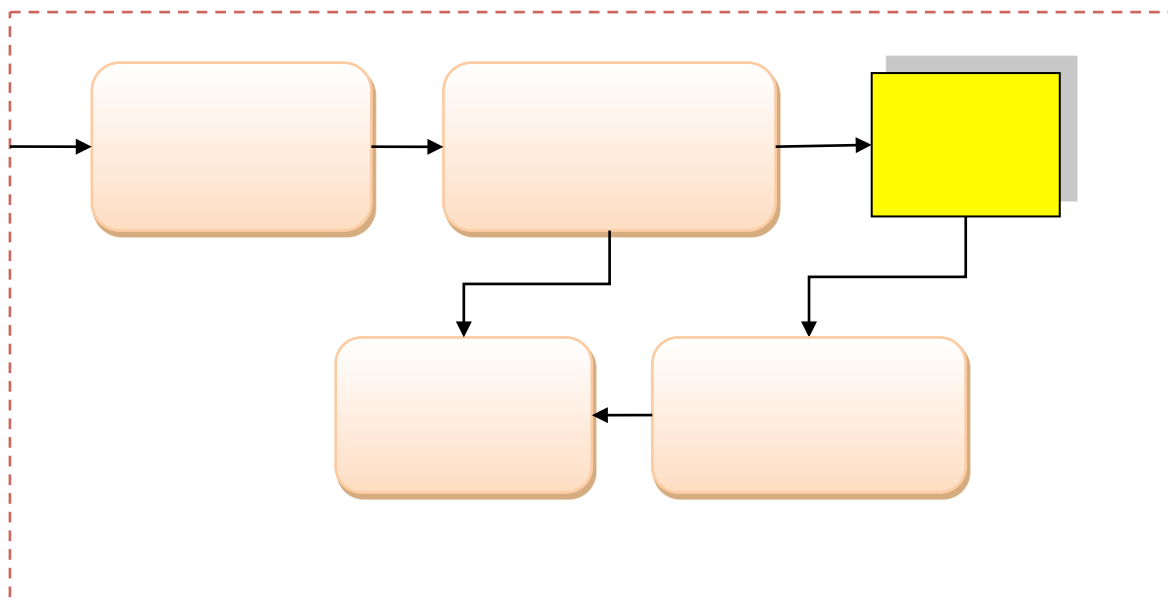


Figure 3: Advisory mode in the case of the character getting into a conflict

4.1.2 The Game

In order to simulate the difference of rules in different groups, we have decided to use a computer-based version of the werewolf game¹ which the characters play throughout the scenario. There are at least two sessions of the werewolf game in which the friend character will participate: one with its original group and then one while going to another group and learning to play by their rules. In the

¹ http://en.wikipedia.org/wiki/Mafia_%28party_game%29

second session there will be a conflict, and the friend character requires advice from the user to resolve the conflict.

4.2 Story Outline

The Mixer scenario features two groups of characters visiting a summer camp. While at the camp these groups will participate in different activities, one of them being the Werewolf game. The user will be an invisible friend to one of the characters of these groups, so the user will be able to create an empathic relationship with this character. The scenario starts with the friend-character playing the game with his group (host group). After the game is over, the friend-character moves on to the other group (guest group) and plays with them. Throughout the process the user communicates with the character helping him to reflect on the character's experience or giving advice on how the character should cope with certain situations. Based on the user's advice, the friend-character will then try to resolve the conflict. If he is successful, the story will end; if he is not successful, he will go back to the user to ask for more advice.

5. Traveller

Traveller is aimed at young adults (18-25) and focuses on intercultural communication – targeting empathy, understanding and skills, as specified in Deliverable D2.1 and D2.2. Users will come across situations that can (easily) be misinterpreted due to differences in culture.

To briefly reiterate: by culture here we refer to the ‘mental programming of the mind’ definition, as stated by Hofstede et al. in their work (G. Hofstede, G. J. Hofstede, & Minkov, 2010). They describe six dimensions of culture that each has a certain influence on social behaviour. These dimensions will help drive the action selection and interpretation mechanisms of intelligent virtual agents, provided these agents have generic capacities for social behaviour in the first place (the underlying framework for social behaviour in agents is described in Deliverable 5.1).

In the Traveller training tool, users will encounter characters, virtual intelligent agents, from different synthetic cultures (These synthetic cultures will be specified in deliverable 3.3). For many users, interacting with these characters will lead to misunderstandings or even conflicts. These misunderstandings can make the learner frustrated and demotivated, which in turn might have an effect on the educational effectiveness of the training tool. This is why we have chosen to combine the intercultural training (education) with a narrative elements (game-like characteristic) to create scenarios that are both educational and engaging. Such an approach can lead to effective training tools (Garris, Ahlers, & Driskell, 2002).

In this chapter we will discuss three important elements: the game flow, which will describe how the user’s progression through the game; the learning process, which focuses on the learning goals and their integration within Traveller; and the story outline, which describes the narrative framing of Traveller.

5.1 Game Flow

Traveller starts by having the user choose an avatar. In this guise, the user will encounter and interact with people (virtual intelligent agents) from different synthetic cultures. The user will have multiple opportunities to meet people from these cultures in their home country. In between ‘foreign’ countries, the user will go back to their home country. In here they will evaluate their experiences by talking to their grandmother (for more information about the locations that the user will visit in Traveller, see Figure 4).

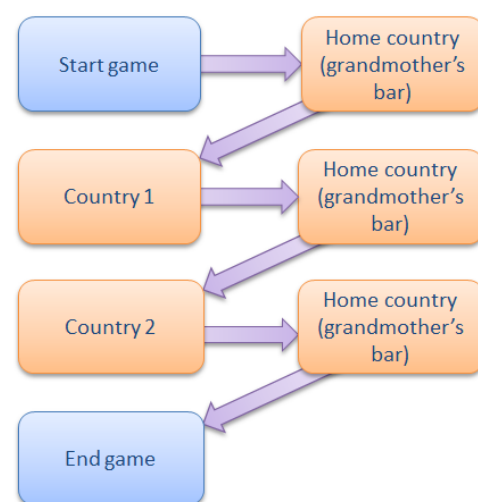


Figure 4: User location Traveller

In short, the user can be in two different places during the game:

- Within a country
 - o The user will travel from place to place, and in this type of place the user will encounter virtual intelligent agents. These cultural configurations will be different in each country.
- Between countries, at his/her grandmother's café
 - o His grandmother's café will be in the 'home country' of the user. The user will encounter no intelligent agents in this place, and will only interact in scripted sequences. He/she will mainly talk about what happened in the previous country, and get new information about the upcoming country. The café is also where the game starts and ends.

