

APPENDIX G

Qualitative Analysis

G.1 Concept map of the categories

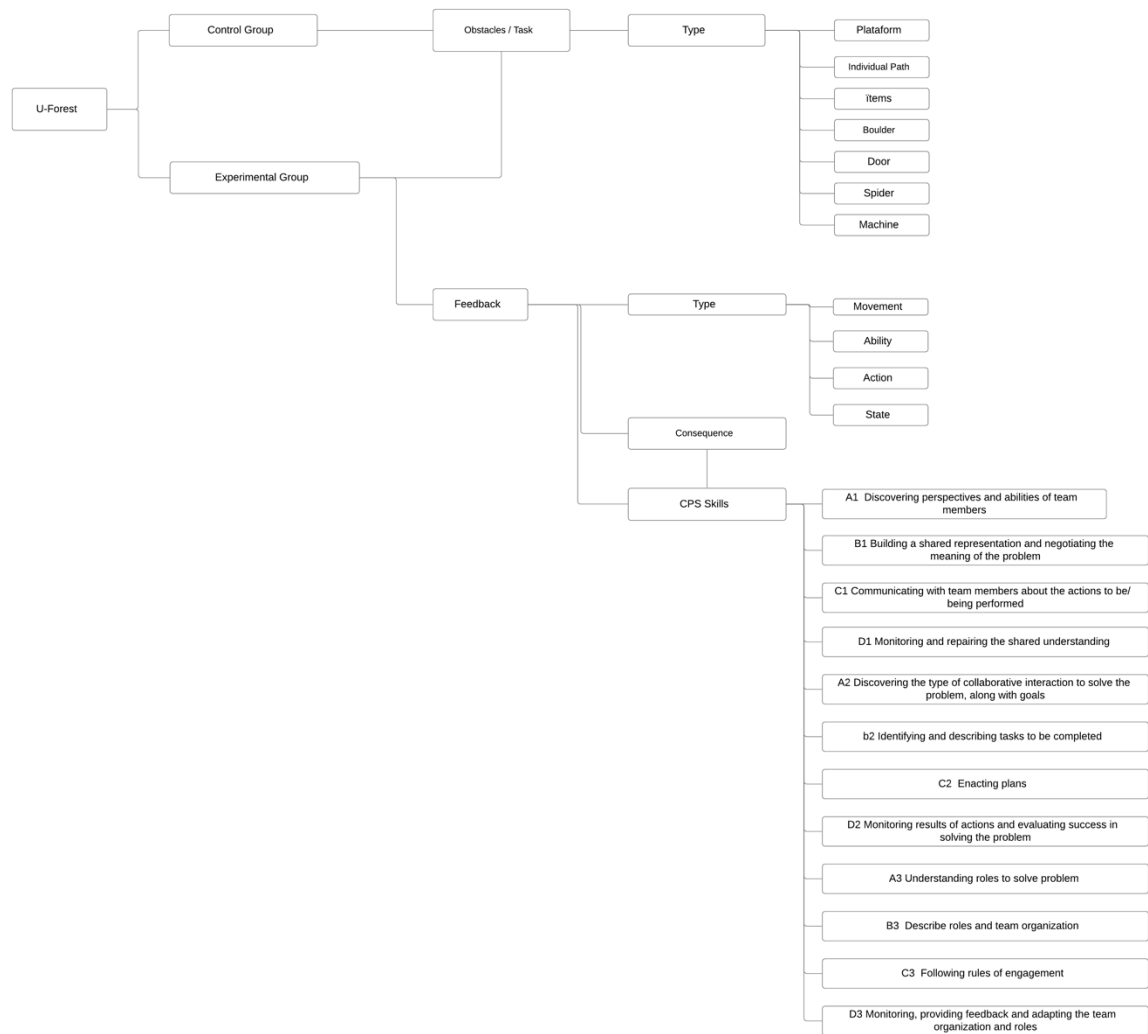


Figure G.1: Concept map of the categories

G.2. Effectiveness of the feedback

Table G.1*Example student feedback and consequences, organized by skill.*

Feedback		Consequence	
Type	Example	CPS	Example
Ability	“The yellow player has to use their special ability to get to path going over the fallen branch”	A1	“I don’t know what I have to do” “What fallen branch?”
Movement	“Look, it says you have to go up”	A2	“P1: It’s giving you hints P2: Ah, OK OK...”
Ability	“The yellow player has to use their special ability to get to path going over the fallen branch”	A3	“What’s my ability?”
Movement	“Did you go where they told you to, to the tree?”	B1	“Which tree? This tree?”
Ability	“The yellow player has to use their special ability to get to path going over the fallen branch”	B2	“Yeah, you have to jump” “First you have to jump there and then you have to jump there”
Movement	“You still haven’t arrived. Is everything OK?”	B3	“P2 you have to get to here” “On my way!”
Ability	“It says the yellow player has to use their special ability to get to path going over the fallen branch”	C1	“Come up here and try to shoot”
Ability	“It says the yellow player has to use their special ability to get to path going over the fallen branch”	C2	“I already shot him”
Action	“The yellow player has to use their special ability to get to path going over the fallen branch”	C3	“Look, I already shot that yellow thing”
Movement	“The red player has to go to the tower by the lake”	D1	“Yeah, the red player has to pass, because over there there are some yellow and green things”
Movement	“Yellow player, come here. You have to press this”	D2	“Done. I pressed a yellow button and the platform went up”
Movement	“Everyone has to come here”	D3	“P2 look, it looks like one has to go over there and not come over here, the other, the red player, has to go over there. And what about me? Where do I go?”
Movement	“It says you have to go to the tower”		No consequence
Ability	“The yellow player has to use their special ability”		No consequence
Action	“The blue and yellow players have to activate the hidden switch...”		No consequence

G.3. Comparing progress between the experimental and control groups

Table G.2

Example messages identified as obstacles in student conversations

Obstacle/Task	Control Group	Experimental Group
Platform	"I can't get up there. How do you do that super jump?"	"So S2, you have to press the yellow button!"
	"How did you get up? I'm trapped, I can't get up... Hey, S2, there's a yellow button here, come on, come down here!"	"There's a yellow button in the tree"
	"But S2, go and press the button so we can go up"	"Done. I pressed a yellow button and the platform went up"
Individual path	"The yellow player has to go up there and the red player has to go down there"	"No, I've already been down and been everywhere, I've done everything"
	"I'm the only one here. Where are you?"	"Hey yeah, it looks like there are three different paths"
	"I'm higher up, I'm coming down..."	"We have to go up and down!"
Items	"How do you use the item?"	"Did you get the item?"
	"I found an item but I don't know how it works"	"There's another item here!"
Puerta	"There was a door and I want to get to the other side"	"Oh! You also found an item!"
	"I found something, like a key to the door"	"Done. I activated it!"
	"There's a door, and I had to put this thing and... it opened!"	"Where do I open the door?"
Machine		"I'm at the door"
		"But look, there's a door!"
Spider		"No, you need to activate this, the machine, that machine!"
		"Over there there's a tool; I don't know what it is!"
Boulder	"I'm by the spider. Now what do you guys have to do?"	"Oh!! Look, there's a Boss!"
	"I'm with the spider, come here"	"I need your help, because the spider here is massive"
		"Yeah, you have to activate the boulder!"