Each visit to a country consists of three different types of sequences (see Figure 5):

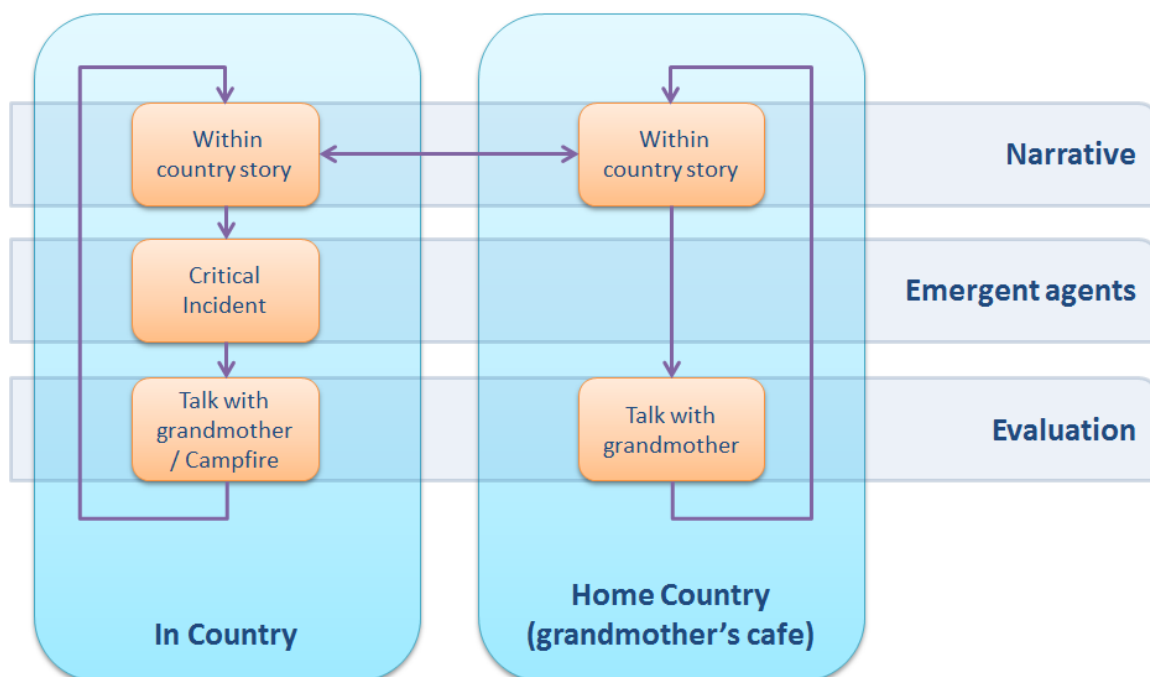


Figure 5: Sequences in Traveller

- Narrative sequences
 - o During these sequences, the user will be presented with information about the overarching story. It acts as a framing device, to give meaning to the actions of the users in the other sequences and to help them establish their goals. There will be no user interaction during these sequences (more information about the story can be found in section 5.3).
- Emergent agents sequences

- During these sequences, the user will be able to interact with virtual intelligent agents through critical incidents. These incidents will be a part of the storyline, and the user will not be able to continue the game without choosing an action. The user must choose actions based on the context that is provided (More information about the critical incidents can be found in section 5.2.1)
- Evaluation sequences
 - Evaluation sequences will be used to evaluate the user's progress through the learning goals. (More information about the possibilities for evaluation can be found in Deliverable D7.2). These sequences will be integrated within the storyline in two ways:
 - Campfire
 - Users can sit around a (metaphorical) campfire with their companions and talk about their experiences. The user may then get some feedback from the agents about what happened. This will allow them to see the situation from a different perspective in a way that does not break the 'magic circle'.
 - It is also possible to have the companions tell new stories to the user, based on their cultural configuration. These stories could then invoke a negative, or puzzled, reaction from another companion (or from the user), based on their cultural configuration. This would then lead to both agents being confused about the other's opinion, which in turn could lead to a (intercultural) conflict. In contrast to the emergent agent's sequences, this would feature a scripted-heavy discussion between the agents. After the discussion, the user can receive factual information about the differences that caused this misunderstanding.
 - Even though the agents are present within both versions of the campfire, their behaviour will be scripted, and not emergent.
 - Talk with grandmother
 - The user can talk to their grandmother over Skype, or in person. She will then ask him/her questions about the events that happened that day, or in the country they just visited. Grandmother is knowledgeable, having heard all of grandfather's stories many times. She is able to clarify intercultural misunderstandings by asking questions about the user's perceptions and interpretations ("why do you think they would act in this way?").

Note that the cultural configuration of the agents is only relevant during the emergent critical incidents. Unlike these, the main story will not change due to different cultural configurations. This allows the scenario to be replayed so the user can encounter new behaviour during the critical incidents.

5.2 Learning within Traveller

In deliverable D2.1 (also shown in Table 1) we described learning goals for intercultural training. These learning goals focus on important elements of intercultural training (based on literature of existing intercultural training tools).

The learning goals described in D2.1 can be used in many different types of intercultural training. For an ideal tool one would want all of these elements to be present. However, creating such a tool would be very time-consuming. This is why we have chosen a specific aim for Traveller.

The aim of Traveller is to increase the intercultural communication in young adults between 18-25 years. Intercultural communication refers to the capability of people to communicate appropriately with people from different cultures.

One of the best known frameworks for increasing intercultural communication are Culture Assimilators (Fiedler, Mitchell, & Triandis, 1971). *Culture assimilators* are collections of ‘critical incidents’ that are valid for a certain pair of cultures. These incidents have certain characteristics (based on Flanagan’s work (1954)):

For the purpose of developing culture assimilators, the ideal incident must describe (a) common occurrence in which a [user] and a host national interact, (b) a situation which the [user] finds conflicting, puzzling, or which is likely to misinterpret, and (c) a situation which can be interpreted in a fairly unequivocal manner, given sufficient knowledge about the culture. Finally the incident must be relevant to the [user]’s task or mission requirements.” (Fiedler et al., 1971)

Critical incidents are usually presented in a written non-experiential form. After a user has observed the relevant context, they can then choose between four different responses, of which one is considered to be correct. They then get feedback based on their choice. Learning happens in three stages: 1) when the user understands that their assumptions about the behaviour within the critical incident are incorrect; 2) When the user understands what other assumptions they should have made; and 3) when the user understands on which observations these assumptions can be based.

Within Traveller there is a different focus. ‘Intercultural communication’ would generally be associated with behavioural learning goals. However, this does not fit with most of the elements present within the ‘behavioural’ branch of the eCute intercultural learning framework. “Being able to unconsciously participate in a group as a native” is tailored to a specific culture, and our aim is to teach young adults more about the breadth of different behaviours and interpretations of people

-> Attitude ->	Emotional goals	Cognitive goals	Behavioural goals
v Stage of learner v			

from different cultures, than the depth.

Beginner (conscious incompetence)	Be able to recognize your emotions (for example fear and anxiety) when dealing with strange behaviours of another group	Start learning the specific practices and values of another group	Be fully present in attending to the other's verbal and non-verbal messages
Journeyman (conscious competence)	Be able to observe the behaviour of another group without feeling prejudice	Understand on a basic level the differences and similarities between another group and your own	Practice skills learned in the previous stage and experiment with different forms of behaviour
Expert (unconscious competence)	Be able to share the emotions (such as sadness or happiness) of a member of another group and other's experiences through empathy	Users should be able to discriminate and select appropriate strategies in cultural contexts	Be able to unconsciously participate in a group as a native

Table 1: Intercultural Training framework for eCute adapted from Deliverable D2.1

This is why we intend to use a set of critical incidents similar in structure to those typically used in culture assimilators. In contrast to the existing culture assimilators, we are not focusing on a single culture; instead of focusing on the practices and customs of a specific culture (a culture-specific approach (Cushner & Brislin, 1997)), we will focus on general behaviours and intentions that will differ across a broad range of cultures. These behaviours and intentions are represented in both the 'cognitive' and 'behavioural' branches within the eCute learning framework.

Before the user is able to learn more about these differences, he or she must first understand that people from different cultures actually do use different rules of behaviour and interpretation. This first step in learning follows the line of traditional culture-general training tools. They generally focus on creating awareness of differences between cultures, and increasing the sensitivity towards those cultures (Fowler & Blohm, 2004). Such goals are present within the 'cognitive' and 'affective' branches within the eCute learning framework (Table 1).

For Traveller we will focus on the learning goals present within the top-left triangle of the intercultural training framework:

Table 2: Targeted Learning Goals for Traveller

Affective	Recognize emotions that arise from interacting with people from different groups
	Observe behaviour of another group without feeling prejudice
	Share the emotions of a member of another group
Cognitive	Identify practices and values of other groups
	Understand the differences between another group and their own
Behavioural	Fully present in attending the other's verbal and non-verbal messages

5.2.1 Critical incident content

The virtual intelligent agents will act according to a generic model for social behaviour that can be modified by the dimensions of culture. This model can help show users how different cultures perceive appropriate social behaviour (see Deliverable D3.1, Degens et al., 2012; G. J. Hofstede, 2011; Mc Breen, Di Tosto, Dignum, & Hofstede, 2011).

The elements of generic social behaviour from our model that we are using for the critical incidents are described in short below:

- Moral Circle (MC) membership and types of Moral Circles, for modelling group affiliation
 - o Who belongs to which MC, and which is more important?
- Rituals, for modelling social processes that happen in groups and that affect Moral Circle changes, or maintenance
 - o Is there an on-going ritual, and who is involved?
- Relational primitives (per individual)
 - o Status
 - This primitive deals with the pecking order in a MC. In more formal MCs this primitive can be seen as the hierarchical status.
 - o Reputation
 - This primitive deals with how well a person lives up to their MC derived obligations and their respect for the rights of other MC members.
- Unwritten rules of behaviour
 - o Social norms (per MC)
 - Social norms may be explicit and could be communicated between agents. They are used to interpret the moral quality of the actions of others. They also indicate what behaviours are allowed (and effective) for translating social intentions into actions.
 - o Meta-norms (per culture)

- Meta-norms are unconscious and implicit. They are longer-term guides to social behaviour and they are shared within any society that has the same culture. They take as input relational primitives, and based on the parameterization of the dimensions of culture yield an appropriate output (more on this in Deliverable D3.3)

Based on these elements, we have established the following cognitive learning goals for the users within Traveller. They are phrased as questions, and they can be found below.

- Moral Circle
 - How do you join an existing MC?
 - How do you recognize members of a certain MC?
- Rituals
 - What structure should a ritual have in certain situations (such as asking for a favour)?
- Relational primitives
 - Status
 - How do you respond to people with higher/lower/equal status?
 - How do you show higher status in a certain MC
 - Reputation
 - How do you respond to people with higher/lower/equal reputation?
- Rules of behaviour
 - Social norms
 - What are the rights and obligations within a MC
 - What is normal social behaviour, and what is unsocial behaviour
 - Meta-norms
 - What are the rules of behaviour in this culture?

Each critical incident will focus on one of these questions. In this deliverable we will only focus on three critical incidents. More information about the exact contents of these critical incidents can be found in Annex 2 – Traveller Critical Incidents.

5.2.2 Critical incident learning process

Learning by doing, or learning by telling? This dichotomy has been very central to the discussion of effective intercultural training tools. Cushner and Brislin (1997) state that learning in intercultural training tools can be done either *experientially* or *didactically* (see also Deliverable D2.1 for a description of the two approaches). The aim of *experiential intercultural training* is to have the user learn more about different cultures through life-like interaction with (simulated) characters from those cultures. The aim of *didactic intercultural training* is to have the user learn more about different cultures by providing them with factual information about these cultures. With regard to didactic intercultural training, we believe that the word 'didactic' is ill chosen. It seems to imply that experiential approaches are not (as) didactic. Both forms of training have their didactic elements, and

we believe that using the word didactic for one over the other is confusing. In this deliverable we will use the word *factual* rather than *didactic*.

One of the properties of experiential training is that users are not passive observers, but have to interact with (simulated) characters. Based on the actions of the user, the characters will change their behaviour. If the character is from a different culture, and interculturally naive, the trainers may be able to artificially create an intercultural misunderstanding, or even conflict, between the user and the (simulated) characters.

The effectiveness of experiential approaches to education in cultural understanding using story-based role-play and case-studies has resulted in these approaches being widely used (Cushner & Brislin, 1997, G. J. Hofstede, Pedersen, & Hofstede, 2002). However, Earley (1987) and Hammer and Martin (1992) found that it was most effective to have both forms of training present within your training activities.

Pruegger and Rogers (1994) also tried to contrast both approaches. Four groups of psychology students were asked to participate in an experiment that would focus on intercultural training. The first two groups played Bafá Bafá, a role play simulation for intercultural training; the third group attended a lecture about differences in culture; and the last group had to solve word puzzles unrelated to cultural issues (the comparison group). Based on the qualitative results, the authors concluded that experiential learning is significantly more effective with regards to attitude change in intercultural training experiences than using instructional learning.

Within Traveller both approaches to learning will be present. Within the 'emergent agent' sequences users will be able to interact with simulated agents in an experiential manner. Every action they choose has a certain consequence, and this might cause the agents to dislike the user or cause them to get into a conflict. This will hopefully trigger an affective response in the user (see Figure 6 for more information).

In the evaluation sequences, users will be able to talk about the incidents and differences in culture in a safe environment. The evaluator will play the role of grandmother, and she can tell them more factual information about the differences in culture that the users could have been exposed to.

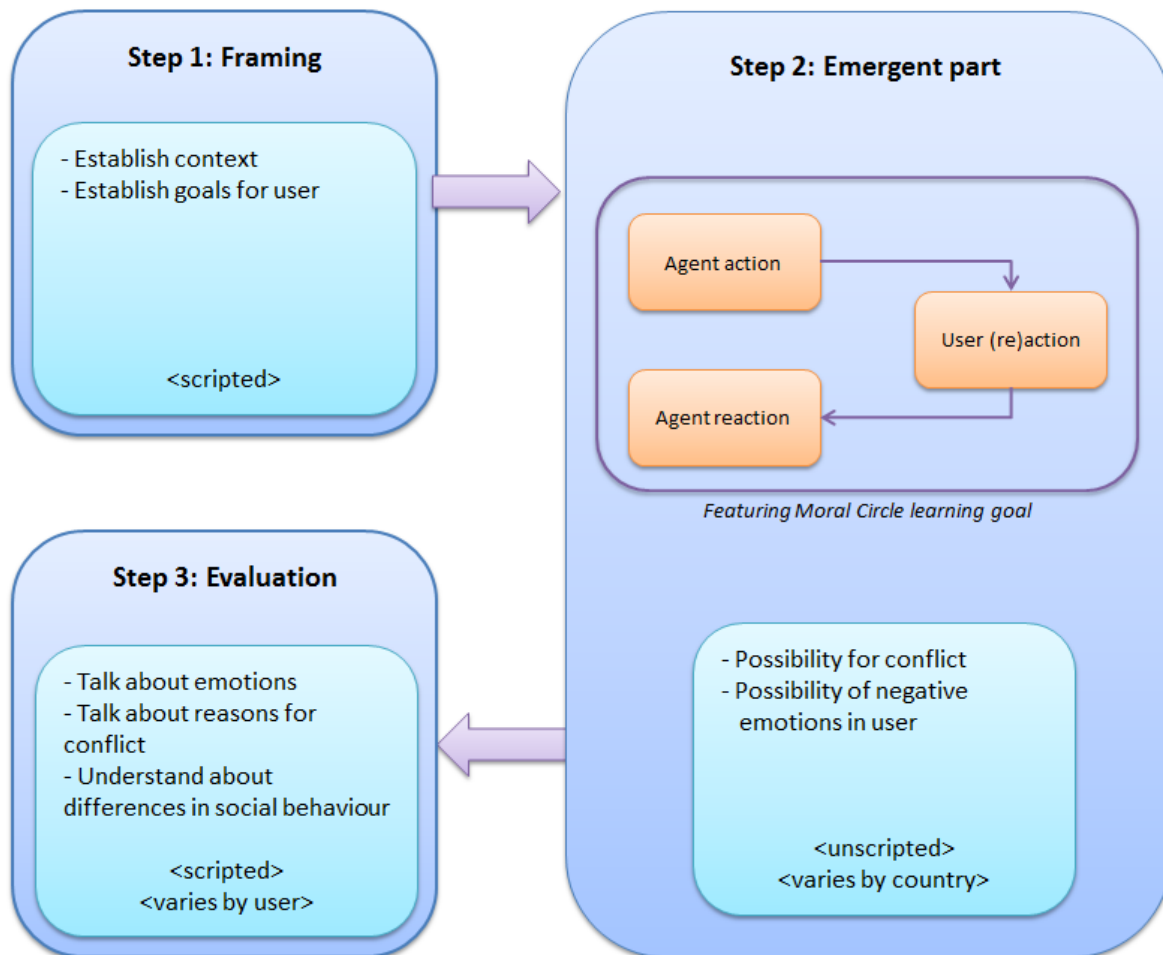


Figure 6: Learning process in Traveller

5.3 Story Outline

At the beginning of the game, the user receives word that his/her (we'll mostly use 'his' for convenience from here on) grandfather has passed away. This grandfather, a well-known traveller during his younger years, has left the user a letter, and some very old pages. In this letter, grandfather mentions that he started his travels because he heard rumours of a long lost treasure. He encourages his grandchild to finish what he started. To do so, the user must find the pages of his grandfather's journal, which have been scattered all over the world. The first place he must visit is described in the letter, and one of the old pages features a map of a country far away. His grandfather also left him a small amount of money, just enough to pay for his travels. Ready for adventure, the user sets off to his first destination.

During each step of the game, the user will visit a new country. During his travels, he will take somebody from the previous country with him to 'help' with his adventures. This person might

sometimes be helpful, by offering valuable insights, or detrimental, by creating stereotypes about the people in the new country.

In each location he has to find a page of his grandfather's journal, which can only be found by working together with the people from that country. On that page, he will find information about his grandfather's perceptions and interactions with the people from that country. The aim is to make these stories very similar to the experiences of the user, to ensure that the user can see himself as a younger version of his virtual grandfather. His grandfather then explains in his journal that he has come to understand these people, and explains a little about their underlying values.

At the end of the game, the user will find the last page of his grandfather's journal. It tells him that his grandfather was unable to find a treasure. Looking back at his experiences, he realized that he had found a different treasure. This treasure consisted of the adventures he's had. His last line reads: "I hope that one day I may be able to pass this 'treasure' to my children, and grandchildren, and all who come after them."

6. Conclusion

In this deliverable we have presented the design-paradigm for both Mixer and Traveller. Based on the learning goals, we have created a learning flow that is able to educate users of both target groups in the relevant elements that are present within Deliverable D2.1 and D2.2. To avoid the user becoming disconnected from the scenarios after repeated misunderstandings or conflicts, we have added a narrative structure to both scenarios to make them engaging as well as educational.

Both scenarios will have to be further developed using a user-centric design approach in which we will prototype the elements within this document. Based on these evaluations, the story boards will be updated accordingly, to create a more effective and engaging intercultural training tool. More information about the specific actions that agents will take and the formulas that determine them will be provided in Deliverable D3.3.

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8. Annex

8.1 Annex 1 – Traveller Story

Legend:

- <> The information between the pointy brackets is undefined. It will be defined later on in the design process, or by the user during the game.
- [] The information that can be found between a **[text]** and a **[/text]** is a sequence of the game, and thus belongs together.
- { } The information between curly brackets is meant for the designer, not the user, usually giving extra information necessary for implementation, or that the user should not see.
- ** Information between the asterisks denotes an action.

{All of the information presented in this chapter is also presented to the user in Traveller, unless it is enclosed by curly brackets.}

Start Game

[Narrative sequence – Game Intro]

It's been ten years since your grandfather passed away. He reached a ripe age of 77 and in your memory he always had a smile on his face. You remember visiting him when you were young: he and your grandmother would always take care of you when your parents were out of town. Rummaging through his big treasure chest in the attic, you used to dress up together like strange characters from faraway places. Every now and then he had to go abroad, but he would always come back with more pieces of clothing and tales of his adventures.

In his later years, when he became older, his health started deteriorating, so he wasn't able to travel abroad as much. That's when he decided to help out your grandmother full-time in her café. While this was not as satisfying as travelling all over the world, he was still able to discover more about the world through talking to foreigners.

When he passed away, your grandmother took over, and the café became a shrine to your grandfather's adventures. The walls are lined with souvenirs from his travels, and each of them has a story. Every year on the date he died, you go back to this café to reminisce about him with your grandmother.

[/Narrative sequence – Game Intro]

Day 0 – Grandmother's Café

[Narrative sequence – Introduction to Grandmother and Grandfather's legacy]

This year when you arrive, your Grandmother tells you that she has a very special message for you.

Grandmother (G): "Grandfather asked me long ago to give you this letter on your twentieth birthday."

Avatar of User (U): *opens the letter*

Dear <name of user's avatar>,

If you read this, then it means that I am no longer here. This letter should arrive to you when you are twenty years old. When I was your age, the war just ended, and it was a time of great confusion. I decided that I wanted to find my own life, and started travelling to many places. During my travels, I tried to find a great treasure. Now that you are also twenty years old, I want to pass it on to you.

Because this treasure is quite valuable to me, I hid it somewhere far away. It should not fall into the wrong hands. I've left hints to its location in each place I used to go to. Here you will find someone important to me, or someplace special to me. There you will find a page of my travel journey, describing my thoughts when travelling the world. Follow the trail of these pages and you will find the treasure, I'm certain of it.

Apart from the first page of my journal, I have enclosed some money with which you can travel. I wish you the best of luck and I know that you will succeed.

With love, your grandfather.

The journal page shows a picture of your grandfather walking around in a strange environment.

G: "What did it say?"

U: <user reaction>

G: "If I remember correctly, that was the first place your grandfather visited in his travels. It is known as <name of country #1>. He never told me anything about this plan, so I'm afraid I can't help you any more than that. I do think you should follow in his footsteps, and discover what he has left behind. If you get into trouble, or just want to talk, you can always call me at home..."

U: <user reaction>

[/Narrative sequence – Introduction to Grandmother and Grandfather's legacy]

Day 1 - Country #1

[Narrative sequence – Start <name of country #1>]

You have arrived at the airport. Many different people from all over the place gather here together. You decide that the only way forward is to ask the tourist information about the location on your grandfather's map. They give you directions to take a bus. Unfortunately, when you finally found that bus, purchased a ticket and arrived at what should be your destination; it seems that you are in the middle of nowhere. There is a kind of bar and you enter it.

[/Narrative sequence – Start <name of country #1>]

[Emergent Agents Sequence - Critical Incident Day 1 #1]

[Start incident]

It's quiet in the bar, and there are only a few people in the bar. In total there are five people: the barman, three people sitting around a table, and one person sitting alone in the corner. Since you don't know where to go in this area, you must ask one of the people sitting in the bar for directions.

[End incident]

The people at the strange bar tell you that the place you are going to is within a protected wild-life park. Unfortunately, this park is off-limits to regular tourists. The only way to get there is with the permission of the park supervisor.

[/Emergent Agents Sequence - Critical Incident Day 1 #1]

[Evaluation sequence – Talking about rituals]

Later that day, in your hotel room, you decide to call your grandmother and talk to her about today's experiences.

<Insert evaluation questions and responses here>

[/Evaluation sequence – Talking about rituals]

[Narrative sequence – Finding the park supervisor]

When you go to the office of the park supervisor, you hear that he is currently too busy at the moment, and that it might take weeks before he will be able to talk to you. However, you gather that he is a very friendly person, and that he will be the opening of a new museum that very evening. This seems like a great opportunity. You decide to try and surprise him, and his entourage, by going there and trying to talk to him.

[/Narrative sequence – Finding the Park supervisor]

[Emergent Agents Sequence - Critical Incident Day 1 #2]

[Start incident]

When you arrive at the museum, you realize that you don't know what the park supervisor looks like. Based on how people look and how they talk to each other, you have to guess who the park supervisor is. You're afraid that if you let people know that you don't belong there, you will be removed from the premises.

[End incident]

You are really lucky: you catch the park supervisor, he is charmed, and you can convince him. He has given you permission to go to the wild-park and has even arranged transport for you. Because the park is hidden away in a jungle, you are going to need help trying to get there. The park supervisor recommends that you find a guide to help you navigate the jungle.

[/Emergent Agents Sequence - Critical Incident Day 1 #2]

[Evaluation sequence – Talking about status]

Later that day, in your hotel room, you decide to call your grandmother and talk to her about today's experiences.

<Insert evaluation questions and responses here>

[/Evaluation sequence – Talking about status]

[Narrative sequence – In between the park supervisor meeting and the guide]

[More room for narration here]

[/Narrative sequence – In between the park supervisor meeting and the guide]

[Emergent Agents Sequence - Critical Incident Day 1 #3]

[Start incident]

You arrive at the camp at the end of the jungle. The guides are currently out, and you decide to wait for their return. The next day, three of the guides come back, and you have an opportunity to speak to their customers, who are leaving the park. You could also just go to a guide and ask for their help."

[End incident]

By having the right guide, you were able to navigate to the wild life park.

[/Emergent Agents Sequence - Critical Incident Day 1 #3]

[Evaluation sequence – Talking about reputation]

When searching the park, you decide to relax one evening. You and your new friend the guide decide to make a small campfire and tell each other some stories.

{Based on the cultural configuration of the agent, there will be a certain story here, related to the elements of our MC model}

<Insert evaluation questions here>

[/Evaluation sequence – Talking about reputation]

[Narrative sequence – Finding the journal page]

After spending two weeks searching the park you find an abandoned cottage, in here you find pictures of your grandfather's adventures in this country. You also find the next set of pages from his diary.

[grandfather's journal page 1]

Dear diary,

When I first came to this place, I was a bit hesitant to talk to these people here. They seemed strange, and I didn't really understand them. But, without money to survive, I

was forced to get a job. This took me a while, but in the end I succeeded. Some people needed help to expand the wild-life park. By doing so, more protected animals could be housed within its perimeters.

This was not an easy task, and it took many months. At first I didn't feel a part of their group; they went out together after work, but they never invited me. After a while I asked them why they didn't invite me, and they thought that I didn't want to come. I asked why and they said previous foreigners never wanted to come. Then I asked if I could come along. So that evening I went out with them for the first time. It was nice to get to know them, and it made working here a lot more fun. I guess they were not as distant as I first thought... Tomorrow I leave for <name of country #2>. I wonder what that place will be like."

While you prepare to go back home, the guide asks you if he/she **{hereafter called he}** could join you on your travels. After spending many nights and days together searching for the cave, he/she couldn't help but admire your search for your grandfather's treasure. (S)He recognizes the next country that your grandfather describes in the journal and would like to join you there.

[/Narrative sequence – Finding the journal page]

Day 1.5 - Grandmother's Café

[Narrative sequence – back at grandmother's cafe]

You arrive back at your grandmother's café to tell her about your adventures.

[/Narrative sequence – back at grandmother's cafe]

[Evaluation sequence – Evaluating <name of country #1>]

<Insert evaluation questions here>

[/Evaluation sequence – Evaluating <name of country #1>]]

[Narrative sequence – Off to <name of country #2>]

G: It seems that this journal seems to talk about the first few days your grandfather spent in country #2.

The user leaves for country #2

[/Narrative sequence – Off to <name of country #2>]

Day 2 - Country #2

[Narrative sequence – Welcome to a new place]

You arrive in the country...

The next part of your grandfather's journal mentions a woman. Maybe she knows something more your grandfather's journal. You know that she used to work in a hospital somewhere in the capital, so you decide to start your journey there.

[/Narrative sequence – Welcome to a new place]

[Emergent Agents Sequence - Critical Incident Day 2 #1]

[Start incident]

Trying to find your way to the hospital, you get lost. Many people are walking around on the streets and you decide to ask one of them for directions.

[End incident]

You go to the hospital and ask for more information about the woman. She is still working there, and you are escorted to her office. You explain to her that you're following in your grandfather's footsteps. She asks how your grandfather is doing and you explain that he has passed away ten years ago. She asks you to join her for dinner, to talk about grandfather.

[/Emergent Agents Sequence - Critical Incident Day 2 #1]

[Emergent Agents Sequence - Critical Incident Day 2 #2]

After the dinner you ask her about your grandfather. She is feeling very tired though and tells you that you will hear more about your grandfather tomorrow.

[Evaluation sequence – Talk about group membership (novices)]

Later that evening, you decide to sit around the fire place and share some stories with a friend of the lady and your friend from the first country.

{Based on the cultural configuration of the agent, there will be a certain story here, related to the elements of our MC model}

<Insert evaluation questions here>

[/Evaluation sequence – Talking about reputation]

[Emergent Agents Sequence - Critical Incident Day 2 #2]

[Start incident]

The next day she invites you to go with her to the hospital and take care of people who need help.

[End incident]

[/Emergent Agents Sequence - Critical Incident Day 2 #2]

[Narrative sequence – Found the document]

At the end of a long day, you sit together at the table and she tells you about your grandfather. After a few days of being here, he became quite ill, and had to go to the hospital. That was where she met him, and it was also the start of a good friendship. She has kept some pages of his journal when he left, which she then gives to you.

You read the first part of the journal:

[Grandfather's journal page 2]

Dear diary...

It's always a strange experience, going to a country you've never been before. My friends from country#1 told me many strange things about the people here. <link back to the events describing country #2 in the previous journal page>. To be honest, I don't really understand what they were talking about. The people are very nice here...

Within the first few days I arrived in this country, I became quite ill. I was taken to the hospital, and they were treating me very nicely. During my prolonged stay here, I got to know many of the hospital staff, and I had long talks with one young girl in particular. She was the daughter of one of the doctors and she helped me to understand more about the people from this country. After I got better, it was time to move on again. I'll always think back fondly on my memories from the last few weeks.

You cannot find any reference to the next country; instead you find a letter that says: "Open me when you're back home." While you are extremely curious as to the content of the letter, you decide that maybe it's for the best to open it back home.

[/Narrative sequence – Found the document]

Day 2.5 – Grandmother's Café

[Narrative sequence – The end]

You take the message back to your grandmother's café. She laughs at you, and asks you to read it out loud. Slowly you open the letter and read the message inside:

My dear grandchild, I hope that you are not disappointed with me. The great treasure that I found, in fact, is nothing else than friends and wisdom; and it is worth more than any amount of gold. Since I recognized in you a kindred spirit, but felt that I would not be given time to see you grow up, I decided on a little trick. Your grandmother has agreed to play along with me. She can tell you more."

Your grandmother recalls how your grandfather was always quite nervous when going abroad, because the people always seemed to act so strange. But after a few days he would always calm down and understand that while their behaviour looked strange, they were actually quite nice people.

[/Narrative sequence – The end]

[Evaluation sequence – What about the game?]

G: And how do you feel about Grandfather's treasure?"

<Insert evaluation questions here>



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End Game

{At the end of the game the user gets an overview of how well they've done. This happens through a discussion with the grandmother.}

8.2 Annex 2 – Traveller Critical Incidents

In this document we describe the critical incidents in the following sections:

- Theme
 - What the critical incident is about, mainly in relation to the work we have presented in the behavioural interface deliverable 3.1. Since our aim is to show different behaviours and the tendencies of people from different cultures towards those tendencies.
- Context
 - The context of the critical incident that the user will read. This also relates to the embedding of the critical incidents within the Traveller story.
- Our goal for the user
 - The goal of the user in the critical incident. Do note that the goal of the user might not be the same as our intended goal for them. Within the scenarios we will have to account for the discrepancies between these two perspectives.
- User Interaction
 - The interaction elements that the user can choose within the critical incident. It is important that the user is able to choose an action that feels appropriate to them
- Agent variables
 - The variations in the agent appearance/behaviour that are relevant to this incident
- Learning process
 - The relation to the learning goals as defined in Deliverable D2.1

Note that the critical incidents described below are still vague in terms to the reactions to the agents. This is because those reactions are dependent on the underlying model of culture that we will use. More specific story boards will be created based on these critical incidents.

Day 1 - Critical incident 1

Theme

Any group of people (in our sense of the word, as a collection of people gathered in one place) that has a degree of shared attention, can be said to be engaged in a ritual. Rituals help mediate changes in social order, and are thus an essential element of social behaviour. Each ritual has a certain social purpose, and they usually have to do with your place in social order. Different cultures have different ways of establishing a ritual; what might be appropriate for one person, might not be appropriate for another (for more info and examples, see Degens et al., 2012).

Context

“Unfortunately, when you finally found that bus, purchased a ticket and arrived at what should be your destination; it seems that you are in the middle of nowhere. There is a kind of bar and you enter it.

It's quiet in the bar, and there are only a few people in the bar. In total there are five people: the barman, three people sitting around a table, and one person sitting alone in the corner. Since you don't know where to go in this area, you must ask one of the people sitting in the bar for directions."

People present in the bar:

- Bartender (B)
- Table 1
 - o Agent 1 (T1A1)
 - o Agent 2 (T1A2)
 - o Agent 3 (T1A3)
- Table 2
 - o Agent 1 (T2A1)

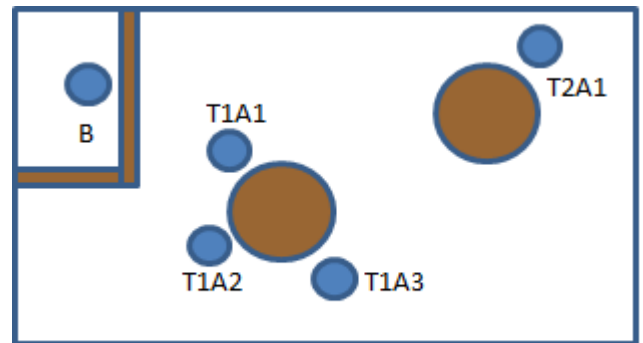


Figure 7: picture of the bar

User goal

Get directions from one of the agents present in the bar.

User interaction

When the user walks into the bar, two things can happen based on the cultural configuration of the agents:

- Everybody looks at the user
- Nobody looks at the user

Based on this, the user can then choose an option for interaction to help him get directions:

- Ask the barman, in a direct manner;
- Ask the barman, in an indirect manner;
- Ask everybody, in a direct manner;
- Ask everybody, in an indirect manner;
- Leave the bar.

Response of the agents:

- Bartender
 - o Response to appropriate behaviour
 - o Response to inappropriate behaviour
- Person from another person (who feels responsible based on cultural formulas)
 - o Response to appropriate behaviour
 - o Response to inappropriate behaviour

Do note, the user might not even do anything wrong, but still get a negative response based on the way they look. So based on their gender and status symbols, the user might cause the user to receive

a reaction from the agent that is not based on the actions they have chosen. This leads to the question of whether or not the user is able to select their appearance.

Agent variables

- For all of the agents
 - o Status symbols
 - o Drives
 - o Gender
- Bartender
 - o <busy or not, smile on his face or not>
- Group of friends
 - o <level of interaction between each other, looking happy or not>
- Person sitting alone
 - o <looking happy or not, engaged in work on his laptop?>

Learning Goals

Affective:

The user will be confronted with a strange environment and not knowing the appropriate behaviour. He might not get directions from the agents, because he does not ask appropriately. This can lead to an affective response in the user in the form of frustration and helplessness.

The agent might help the user, but in a seemingly non-friendly way (at least, according to the user). This might cause the user to think that the agent is not very friendly, even though he shows it differently.

Cognitive:

The user will be able to learn more about how “strangers” should behave in a new environment if they want a favour (Do note, their aim is not to create a lasting relationship in this environment).

Day 1 - Critical incident 2

Theme

Moral Circle Status and Power Distance

Power Distance deals with the extent to which the less powerful members of a society expect and accept that power and rights are distributed unequally. Large PDI splits up the MC into status levels (MCS) that are not permeable, and depend on position in society. Agents in cultures of large power distance will respond differently to others depending on how they perceive their MCS relative to their own. Status differences will be effective barriers to communication, and particularly to volitional behaviour travelling upwards.

Context

“Before you go to the party, you will have to choose what you will wear”

<Give the user a choice between different outfits, with certain status symbols>

“When you arrive at the museum, you realize that you don’t know what the park supervisor looks like. Based on how people look and how they talk to each other, you have to guess the identity of the park supervisor. You’re afraid that if you let people know that you don’t belong there, you will be removed from the premises.

You walk around the premises and see many different people. All of a sudden you bump into the guard that you met at the park supervisor office. You ask him where he is, and he points you in the right direction.”

User goal

The goal of the user is to ask the park supervisor for permission to enter the wild-life park.

User interaction

The user walks up to the park supervisor, and two things can happen based on the cultural configuration of the agents”

- He looks at you with disdain
- He looks at you with respect

Based on this, the user can then choose an option for interaction to help him get the permission he needs:

- Ask the park supervisor for permission, in a respectful manner;
- Ask the park supervisor for permission, as if he were your equal;
- Go back to the guard and ask him if he can explain the situation to the park supervisor;
- Go back to the guard and order him to explain the situation to the park supervisor;
- Leave

Response of the agents:

- Park supervisor
 - o Response to appropriate behaviour
 - o Response to inappropriate behaviour

Agent Variables

- For all of the agents
 - o Status symbols (clothing, other)
 - o Drives
 - o Gender

Symbol level	Masc	Fem
	<ul style="list-style-type: none"> - Status symbols - Formally dressed - Supervisor may have guards 	<ul style="list-style-type: none"> - Hardly any Status symbols - Casually dressed
	Large PDI	Small PDI
	<ul style="list-style-type: none"> - Different groups for people with different status levels 	<ul style="list-style-type: none"> - Distributed groups

Behaviour level	Masc	Fem
	<ul style="list-style-type: none"> - Extroverted - React strongly to the user - Boast 	<ul style="list-style-type: none"> - Be kind and helpful - Be humble
	Large PDI	Small PDI
	<ul style="list-style-type: none"> - React strongly to the user's perceived status - Not talk to those with higher status 	<ul style="list-style-type: none"> - Will talk to anybody, regardless of status

Learning process

In this critical incident the user will be able to observe the effect of status on behaviour and appearance (through status symbols). They user will also be able to see the dimension of power distance in action.

Affective:

The user will encounter the feeling of frustration when they encounter behaviour that is strange to them. The user might dress casually, and receive a look of disdain from the supervisor (high PDI for agents). He might dress formal and not get the appropriate response for that (low PDI for agents).

Cognitive:

The user should be able to recognize the effect of MCS on behaviour among people from different cultures. Power distance has a strong influence on the importance people attribute to differences in status. MCS can be used to make assumptions about the others status, but it should also be used to choose the appropriate actions based on their MCS.

Day 1 - Critical incident 3

Theme

Moral Circle Reputation and Masculinity & Femininity

Moral Circle Reputation is a measure of how well a person lives up to their MC derived obligations and their respect for the rights of other MC members. It can be conceived of as the 'moral status' of a MC member, but we do not use this term for the sake of clarity. Another similar term is 'standing', a variable that could be binary or scalar. An agent can be 'in good standing' versus 'in bad standing' with its fellows.

How people deal with norm violations has a lot to do with Masc and Fem. People from a Masc background are less easy to forgive violations than people from a Fem background.

Context

"You are really lucky: you catch the park supervisor, he is charmed, and you can convince him. The park supervisor gives you permission to go to the location and has even arranged transport for you. Because the park is hidden away in a jungle, you are going to need help trying to get there. The park supervisor recommends that you find a guide to help you navigate the jungle.

You arrive at the camp at the end of the jungle. The guides are currently out, and you decide to wait for their return. The next day, three of the guides come back, and you have an opportunity to speak to their customers, who are leaving the park. You could also just go to a guide and ask for their help."

There are three guides in the park. The user does not know that two of them are not good at their job, and will lead him/her astray. It's up to the user to judge which guide has the best reputation, based on their own interactions with him, or by speaking to his previous customers.

User goal

Based on the interactions between the guides and their customers, the user has to choose a guide that will help them find the location that the avatar's grandfather described. If the user chooses the wrong guide, they will abandon him, and will let him fend for himself.

User interaction

First question:

- Will you ask somebody for more information about the guides?
 - o Yes (go to the second question)
 - o No (go to the third question)

Second question (ask customer):

- First the user has to select a customer of a certain guide to talk too
 - o Customer of guide 1

- Customer of guide 2
- Customer of guide 3
- Then he can ask them in two ways:
 - Ask about the guide
 - Strongly push for details about the performance of the guide

Third question (ask guide):

- The user can select a guide to ask them some questions
 - Guide 1
 - Guide 2
 - Guide 3
- Then he can ask them in two ways
 - Explain what you need to find in a clear, detailed and direct manner
 - Explain the situation

The user will be able to choose to act as many people as he would like

Fourth question:

- Who do you choose
 - Guide 1
 - Guide 2
 - Guide 3

Agent variables

Customers

- Praise the guide in a direct manner
- Praise the guide in an indirect manner
- Criticize the guide in a direct manner
- Praise the guide in an indirect manner

Guides

- Boast
- Be humble
- Push the user to hire him

Learning process

In this critical incident the user will be able to observe how people from different cultures will talk about people with a certain reputation (good and bad). This also has a lot to do with the Masculinity and Femininity Dimension of Culture.



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Affective:

The user might feel upset, that they have chosen the wrong guide. They might also feel uncomfortable with the customers criticizing the agent in a very harsh manner.

Cognitive:

The user should be able to recognize the effect of MCR on behaviour among people from different cultures.